



Monticello Nuclear Generating Plant  
2807 W County Road 75  
Monticello, MN 55362

April 26, 2012

L-MT-12-040  
10 CFR 50 Appendix E

U.S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, DC 20555-0001

Monticello Nuclear Generating Plant  
Docket 50-263  
Renewed Facility Operating License No. DPR-22

Notification of Changes to Monticello Nuclear Generating Plant (MNGP) Emergency Response Data System (ERDS) and MNGP Data Point Library (DPL)

In accordance with the requirements of 10 CFR 50, Appendix E, Section VI.3.b, Northern States Power Company, a Minnesota corporation (NSPM), d/b/a Xcel Energy, is submitting this letter to provide notification of changes to the MNGP ERDS link software targeted to be implemented by May 30, 2012. Notification is required 30 days prior to any hardware or software changes that could affect the transmission format or computer communication protocol to the ERDS.

These changes will involve a conversion from a dial-up modem-based system to a more reliable internet-based system using a plant information server and NRC-supplied Virtual Private Network (VPN) appliance. During implementation of this change, the existing ERDS link will remain available and will not affect the plant's ability to activate the existing ERDS link, if required.

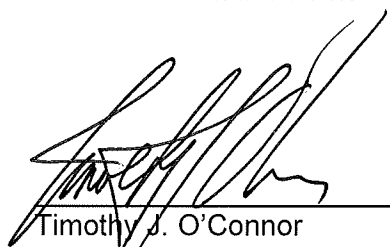
Concurrent with the implementation of the above change, the following four computer points are identified and added in the ERDS-SRS-1-11 MNGP Data Point Library:

- PRM125 MAIN STEAM LINE RAD CH A
- PRM126 MAIN STEAM LINE RAD CH B
- PRM127 MAIN STEAM LINE RAD CH C
- PRM128 MAIN STEAM LINE RAD CH D

A copy of the updated ERDS Data Point Library has been provided in the Enclosure. This notification satisfies the reporting criteria for 10 CFR 50, Appendix E, Section VI.3.a.

Summary of Commitments

This letter contains no new commitments and no revisions to existing commitments.



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Timothy J. O'Connor  
Site Vice-President  
Monticello Nuclear Generating Plant  
Northern States Power Company-Minnesota

Enclosure

cc: Regional Administrator, Region III, USNRC  
Project Manager, Monticello Nuclear Generating Plant, USNRC  
Resident Inspector, Monticello Nuclear Generating Plant, USNRC

**Enclosure**

**Monticello Nuclear Generating Plant**

**Changes to Emergency Response Data System  
Data Point Library**

(66 pages to follow)

<b>SRS</b>	Title:	Number:
	Process Computer System - Emergency Response Data System (ERDS) - Data Point Library	ERDS-SRS-1-11
		Sheet No: 1

Prepared By: <u><i>Kevin Van Der</i></u>	Effective Date: <u><i>May 30, 2012</i></u>
Reviewed By: <u><i>Bob Claude Jr.</i></u>	Approved By: <u><i>Kevin Van Der</i></u>

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<b><u>SHEET</u></b>	<b><u>DESCRIPTION</u></b>	<b><u>REVISION and DATE</u></b>
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7	NI INTER RANGE	Revision 9, 5/06/09
8	NI SOURC RNG	Revision 9, 5/06/09
9	REAC VES LEV	Revision 9, 5/06/09
10	RCS PRESSURE	Revision 9, 5/06/09
11	MAIN FD FLOW	Revision 9, 5/06/09
13	HPCI FLOW	Revision 9, 5/06/09
14	RCIC FLOW	Revision 9, 5/06/09
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19	CR SPRAY FL	Revision 9, 5/06/09
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22	DW FD SMP LV	Revision 9, 5/06/09
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37	MN STEAM RAD	Revision 11, 4/20/12
41	DW PRESS	Revision 9, 5/06/09
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44	SP LEVEL	Revision 9, 5/06/09
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47	O2 CONC	Revision 9, 5/06/09
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51	WIND SPEED	Revision 10, 3/15/12
55	WIND DIR	Revision 10, 3/15/12
59	STAB CLASS	Revision 10, 3/15/12
63	Contacts	Revision 9, 5/06/09
65	Data Feeder Information	Revision 11, 4/20/12

**SRS**

Title:  
Process Computer System - Emergency Response Data  
System (ERDS) - Data Point Library

Number:  
ERDS-SRS-1-11

Sheet No: 2

### DATA POINT LIBRARY REFERENCE FILE

Date:	01/07/92
Reactor Unit:	MO1
Data Feeder:	PCS
NRC ERDS Parameter:	NI POWER RNG
Point ID:	C51C4001
Plant Spec Point Desc.:	AVERAGE CONSISTENT APRM READING
Generic/Cond Desc.:	NUCLEAR INSTRUMENTS, POWER RANGE
Analog/Digital	A
Engr Units/Dig States:	%
Engr Units Conversion:	N/A
Minimum Instr Range:	0
Maximum Instr Range:	125
Zero Point Reference:	N/A
Reference Point Notes:	N/A
PROC or SENS:	P
Number of Sensors:	12
How Processed:	AVERAGE OF CONSISTENT APRMS
Sensor Location:	APRM UTILIZE 24 LPRMS LOCATED IN CORE
Alarm/Trip Set Points:	HI-HI TRIP=(.58W+62%), W=%RECIRC FLOW
NI Detector Power Supply	N/A
Cut-off Power Level:	
NI Detector Power Supply	N/A
Turn-on Power Level:	
Instrument Failure Mode:	DOWNSCALE(3%), INOP, BYPASS
Temperature Compensation	N/A
For DP Transmitters:	
Level Reference Leg:	N/A
Unique System Desc.:	This point consists of either an average of all consistent APRMs or an average of in-range APRMs if there are less than the required number of consistent signals. APRMS(Average Power Range Monitors) consist of an average of 24 LPRMs (Local Power Range Monitors). Each individual APRM signal will fail on Downscale(3%), Inop, or Bypass. HI-HI trip feed RPS SCRAM for one-out-of-three-twice logic. HI trip (.58W+50%) results in Rod Withdraw Block.

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**DATA POINT LIBRARY REFERENCE FILE**

Date:	05/06/09
Reactor Unit:	MO1
Data Feeder:	PCS
NRC ERDS Parameter:	NI POWER RNG
Point ID:	NUI196
Plant Spec Point Desc.:	APRM #1
Generic/Cond Desc.:	NUCLEAR INSTRUMENTS, POWER RANGE
Analog/Digital	A
Engr Units/Dig States:	%
Engr Units Conversion:	N/A
Minimum Instr Range:	0
Maximum Instr Range:	125
Zero Point Reference:	N/A
Reference Point Notes:	N/A
PROC or SENS:	S
Number of Sensors:	24
How Processed:	AVERAGE OF 24 LPRMs
Sensor Location:	APRM UTILIZE 24 LPRMs LOCATED IN CORE
Alarm/Trip Set Points:	Note A
NI Detector Power Supply	N/A
Cut-off Power Level:	
NI Detector Power Supply	N/A
Turn-on Power Level:	
Instrument Failure Mode:	HIGH & LOW SENSOR
Temperature Compensation	N/A
For DP Transmitters:	N/A
Level Reference Leg:	N/A
Unique System Desc.:	The APRM provides overall power range monitoring, the range monitored is from approximately 3 to 100% power. The reading of APRM is the average of 24 LPRM signals and provides output signal that are proportional to average neutron flux. The output signal is recorded on reactor control console recorder and indicated on the APRM Panel indicator. Trip circuit associated with APRM channel provides trip output signals to the RMCS rod withdrawal block circuits and the RPS scram circuitry.

Note A: Three Alarm/Trip Set Points:  
 HI-HI TRIP=(.66W+59.6%),W=%RECIRC FLOW  
 UPSCALE TRIP=119.5% (MODE SWITCH IN RUN)  
 UPSCALE TRIP=18% (MODE SWITCH NOT IN RUN)

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**DATA POINT LIBRARY REFERENCE FILE**

Date:	05/06/09
Reactor Unit:	MO1
Data Feeder:	PCS
NRC ERDS Parameter:	NI POWER RNG
Point ID:	NUI197
Plant Spec Point Desc.:	APRM #4
Generic/Cond Desc.:	NUCLEAR INSTRUMENTS, POWER RANGE
Analog/Digital	A
Engr Units/Dig States:	%
Engr Units Conversion:	N/A
Minimum Instr Range:	0
Maximum Instr Range:	125
Zero Point Reference:	N/A
Reference Point Notes:	N/A
PROC or SENS:	S
Number of Sensors:	24
How Processed:	AVERAGE OF 24 LPRMs
Sensor Location:	APRM UTILIZE 24 LPRMs LOCATED IN CORE
Alarm/Trip Set Points:	Note A
NI Detector Power Supply	N/A
Cut-off Power Level:	
NI Detector Power Supply	N/A
Turn-on Power Level:	
Instrument Failure Mode:	HIGH & LOW SENSOR
Temperature Compensation	N/A
For DP Transmitters:	N/A
Level Reference Leg:	N/A
Unique System Desc.:	The APRM provides overall power range monitoring, the range monitored is from approximately 3 to 100% power. The reading of APRM is the average of 24 LPRM signals and provides output signal that are proportional to average neutron flux. The output signal is recorded on reactor control console recorder and indicated on the APRM Panel indicator. Trip circuit associated with APRM channel provides trip output signals to the RMCS rod withdrawal block circuits and the RPS scram circuitry.

Note A: Three Alarm/Trip Set Points:  
 HI-HI TRIP=(.66W+59.6%),W=%RECIRC FLOW  
 UPSCALE TRIP=119.5% (MODE SWITCH IN RUN)  
 UPSCALE TRIP=18% (MODE SWITCH NOT IN RUN)

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**DATA POINT LIBRARY REFERENCE FILE**

Date:	05/06/09
Reactor Unit:	MO1
Data Feeder:	PCS
NRC ERDS Parameter:	NI POWER RNG
Point ID:	NUI198
Plant Spec Point Desc.:	APRM #2
Generic/Cond Desc.:	NUCLEAR INSTRUMENTS, POWER RANGE
Analog/Digital	A
Engr Units/Dig States:	%
Engr Units Conversion:	N/A
Minimum Instr Range:	0
Maximum Instr Range:	125
Zero Point Reference:	N/A
Reference Point Notes:	N/A
PROC or SENS:	S
Number of Sensors:	24
How Processed:	AVERAGE OF 24 LPRMs
Sensor Location:	APRM UTILIZE 24 LPRMs LOCATED IN CORE
Alarm/Trip Set Points:	sNote A
NI Detector Power Supply	N/A
Cut-off Power Level:	
NI Detector Power Supply	N/A
Turn-on Power Level:	
Instrument Failure Mode:	HIGH & LOW SENSOR
Temperature Compensation	N/A
For DP Transmitters:	N/A
Level Reference Leg:	N/A
Unique System Desc.:	The APRM provides overall power range monitoring, the range monitored is from approximately 3 to 100% power. The reading of APRM is the average of 24 LPRM signals and provides output signal that are proportional to average neutron flux. The output signal is recorded on reactor control console recorder and indicated on the APRM Panel indicator. Trip circuit associated with APRM channel provides trip output signals to the RMCS rod withdrawal block circuits and the RPS scram circuitry.

Note A: Three Alarm/Trip Set Points:  
 HI-HI TRIP=(.66W+59.6%), W=%RECIRC FLOW  
 UPSCALE TRIP=119.5% (MODE SWITCH IN RUN)  
 UPSCALE TRIP=18% (MODE SWITCH NOT IN RUN)



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### DATA POINT LIBRARY REFERENCE FILE

Date:	05/06/09
Reactor Unit:	MO1
Data Feeder:	PCS
NRC ERDS Parameter:	NI POWER RNG
Point ID:	NUI200
Plant Spec Point Desc.:	APRM #3
Generic/Cond Desc.:	NUCLEAR INSTRUMENTS, POWER RANGE
Analog/Digital	A
Engr Units/Dig States:	%
Engr Units Conversion:	N/A
Minimum Instr Range:	0
Maximum Instr Range:	125
Zero Point Reference:	N/A
Reference Point Notes:	N/A
PROC or SENS:	S
Number of Sensors:	24
How Processed:	AVERAGE OF 24 LPRMs
Sensor Location:	APRM UTILIZE 24 LPRMs LOCATED IN CORE
Alarm/Trip Set Points:	Note A
NI Detector Power Supply	N/A
Cut-off Power Level:	
NI Detector Power Supply	N/A
Turn-on Power Level:	
Instrument Failure Mode:	HIGH & LOW SENSOR
Temperature Compensation	N/A
For DP Transmitters:	N/A
Level Reference Leg:	N/A
Unique System Desc.:	The APRM provides overall power range monitoring, the range monitored is from approximately 3 to 100% power. The reading of APRM is the average of 24 LPRM signals and provides output signal that are proportional to average neutron flux. The output signal is recorded on reactor control console recorder and indicated on the APRM Panel indicator. Trip circuit associated with APRM channel provides trip output signals to the RMCS rod withdrawal block circuits and the RPS scram circuitry.

Note A: Three Alarm/Trip Set Points:  
HI-HI TRIP=(.66W+59.6%),W=%RECIRC FLOW  
UPSCALE TRIP=119.5% (MODE SWITCH IN RUN)  
UPSCALE TRIP=18% (MODE SWITCH NOT IN RUN)

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### DATA POINT LIBRARY REFERENCE FILE

Date: 01/07/92  
Reactor Unit: MO1  
Data Feeder: PCS  
NRC ERDS Parameter: NI INTER RNG  
Point ID:  
Plant Spec Point Desc.: (not available)  
Generic/Cond Desc.: NUCLEAR INSTRUMENTS, INTERMEDIATE RANGE  
Analog/Digital  
Engr Units/Dig States:  
Engr Units Conversion:  
Minimum Instr Range:  
Maximum Instr Range:  
Zero Point Reference:  
Reference Point Notes:  
PROC or SENS:  
Number of Sensors:  
How Processed:  
Sensor Location:  
Alarm/Trip Set Points:  
NI Detector Power Supply  
Cut-off Power Level:  
NI Detector Power Supply  
Turn-on Power Level:  
Instrument Failure Mode:  
Temperature Compensation  
For DP Transmitters:  
Level Reference Leg:  
Unique System Desc.: Not available to Process Computer  
System.

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### DATA POINT LIBRARY REFERENCE FILE

Date: 01/07/92  
Reactor Unit: MO1  
Data Feeder: PCS  
NRC ERDS Parameter: NI SOURC RNG  
Point ID:  
Plant Spec Point Desc.: (not available)  
Generic/Cond Desc.: NUCLEAR INSTRUMENTS, SOURCE RANGE  
Analog/Digital  
Engr Units/Dig States:  
Engr Units Conversion:  
Minimum Instr Range:  
Maximum Instr Range:  
Zero Point Reference:  
Reference Point Notes:  
PROC or SENS:  
Number of Sensors:  
How Processed:  
Sensor Location:  
Alarm/Trip Set Points:  
NI Detector Power Supply  
Cut-off Power Level:  
NI Detector Power Supply  
Turn-on Power Level:  
Instrument Failure Mode:  
Temperature Compensation  
For DP Transmitters:  
Level Reference Leg:  
Unique System Desc.: Not available to Process Computer System.

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### DATA POINT LIBRARY REFERENCE FILE

Date:	01/07/92
Reactor Unit:	MO1
Data Feeder:	PCS
NRC ERDS Parameter:	REAC VES LEV
Point ID:	B21C0010
Plant Spec Point Desc.:	RPV VALIDATED WATER LEVEL
Generic/Cond Desc.:	REACTOR VESSEL WATER LEVEL
Analog/Digital	A
Engr Units/Dig States:	INCHES
Engr Units Conversion:	N/A
Minimum Instr Range:	-350
Maximum Instr Range:	350
Zero Point Reference:	MSSKRT
Reference Point Notes:	0" CORRESPONDS TO 126" ABOVE TOP OF FUEL
PROC or SENS:	P
Number of Sensors:	28
How Processed:	WEIGHTED AVERAGE OF CONSISTENT LEVELS
Sensor Location:	LEVEL REF LEGS - 5 HOT(IN DW) & 2 COLD
Alarm/Trip Set Points:	-48"=ECCS INIT, 9"=SCRAM, 48"=HI TRIP
NI Detector Power Supply	N/A
Cut-off Power Level:	
NI Detector Power Supply	N/A
Turn-on Power Level:	
Instrument Failure Mode:	+280" TOP OF REACTOR HEAD
Temperature Compensation	N/A
For DP Transmitters:	
Level Reference Leg:	WET
Unique System Desc.:	This point consists of either a weighted average of all consistent level indicators or an average of in-range level indicators if there are less than the required number of consistent signals. Algorithm performs temperature compensation and evaluates reference leg flashing on 7 level signals. Safeguards Levels (-50" to 50") utilize cold reference leg design outside of drywell. ECCS levels (-335" to 65") are invalidated with recirc pumps running. Other levels include 2 feedwater (0 to 60") and 1 vessel flood (-50" to 350").

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### DATA POINT LIBRARY REFERENCE FILE

Date:	01/19/93
Reactor Unit:	MO1
Data Feeder:	PCS
NRC ERDS Parameter:	RCS PRESSURE
Point ID:	B21C0210
Plant Spec Point Desc.:	RPV VALIDATED PRESSURE
Generic/Cond Desc.:	REACTOR COOLANT SYSTEM PRESSURE
Analog/Digital	A
Engr Units/Dig States:	PSIG
Engr Units Conversion:	N/A
Minimum Instr Range:	0.00
Maximum Instr Range:	1500
Zero Point Reference:	N/A
Reference Point Notes:	N/A
PROC or SENS:	P
Number of Sensors:	3
How Processed:	WEIGHTED AVERAGE OF CONSISTENT LEVELS
Sensor Location:	PRESSURE SENSED OFF LEVEL REF LEGS
Alarm/Trip Set Points:	1056 PSIG=SCRAM
NI Detector Power Supply	N/A
Cut-off Power Level:	
NI Detector Power Supply	N/A
Turn-on Power Level:	
Instrument Failure Mode:	HI/LOW SENSOR
Temperature Compensation	N/A
For DP Transmitters:	
Level Reference Leg:	N/A
Unique System Desc.:	This point consists of either a weighted average of all consistent pressure indicators or an average of in-range pressure level indicators if there are less than the required number of consistent signals.

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### DATA POINT LIBRARY REFERENCE FILE

Date:	01/07/92
Reactor Unit:	MO1
Data Feeder:	PCS
NRC ERDS Parameter:	MAIN FD FLOW
Point ID:	C51C9001
Plant Spec Point Desc.:	SMOOTHED FEEDWATER FLOW LOOP A
Generic/Cond Desc.:	FEEDWATER FLOW INTO THE REACTOR SYSTEM
Analog/Digital	A
Engr Units/Dig States:	MLB/HR
Engr Units Conversion:	N/A
Minimum Instr Range:	0
Maximum Instr Range:	4
Zero Point Reference:	N/A
Reference Point Notes:	N/A
PROC or SENS:	P
Number of Sensors:	4
How Processed:	SMOOTHED FW FLOW CALC FROM A NOZZLE D/P
Sensor Location:	FW NOZZLE IS DOWNSTREAM OF RX FW PUMPS
Alarm/Trip Set Points:	N/A
NI Detector Power Supply	N/A
Cut-off Power Level:	
NI Detector Power Supply	N/A
Turn-on Power Level:	
Instrument Failure Mode:	HI/LOW SENSOR
Temperature Compensation	N/A
For DP Transmitters:	N/A
Level Reference Leg:	N/A
Unique System Desc.:	SMOOTHED FW FLOW LOOP A is calculated using Feedwater nozzle D/P, Pressure, and temperature. Smoothing algorithm sums 1/12 current sample + 11/12 of previous smoothed value. Sampling frequency is 5 seconds. Feedwater nozzles are located downstream of Reactor Feedwater Pumps and ahead of high pressure heaters.

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### DATA POINT LIBRARY REFERENCE FILE

Date:	01/07/92
Reactor Unit:	MO1
Data Feeder:	PCS
NRC ERDS Parameter:	MAIN FD FLOW
Point ID:	C51C9002
Plant Spec Point Desc.:	SMOOTHED FEEDWATER FLOW LOOP B
Generic/Cond Desc.:	FEEDWATER FLOW INTO THE REACTOR SYSTEM
Analog/Digital	A
Engr Units/Dig States:	MLB/HR
Engr Units Conversion:	N/A
Minimum Instr Range:	0
Maximum Instr Range:	4
Zero Point Reference:	N/A
Reference Point Notes:	N/A
PROC or SENS:	P
Number of Sensors:	4
How Processed:	SMOOTHED FW FLOW CALC FROM B NOZZLE D/P
Sensor Location:	FW NOZZLE IS DOWNSTREAM OF RX FW PUMPS
Alarm/Trip Set Points:	N/A
NI Detector Power Supply	N/A
Cut-off Power Level:	
NI Detector Power Supply	N/A
Turn-on Power Level:	
Instrument Failure Mode:	HI/LOW SENSOR
Temperature Compensation	N/A
For DP Transmitters:	N/A
Level Reference Leg:	N/A
Unique System Desc.:	SMOOTHED FW FLOW LOOP B is calculated using Feedwater nozzle D/P, Pressure, and temperature. Smoothing algorithm sums 1/12 current sample + 11/12 of previous smoothed value. Sampling frequency is 5 seconds. Feedwater nozzles are located downstream of Reactor Feedwater Pumps and ahead of high pressure heaters.

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### DATA POINT LIBRARY REFERENCE FILE

Date:	01/19/93
Reactor Unit:	MO1
Data Feeder:	PCS
NRC ERDS Parameter:	HPCI FLOW
Point ID:	HPC100
Plant Spec Point Desc.:	HPCI PUMP DISCHARGE FLOW
Generic/Cond Desc.:	HIGH PRESSURE COOLANT INJECTION FLOW
Analog/Digital	A
Engr Units/Dig States:	GPM
Engr Units Conversion:	N/A
Minimum Instr Range:	0
Maximum Instr Range:	3500
Zero Point Reference:	N/A
Reference Point Notes:	N/A
PROC or SENS:	S
Number of Sensors:	1
How Processed:	SIGNAL INPUT FROM FLOW TRANSMITTER
Sensor Location:	FLOW ELEMENT ON HPCI PUMP DISCHARGE
Alarm/Trip Set Points:	N/A
NI Detector Power Supply	N/A
Cut-off Power Level:	
NI Detector Power Supply	N/A
Turn-on Power Level:	
Instrument Failure Mode:	HIGH & LOW SENSOR
Temperature Compensation	N/A
For DP Transmitters:	N/A
Level Reference Leg:	N/A
Unique System Desc.:	HPCI is a steam turbine driven pump designed to deliver 2700 gpm over reactor pressure range of 150-1120 psig. Flow element is located on pump discharge line ahead of the test return line to the CST tanks and injection line into "B" feedwater line. HPCI injects into feedwater line prior to the line entering containment.



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### DATA POINT LIBRARY REFERENCE FILE

Date:	01/07/92
Reactor Unit:	MO1
Data Feeder:	PCS
NRC ERDS Parameter:	RCIC FLOW
Point ID:	RCI100
Plant Spec Point Desc.:	RCIC PUMP DISCHARGE FLOW
Generic/Cond Desc.:	REACTOR CORE ISOLATION COOLING
Analog/Digital	A
Engr Units/Dig States:	GPM
Engr Units Conversion:	N/A
Minimum Instr Range:	0
Maximum Instr Range:	500
Zero Point Reference:	N/A
Reference Point Notes:	N/A
PROC or SENS:	S
Number of Sensors:	1
How Processed:	SIGNAL INPUT FROM FLOW TRANSMITTER
Sensor Location:	FLOW ELEMENT ON RCIC PUMP DISCHARGE
Alarm/Trip Set Points:	N/A
NI Detector Power Supply	N/A
Cut-off Power Level:	
NI Detector Power Supply	N/A
Turn-on Power Level:	
Instrument Failure Mode:	HIGH & LOW SENSOR
Temperature Compensation	N/A
For DP Transmitters:	N/A
Level Reference Leg:	N/A
Unique System Desc.:	RCIC is a steam turbine driven pump designed to deliver 400 gpm over reactor pressure range of 150-1120 psig. Flow element is located on pump discharge line ahead of the test return line to the CST tanks and injection line into "A" feedwater line. RCIC injects into feedwater line prior to the line entering containment.

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### DATA POINT LIBRARY REFERENCE FILE

Date:	01/07/92
Reactor Unit:	MO1
Data Feeder:	PCS
NRC ERDS Parameter:	LPCI FLOW
Point ID:	RHR100
Plant Spec Point Desc.:	CONTAINMENT SPRAY/COOLING A LOOP
Generic/Cond Desc.:	LOW PRESSURE COOLANT INJECTION FLOW
Analog/Digital	A
Engr Units/Dig States:	GPM
Engr Units Conversion:	N/A
Minimum Instr Range:	0
Maximum Instr Range:	10000
Zero Point Reference:	N/A
Reference Point Notes:	N/A
PROC or SENS:	S
Number of Sensors:	1
How Processed:	SIGNAL INPUT FROM FLOW TRANSMITTER
Sensor Location:	DISCHARGE OF RHR HEAT EXCHANGERS
Alarm/Trip Set Points:	N/A
NI Detector Power Supply	N/A
Cut-off Power Level:	
NI Detector Power Supply	N/A
Turn-on Power Level:	
Instrument Failure Mode:	HIGH & LOW SENSOR
Temperature Compensation	N/A
For DP Transmitters:	N/A
Level Reference Leg:	N/A
Unique System Desc.:	CONTAINMENT SPRAY/COOLING A LOOP flow is the RHR flow to the A loop drywell spray, torus spray and torus cooling. Each RHR pump is approximately rated at 4000 gpm depending on system head. Two pumps are located in each loop although flow can be cross tied between A and B loops.

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### DATA POINT LIBRARY REFERENCE FILE

Date:	01/07/92
Reactor Unit:	MO1
Data Feeder:	PCS
NRC ERDS Parameter:	LPCI FLOW
Point ID:	RHR101
Plant Spec Point Desc.:	CONTAINMENT SPRAY/COOLING B LOOP
Generic/Cond Desc.:	LOW PRESSURE COOLANT INJECTION FLOW
Analog/Digital	A
Engr Units/Dig States:	GPM
Engr Units Conversion:	N/A
Minimum Instr Range:	0
Maximum Instr Range:	10000
Zero Point Reference:	N/A
Reference Point Notes:	N/A
PROC or SENS:	S
Number of Sensors:	1
How Processed:	SIGNAL INPUT FROM FLOW TRANSMITTER
Sensor Location:	DISCHARGE OF RHR HEAT EXCHANGERS
Alarm/Trip Set Points:	N/A
NI Detector Power Supply	N/A
Cut-off Power Level:	
NI Detector Power Supply	N/A
Turn-on Power Level:	
Instrument Failure Mode:	HIGH & LOW SENSOR
Temperature Compensation	N/A
For DP Transmitters:	N/A
Level Reference Leg:	N/A
Unique System Desc.:	CONTAINMENT SPRAY/COOLING B LOOP flow is the RHR flow to the B loop drywell spray, torus spray and torus cooling. Each RHR pump is approximately rated at 4000 gpm depending on system head. Two pumps are located in each loop although flow can be cross tied between A and B loops.

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Date:	01/07/92
Reactor Unit:	MO1
Data Feeder:	PCS
NRC ERDS Parameter:	LPCI FLOW
Point ID:	RHR102
Plant Spec Point Desc.:	RHR LOOP A INJECT FLOW
Generic/Cond Desc.:	LOW PRESSURE COOLANT INJECTION FLOW
Analog/Digital	A
Engr Units/Dig States:	GPM
Engr Units Conversion:	N/A
Minimum Instr Range:	0
Maximum Instr Range:	10000
Zero Point Reference:	N/A
Reference Point Notes:	N/A
PROC or SENS:	S
Number of Sensors:	1
How Processed:	SIGNAL INPUT FROM FLOW TRANSMITTER
Sensor Location:	DISCHARGE OF RHR HEAT EXCHANGERS
Alarm/Trip Set Points:	N/A
NI Detector Power Supply	N/A
Cut-off Power Level:	
NI Detector Power Supply	N/A
Turn-on Power Level:	
Instrument Failure Mode:	HIGH & LOW SENSOR
Temperature Compensation	N/A
For DP Transmitters:	N/A
Level Reference Leg:	N/A
Unique System Desc.:	RHR LOOP A INJECT FLOW is the RHR flow to the A Recirc Loop, Reactor Head Cooling, Waste Surge Tank, and cross tie to B Loop. Each RHR pump is rated at about 4000 gpm depending on system head. Two pumps are located in each loop although flow can be cross tied between A and B loops.

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### DATA POINT LIBRARY REFERENCE FILE

Date:	01/07/92
Reactor Unit:	MO1
Data Feeder:	PCS
NRC ERDS Parameter:	LPCI FLOW
Point ID:	RHR103
Plant Spec Point Desc.:	RHR LOOP B INJECT FLOW
Generic/Cond Desc.:	LOW PRESSURE COOLANT INJECTION FLOW
Analog/Digital	A
Engr Units/Dig States:	GPM
Engr Units Conversion:	N/A
Minimum Instr Range:	0
Maximum Instr Range:	10000
Zero Point Reference:	N/A
Reference Point Notes:	N/A
PROC or SENS:	S
Number of Sensors:	1
How Processed:	SIGNAL INPUT FROM FLOW TRANSMITTER
Sensor Location:	DISCHARGE OF RHR HEAT EXCHANGERS
Alarm/Trip Set Points:	N/A
NI Detector Power Supply	N/A
Cut-off Power Level:	
NI Detector Power Supply	N/A
Turn-on Power Level:	
Instrument Failure Mode:	HIGH & LOW SENSOR
Temperature Compensation	N/A
For DP Transmitters:	N/A
Level Reference Leg:	N/A
Unique System Desc.:	RHR LOOP B INJECT FLOW is the RHR flow to the B Recirc Loop and cross tie to A Loop. Each RHR pump is rated at about 4000 gpm depending on system head. Two pumps are located in each loop although flow can be cross tied between A and B loops.

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### DATA POINT LIBRARY REFERENCE FILE

Date:	01/07/92
Reactor Unit:	MO1
Data Feeder:	PCS
NRC ERDS Parameter:	CR SPRAY FL
Point ID:	CSP100
Plant Spec Point Desc.:	CS LOOP 11 FLOW
Generic/Cond Desc.:	Core Spray Cooling System Flow
Analog/Digital	A
Engr Units/Dig States:	GPM
Engr Units Conversion:	N/A
Minimum Instr Range:	0
Maximum Instr Range:	5000
Zero Point Reference:	N/A
Reference Point Notes:	N/A
PROC or SENS:	S
Number of Sensors:	1
How Processed:	SIGNAL INPUT FROM FLOW TRANSMITTER
Sensor Location:	ON PUMP DISCHARGE LINE
Alarm/Trip Set Points:	
NI Detector Power Supply	N/A
Cut-off Power Level:	
NI Detector Power Supply	N/A
Turn-on Power Level:	
Instrument Failure Mode:	HIGH & LOW SENSOR
Temperature Compensation	N/A
For DP Transmitters:	
Level Reference Leg:	N/A
Unique System Desc.:	The loop A Core Spray system consists of one electric driven pump designed to deliver 3020 gpm against a system head corresponding to a reactor pressure of 130psi above containment pressure. The flow element is located on the pump discharge line just a head of the reactor vessel injection and test return lines.

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### DATA POINT LIBRARY REFERENCE FILE

Date:	01/07/92
Reactor Unit:	MO1
Data Feeder:	PCS
NRC ERDS Parameter:	CR SPRAY FL
Point ID:	CSP101
Plant Spec Point Desc.:	CS LOOP 12 FLOW
Generic/Cond Desc.:	CORE SPRAY COOLING SYSTEM FLOW
Analog/Digital	A
Engr Units/Dig States:	GPM
Engr Units Conversion:	N/A
Minimum Instr Range:	0
Maximum Instr Range:	5000
Zero Point Reference:	N/A
Reference Point Notes:	N/A
PROC or SENS:	S
Number of Sensors:	1
How Processed:	SIGNAL INPUT FROM FLOW TRANSMITTER
Sensor Location:	ON PUMP DISCHARGE LINE
Alarm/Trip Set Points:	
NI Detector Power Supply	N/A
Cut-off Power Level:	
NI Detector Power Supply	N/A
Turn-on Power Level:	
Instrument Failure Mode:	HIGH & LOW SENSOR
Temperature Compensation	N/A
For DP Transmitters:	
Level Reference Leg:	N/A
Unique System Desc.:	The loop B Core Spray system consists of one electric driven pump designed to deliver 3020 gpm against a system head corresponding to a reactor pressure of 130psi above containment pressure. The flow element is located on the pump discharge line just a head of the reactor vessel injection and test return lines.

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### DATA POINT LIBRARY REFERENCE FILE

Date: 01/07/92  
Reactor Unit: MO1  
Data Feeder: PCS  
NRC ERDS Parameter: DW ED SMP LV  
Point ID: PCT138  
Plant Spec Point Desc.: DW EQUIP DRAIN SUMP VOL  
Generic/Cond Desc.: DRYWELL FLOOR DRAIN SUMP LEVEL  
Analog/Digital A  
Engr Units/Dig States: GAL  
Engr Units Conversion: N/A  
Minimum Instr Range: 164  
Maximum Instr Range: 565  
Zero Point Reference: N/A  
Reference Point Notes: N/A  
PROC or SENS: S  
Number of Sensors: 1  
How Processed: SIGNAL INPUT FROM LEVEL TRANSMITTER  
Sensor Location: DIRECTLY BELOW RX VESSEL IN DRYWELL  
Alarm/Trip Set Points: HI=555  
NI Detector Power Supply N/A  
Cut-off Power Level:  
NI Detector Power Supply N/A  
Turn-on Power Level:  
Instrument Failure Mode: HIGH & LOW SENSOR  
Temperature Compensation N/A  
For DP Transmitters:  
Level Reference Leg: N/A  
Unique System Desc.: This sump collects liquid effluent from valve stem leak-offs, Rx Recirc Pump and piping maintenance drains, reactor well bulkhead and bellows drains, reactor vessel flange leakoff and Drywell Equipment Drain Sump heat exchanger drain. Two 50 GPM pumps discharge the water to the Waste Collector Tank in the Reactor building. Sump is isolated by Group II Isolation or manually from control room. Sump overflows into Drywell Floor Drain Sump at 1090 Gallons.



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Date:	01/07/92
Reactor Unit:	MO1
Data Feeder:	PCS
NRC ERDS Parameter:	DW FD SMP LV
Point ID:	PCT139
Plant Spec Point Desc.:	DW FLOOR DRAIN SUMP VOL
Generic/Cond Desc.:	DRYWELL FLOOR DRAIN SUMP LEVEL
Analog/Digital	A
Engr Units/Dig States:	GAL
Engr Units Conversion:	N/A
Minimum Instr Range:	164
Maximum Instr Range:	565
Zero Point Reference:	N/A
Reference Point Notes:	N/A
PROC or SENS:	S
Number of Sensors:	1
How Processed:	SIGNAL INPUT FROM LEVEL TRANSMITTER
Sensor Location:	DIRECTLY BELOW RX VESSEL IN DRYWELL
Alarm/Trip Set Points:	HI=555
NI Detector Power Supply	N/A
Cut-off Power Level:	
NI Detector Power Supply	N/A
Turn-on Power Level:	
Instrument Failure Mode:	HIGH & LOW SENSOR
Temperature Compensation	N/A
For DP Transmitters:	
Level Reference Leg:	N/A
Unique System Desc.:	This sump collects liquid effluent from Drywell cooler drains, floor drains, control rod drive leakage and drains, closed cooling water piping drains, and piping and equipment maintenance vents. Two 50 GPM pumps discharge the water to the Floor Drain Collector Tank in the Reactor building. Sump is isolated by Group II Isolation or manually from control room. Sump overflows into Drywell Equipment Drain Sump at 1090 Gallons.

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### DATA POINT LIBRARY REFERENCE FILE

Date: 3/15/12  
Reactor Unit: MO1  
Data Feeder: PCS  
NRC ERDS Parameter: EFF GAS RAD  
Point ID: PRM500FR  
Plant Spec Point Desc.: STACK EFF RAD A 15MRUN  
Generic/Cond Desc.: RADIOACTIVITY OF RELEASED GASES  
Analog/Digital: A  
Engr Units/Dig States: uCi/S  
Engr Units Conversion: N/A  
Minimum Instr Range: 1  
Maximum Instr Range: 10E12  
Zero Point Reference: N/A  
Reference Point Notes: N/A  
PROC or SENS: P  
Number of Sensors: 1  
How Processed: 15 MINUTE AVERAGE OF 5 SECOND VALUES  
Sensor Location: FOUR ISOKINETIC PROBES IN OFF GAS STACK  
Alarm/Trip Set Points: N/A  
NI Detector Power Supply: N/A  
Cut-off Power Level:  
NI Detector Power Supply: N/A  
Turn-on Power Level:  
Instrument Failure Mode: HIGH & LOW SENSOR  
Temperature Compensation: N/A  
For DP Transmitters:  
Level Reference Leg: N/A  
Unique System Desc.: Data is collected every five seconds, averaged every minute,  
and stored in data files as 15-minute average.

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### DATA POINT LIBRARY REFERENCE FILE

Date:	3/15/12
Reactor Unit:	MO1
Data Feeder:	PCS
NRC ERDS Parameter:	EFF GAS RAD
Point ID:	PRM501FR
Plant Spec Point Desc.:	STACK EFF RAD B 15MRUN
Generic/Cond Desc.:	RADIOACTIVITY OF RELEASED GASES
Analog/Digital:	A
Engr Units/Dig States:	uCi/S
Engr Units Conversion:	N/A
Minimum Instr Range:	1
Maximum Instr Range:	10E12
Zero Point Reference:	N/A
Reference Point Notes:	N/A
PROC or SENS:	P
Number of Sensors:	1
How Processed:	15 MINUTE AVERAGE OF 5 SECOND VALUES
Sensor Location:	FOUR ISOKINETIC PROBES IN OFF GAS STACK
Alarm/Trip Set Points:	N/A
NI Detector Power Supply	N/A
Cut-off Power Level:	
NI Detector Power Supply	N/A
Turn-on Power Level:	
Instrument Failure Mode:	HIGH & LOW SENSOR
Temperature Compensation	N/A
For DP Transmitters:	
Level Reference Leg:	N/A
Unique System Desc.:	Data is collected every five seconds, averaged every minute, and stored in data files as 15-minute average.

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### DATA POINT LIBRARY REFERENCE FILE

Date:	3/15/12
Reactor Unit:	MO1
Data Feeder:	PCS
NRC ERDS Parameter:	EFF GAS RAD
Point ID:	PRM123FR
Plant Spec Point Desc.:	RBV EFFLUENT MONITOR CHA 15MAVG
Generic/Cond Desc.:	RADIOACTIVITY OF RELEASED GASES
Analog/Digital:	A
Engr Units/Dig States:	uCi/S
Engr Units Conversion:	N/A
Minimum Instr Range:	1
Maximum Instr Range:	10E12
Zero Point Reference:	N/A
Reference Point Notes:	N/A
PROC or SENS:	P
Number of Sensors:	1
How Processed:	15 MINUTE AVERAGE OF 5 SECOND VALUES
Sensor Location:	ISOKINETIC PROBES IN EACH RX BLDG VENT
Alarm/Trip Set Points:	N/A
NI Detector Power Supply	N/A
Cut-off Power Level:	
NI Detector Power Supply	N/A
Turn-on Power Level:	
Instrument Failure Mode:	HIGH & LOW SENSOR
Temperature Compensation	N/A
For DP Transmitters:	
Level Reference Leg:	N/A
Unique System Desc.:	Data is collected every five seconds, averaged every minute, and stored in data files as 15-minute average.

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Date:	3/15/12
Reactor Unit:	MO1
Data Feeder:	PCS
NRC ERDS Parameter:	EFF GAS RAD
Point ID:	PRM124FR
Plant Spec Point Desc.:	RBV EFFLUENT MONITOR CHB 15MAVG
Generic/Cond Desc.:	RADIOACTIVITY OF RELEASED GASES
Analog/Digital:	A
Engr Units/Dig States:	uCi/S
Engr Units Conversion:	N/A
Minimum Instr Range:	1
Maximum Instr Range:	10E12
Zero Point Reference:	N/A
Reference Point Notes:	N/A
PROC or SENS:	P
Number of Sensors:	1
How Processed:	15 MINUTE AVERAGE OF 5 SECOND VALUES
Sensor Location:	ISOKINETIC PROBES IN EACH RX BLDG VENT
Alarm/Trip Set Points:	N/A
NI Detector Power Supply	N/A
Cut-off Power Level:	
NI Detector Power Supply	N/A
Turn-on Power Level:	
Instrument Failure Mode:	HIGH & LOW SENSOR
Temperature Compensation	N/A
For DP Transmitters:	
Level Reference Leg:	N/A
Unique System Desc.:	Data is collected every five seconds, averaged every minute, and stored in data files as 15-minute average.

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**DATA POINT LIBRARY REFERENCE FILE**

Date: 01/07/92  
Reactor Unit: MO1  
Data Feeder: PCS  
NRC ERDS Parameter: EFF LIQ RAD  
Point ID: PRM107  
Plant Spec Point Desc.: SERVICE WATER EFFLUENT  
Generic/Cond Desc.: RADIOACTIVITY OF RELEASED LIQUIDS  
Analog/Digital: A  
Engr Units/Dig States: CPS  
Engr Units Conversion:  $\mu\text{Ci}/\text{MI} = ((\text{PRM107 in CPS}) - 5) * (4.3\text{E}-7)$   
Minimum Instr Range: .1  
Maximum Instr Range: 10E6  
Zero Point Reference: N/A  
Reference Point Notes: N/A  
PROC or SENS: S  
Number of Sensors: 1  
How Processed: SIGNAL INPUT FROM MONITOR  
Sensor Location: SAMPLES SW PRIOR TO SW LEAVING RX BLDG  
Alarm/Trip Set Points: HI=20; HI-HI=31400  
NI Detector Power Supply: N/A  
Cut-off Power Level: N/A  
NI Detector Power Supply: N/A  
Turn-on Power Level: N/A  
Instrument Failure Mode: DOWNSCALE & UPSCALE  
Temperature Compensation: N/A  
For DP Transmitters: N/A  
Level Reference Leg: N/A  
Unique System Desc.: Gamma radiation emitted by radioactive materials contained in process liquid are detected by a scintillation detector housed in shielded sampler. Sidestream sample is used from the service water line prior to leaving the Reactor Building. After leaving Reactor Building, line discharges into circ water discharge pipe. Alarm setpoints vary with plant operation as determined by plant chemist.

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**DATA POINT LIBRARY REFERENCE FILE**

Date:	01/07/92
Reactor Unit:	MO1
Data Feeder:	PCS
NRC ERDS Parameter:	EFF LIQ RAD
Point ID:	PRM109
Plant Spec Point Desc.:	RADWASTE EFFLUENT
Generic/Cond Desc.:	RADIOACTIVITY OF RELEASED LIQUIDS
Analog/Digital:	A
Engr Units/Dig States:	CPS
Engr Units Conversion:	$\mu\text{Ci}/\text{MI} = ((\text{PRM109 in CPS}) - 7) * (2.5\text{E}-6)$
Minimum Instr Range:	.1
Maximum Instr Range:	10E6
Zero Point Reference:	N/A
Reference Point Notes:	N/A
PROC or SENS:	S
Number of Sensors:	1
How Processed:	SIGNAL INPUT FROM MONITOR
Sensor Location:	SAMPLED PRIOR TO LEAVING RADWASTE BLDG
Alarm/Trip Set Points:	HI=70; HI-HI=10000000
NI Detector Power Supply	N/A
Cut-off Power Level:	
NI Detector Power Supply	N/A
Turn-on Power Level:	
Instrument Failure Mode:	DOWNSCALE & UPSCALE, INOP
Temperature Compensation	N/A
For DP Transmitters:	
Level Reference Leg:	N/A
Unique System Desc.:	Gamma radiation emitted by radioactive materials contained in process liquid are detected by a scintillation detector housed in shielded sampler. Liquid is sampled prior to leaving the Radwaste Building. After leaving Radwaste Building, line discharges into discharge canal. Although Monticello has permits, Monticello maintains a policy of zero liquid radwaste releases into the river. Alarm setpoints vary with plant operation as determined by plant chemist.

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### DATA POINT LIBRARY REFERENCE FILE

Date: 01/07/92  
Reactor Unit: MO1  
Data Feeder: PCS  
NRC ERDS Parameter: EFF LIQ RAD  
Point ID: PRM110  
Plant Spec Point Desc.: TB NORMAL WASTE SUMP CH A  
Generic/Cond Desc.: RADIOACTIVITY OF RELEASED LIQUIDS  
Analog/Digital: A  
Engr Units/Dig States: CPM  
Engr Units Conversion:  $\mu\text{Ci}/\text{MI} = ((\text{PRM110 in CPM}) - 400) * (3.5\text{E}-9)$   
Minimum Instr Range: 10  
Maximum Instr Range: 10E6  
Zero Point Reference: N/A  
Reference Point Notes: N/A  
PROC or SENS: S  
Number of Sensors: 1  
How Processed: SIGNAL INPUT FROM MONITOR  
Sensor Location: SAMPLED PRIOR TO LEAVING TURBINE BLDG  
Alarm/Trip Set Points: HI=4000; HI-HI=3780000  
NI Detector Power Supply: N/A  
Cut-off Power Level:  
NI Detector Power Supply: N/A  
Turn-on Power Level:  
Instrument Failure Mode: DOWNSCALE & UPSCALE, INOP  
Temperature Compensation For DP Transmitters: N/A  
Level Reference Leg: N/A  
Unique System Desc.: Gamma radiation emitted by radioactive materials contained in process liquid are detected by a scintillation detectors in dry tube in sump. Sampled prior to leaving the Turbine Building. Alarm setpoints vary with plant operation as determined by plant chemist.



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### DATA POINT LIBRARY REFERENCE FILE

Date:	01/07/92
Reactor Unit:	MO1
Data Feeder:	PCS
NRC ERDS Parameter:	EFF LIQ RAD
Point ID:	PRM111
Plant Spec Point Desc.:	TB NORMAL WASTE SUMP CH B
Generic/Cond Desc.:	RADIOACTIVITY OF RELEASED LIQUIDS
Analog/Digital:	A
Engr Units/Dig States:	CPM
Engr Units Conversion:	$\mu\text{Ci}/\text{MI} = ((\text{PRM111 in CPM}) - 400) * (3.5\text{E}-9)$
Minimum Instr Range:	10
Maximum Instr Range:	10E6
Zero Point Reference:	N/A
Reference Point Notes:	N/A
PROC or SENS:	S
Number of Sensors:	1
How Processed:	SIGNAL INPUT FROM MONITOR
Sensor Location:	SAMPLED PRIOR TO LEAVING TURBINE BLDG
Alarm/Trip Set Points:	HI=4000;HI-HI=3780000
NI Detector Power Supply	N/A
Cut-off Power Level:	
NI Detector Power Supply	N/A
Turn-on Power Level:	
Instrument Failure Mode:	DOWNSCALE & UPSCALE, INOP
Temperature Compensation	N/A
For DP Transmitters:	
Level Reference Leg:	N/A
Unique System Desc.:	Gamma radiation emitted by radioactive materials contained in process liquid are detected by a scintillation detectors in dry tube in sump. Sampled prior to leaving the Turbine Building. Alarm setpoints vary with plant operation as determined by plant chemist.

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**DATA POINT LIBRARY REFERENCE FILE**

Date: 01/07/92  
 Reactor Unit: MO1  
 Data Feeder: PCS  
 NRC ERDS Parameter: EFF LIQ RAD  
 Point ID: PRM112  
 Plant Spec Point Desc.: DISCHARGE CANAL MONITOR A  
 Generic/Cond Desc.: RADIOACTIVITY OF RELEASED LIQUIDS  
 Analog/Digital: A  
 Engr Units/Dig States: CPS  
 Engr Units Conversion:  $\mu\text{Ci}/\text{MI} = ((\text{PRM112 in CPS}) - 2) * (1.4\text{E}-7)$   
 Minimum Instr Range: .1  
 Maximum Instr Range: 10E6  
 Zero Point Reference: N/A  
 Reference Point Notes: N/A  
 PROC or SENS: S  
 Number of Sensors: 1  
 How Processed: SIGNAL INPUT FROM MONITOR  
 Sensor Location: 550FT DOWNSTREAM FROM DISCHARGE STRUCTURE  
 Alarm/Trip Set Points: HI=40; HI-HI=93000  
 NI Detector Power Supply: N/A  
 Cut-off Power Level:  
 NI Detector Power Supply: N/A  
 Turn-on Power Level:  
 Instrument Failure Mode: DOWNSCALE & UPSCALE, INOP  
 Temperature Compensation: N/A  
 For DP Transmitters:  
 Level Reference Leg: N/A  
 Unique System Desc.: Gamma radiation emitted by radioactive materials contained in process liquid are detected by a scintillation detectors. Sample is drawn from 4 standpipes in canal 550 feet downstream from the discharge structure. Alarm setpoints vary with plant operation as determined by plant chemist.

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### DATA POINT LIBRARY REFERENCE FILE

Date: 01/07/92  
Reactor Unit: MO1  
Data Feeder: PCS  
NRC ERDS Parameter: EFF LIQ RAD  
Point ID: PRM113  
Plant Spec Point Desc.: DISCHARGE CANAL MONITOR B  
Generic/Cond Desc.: RADIOACTIVITY OF RELEASED LIQUIDS  
Analog/Digital: A  
Engr Units/Dig States: CPS  
Engr Units Conversion:  $\mu\text{Ci}/\text{MI} = ((\text{PRM113 in CPS}) - 2) * (1.4\text{E}-7)$   
Minimum Instr Range: .1  
Maximum Instr Range: 10E6  
Zero Point Reference: N/A  
Reference Point Notes: N/A  
PROC or SENS: S  
Number of Sensors: 1  
How Processed: SIGNAL INPUT FROM MONITOR  
Sensor Location: 550FT DOWNSTREAM FROM DISCHARGE STRUCTURE  
Alarm/Trip Set Points: HI=40; HI-HI=93000  
NI Detector Power Supply: N/A  
Cut-off Power Level: N/A  
NI Detector Power Supply: N/A  
Turn-on Power Level: N/A  
Instrument Failure Mode: DOWNSCALE & UPSCALE, INOP  
Temperature Compensation: N/A  
For DP Transmitters: N/A  
Level Reference Leg: N/A  
Unique System Desc.: Gamma radiation emitted by radioactive materials contained in process liquid are detected by a scintillation detectors. Sample is drawn from 4 standpipes in canal 550 feet downstream from the discharge structure. Alarm setpoints vary with plant operation as determined by plant chemist.

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Date:	01/07/92
Reactor Unit:	MO1
Data Feeder:	PCS
NRC ERDS Parameter:	CND A/E RAD
Point ID:	PRM118
Plant Spec Point Desc.:	OFF GAS CH 1
Generic/Cond Desc.:	CONDENSER AIR EJECTOR RADIOACTIVITY
Analog/Digital:	A
Engr Units/Dig States:	MR/HR
Engr Units Conversion:	N/A
Minimum Instr Range:	1
Maximum Instr Range:	10E6
Zero Point Reference:	N/A
Reference Point Notes:	N/A
PROC or SENS:	S
Number of Sensors:	1
How Processed:	SIGNAL OUTPUT FROM MONITOR
Sensor Location:	SAMPLE DRAWN FROM OFF GAS LINE
Alarm/Trip Set Points:	HI=2500; HI-HI=200000
NI Detector Power Supply	N/A
Cut-off Power Level:	
NI Detector Power Supply	N/A
Turn-on Power Level:	
Instrument Failure Mode:	LOW
Temperature Compensation	N/A
For DP Transmitters:	
Level Reference Leg:	N/A
Unique System Desc.:	OFF GAS CH 1 radiation monitor is positioned adjacent to a vertical sample chamber. A continuous sample is drawn from the off gas line downstream from the Steam Jet Air Ejectors and ahead of the Recombiner trains. The sample is monitored after a time delay of approximately 2 minutes to permit Nitrogen-16 and Oxygen-19 to decay. Alarm setpoints vary with plant operation as determined by plant chemist.

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**DATA POINT LIBRARY REFERENCE FILE**

Date:	01/07/92
Reactor Unit:	MO1
Data Feeder:	PCS
NRC ERDS Parameter:	CND A/E RAD
Point ID:	PRM119
Plant Spec Point Desc.:	OFF GAS CH 2
Generic/Cond Desc.:	CONDENSER AIR EJECTOR RADIOACTIVITY
Analog/Digital:	A
Engr Units/Dig States:	MR/HR
Engr Units Conversion:	N/A
Minimum Instr Range:	1
Maximum Instr Range:	10E6
Zero Point Reference:	N/A
Reference Point Notes:	N/A
PROC or SENS:	S
Number of Sensors:	1
How Processed:	SIGNAL OUTPUT FROM MONITOR
Sensor Location:	SAMPLE DOWNSTREAM OF STEAM JET AIR EJECT
Alarm/Trip Set Points:	HI=2500; HI-HI=200000
NI Detector Power Supply	N/A
Cut-off Power Level:	
NI Detector Power Supply	N/A
Turn-on Power Level:	
Instrument Failure Mode:	LOW
Temperature Compensation	N/A
For DP Transmitters:	
Level Reference Leg:	N/A
Unique System Desc.:	OFF GAS CH 2 radiation monitor is positioned adjacent to a vertical sample chamber. A continuous sample is drawn from the off gas line downstream from the Steam Jet Air Ejectors and ahead of the Recombiner trains. The sample is monitored after a time delay of approximately 2 minutes to permit Nitrogen-16 and Oxygen-19 to decay. Alarm setpoints vary with plant operation as determined by plant chemist.

**SRS**

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Process Computer System - Emergency Response Data  
System (ERDS) - Data Point Library

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### DATA POINT LIBRARY REFERENCE FILE

Date:	01/07/92
Reactor Unit:	MO1
Data Feeder:	PCS
NRC ERDS Parameter:	DW RAD
Point ID:	PCT109
Plant Spec Point Desc.:	DRYWELL RADIATION CH A
Generic/Cond Desc.:	RADIATION LEVEL IN THE DRYWELL
Analog/Digital:	A
Engr Units/Dig States:	R/HR
Engr Units Conversion:	N/A
Minimum Instr Range:	1
Maximum Instr Range:	10E8
Zero Point Reference:	N/A
Reference Point Notes:	N/A
PROC or SENS:	S
Number of Sensors:	1
How Processed:	SIGNAL INPUT FROM RADIATION MONITOR
Sensor Location:	DRYWELL 180 DEGREE AZIMUTH AT 944'
Alarm/Trip Set Points:	HI=49.999, HI-HI=35
NI Detector Power Supply	N/A
Cut-off Power Level:	
NI Detector Power Supply	N/A
Turn-on Power Level:	
Instrument Failure Mode:	HIGH SENSOR, INOP
Temperature Compensation	N/A
For DP Transmitters:	
Level Reference Leg:	N/A
Unique System Desc.:	Purpose is to provide estimate of core damage by measuring drywell gamma radiation fields caused by fission product leakage from the core. Each sensor is an ionization chamber with an internal U-234 source which gives 1R/HR reading for operation verification. Elevation 944' is just below bottom of reactor vessel (949').

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### DATA POINT LIBRARY REFERENCE FILE

Date:	01/07/92
Reactor Unit:	MO1
Data Feeder:	PCS
NRC ERDS Parameter:	DW RAD
Point ID:	PCT110
Plant Spec Point Desc.:	DRYWELL RADIATION CH B
Generic/Cond Desc.:	RADIATION LEVEL IN THE DRYWELL
Analog/Digital:	A
Engr Units/Dig States:	R/HR
Engr Units Conversion:	N/A
Minimum Instr Range:	1
Maximum Instr Range:	10E8
Zero Point Reference:	N/A
Reference Point Notes:	N/A
PROC or SENS:	S
Number of Sensors:	1
How Processed:	SIGNAL INPUT FROM RADIATION MONITOR
Sensor Location:	DRYWELL 0 DEGREE AZIMUTH AT 944'
Alarm/Trip Set Points:	HI=49.999, HI-HI=35
NI Detector Power Supply	N/A
Cut-off Power Level:	
NI Detector Power Sply	N/A
Turn-on Power Level:	
Instrument Failure Mode:	HIGH SENSOR, INOP
Temperature Compensation	N/A
For DP Transmitters:	
Level Reference Leg:	N/A
Unique System Desc.:	Purpose is to provide estimate of core damage by measuring drywell gamma radiation fields caused by fission product leakage from the core. Each sensor is an ionization chamber with an internal U-234 source which gives 1R/HR reading for operation verification. Elevation 944' is just below bottom of reactor vessel (949').

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### DATA POINT LIBRARY REFERENCE FILE

Date: 04/20/12  
Reactor Unit: MO1  
Data Feeder: PCS  
NRC ERDS Parameter: MN STEAM RAD  
Point ID: PRM125  
Plant Spec Point Desc.: MAIN STEAM LINE RAD CH A  
Generic/Cond Desc.: RADIATION LEVEL OF THE MAIN STEAM LINE  
Analog/Digital: A  
Engr Units/Dig States: MR/H  
Engr Units Conversion: N/A  
Minimum Instr Range: 1  
Maximum Instr Range: 10E6  
Zero Point Reference: N/A  
Reference Point Notes: N/A  
PROC or SENS: S  
Number of Sensors: 1  
How Processed: SIGNAL INPUT FROM RM-17-251A  
Sensor Location: C10 ADMIN 951' CONTROL ROOM  
Alarm/Trip Set Points:  
NI Detector Power Supply  
Cut-off Power Level:  
NI Detector Power Supply  
Turn-on Power Level:  
Instrument Failure Mode:  
Temperature Compensation  
For DP Transmitters:  
Level Reference Leg:  
Unique System Desc.:

The Main Steam Line Radiation Monitoring System provides continuous control room indication of the gamma radiation level of the main steam tunnel area lines immediately downstream of the outboard main steam isolation valves. When the gamma sensitive ion chamber (supplied by General Electric) is exposed to gamma radiation, producing current flow is proportional to the gamma radiation level, and serves as the input signal to the logarithmic radiation monitor. The monitor then provides an output voltage signal proportional to the logarithm of the input current. The output voltage signal of the main steam line monitor is also continuously recorded on the plant process computer point (PRM125).



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### DATA POINT LIBRARY REFERENCE FILE

Date:	04/20/12
Reactor Unit:	MO1
Data Feeder:	PCS
NRC ERDS Parameter:	MN STEAM RAD
Point ID:	PRM126
Plant Spec Point Desc.:	MAIN STEAM LINE RAD CH B
Generic/Cond Desc.:	RADIATION LEVEL OF THE MAIN STEAM LINE
Analog/Digital:	A
Engr Units/Dig States:	MR/H
Engr Units Conversion:	N/A
Minimum Instr Range:	1
Maximum Instr Range:	10E6
Zero Point Reference:	N/A
Reference Point Notes:	N/A
PROC or SENS:	S
Number of Sensors:	1
How Processed:	SIGNAL INPUT FROM RM-17-251B
Sensor Location:	C10 ADMIN 951' CONTROL ROOM
Alarm/Trip Set Points:	
NI Detector Power Supply	
Cut-off Power Level:	
NI Detector Power Supply	
Turn-on Power Level:	
Instrument Failure Mode:	
Temperature Compensation	
For DP Transmitters:	
Level Reference Leg:	
Unique System Desc.:	

The Main Steam Line Radiation Monitoring System provides continuous control room indication of the gamma radiation level of the main steam tunnel area lines immediately downstream of the outboard main steam isolation valves. When the gamma sensitive ion chamber (supplied by General Electric) is exposed to gamma radiation, producing current flow is proportional to the gamma radiation level, and serves as the input signal to the logarithmic radiation monitor. The monitor then provides an output voltage signal proportional to the logarithm of the input current. The output voltage signal of the main steam line monitor is also continuously recorded on the plant process computer point (PRM126).

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### DATA POINT LIBRARY REFERENCE FILE

Date:	04/20/12
Reactor Unit:	MO1
Data Feeder:	PCS
NRC ERDS Parameter:	MN STEAM RAD
Point ID:	PRM127
Plant Spec Point Desc.:	MAIN STEAM LINE RAD CH C
Generic/Cond Desc.:	RADIATION LEVEL OF THE MAIN STEAM LINE
Analog/Digital:	A
Engr Units/Dig States:	MR/H
Engr Units Conversion:	N/A
Minimum Instr Range:	1
Maximum Instr Range:	10E6
Zero Point Reference:	N/A
Reference Point Notes:	N/A
PROC or SENS:	S
Number of Sensors:	1
How Processed:	SIGNAL INPUT FROM RM-17-251C
Sensor Location:	C10 ADMIN 951' CONTROL ROOM
Alarm/Trip Set Points:	
NI Detector Power Supply	
Cut-off Power Level:	
NI Detector Power Supply	
Turn-on Power Level:	
Instrument Failure Mode:	
Temperature Compensation	
For DP Transmitters:	
Level Reference Leg:	
Unique System Desc.:	

The Main Steam Line Radiation Monitoring System provides continuous control room indication of the gamma radiation level of the main steam tunnel area lines immediately downstream of the outboard main steam isolation valves. When the gamma sensitive ion chamber (supplied by General Electric) is exposed to gamma radiation, producing current flow is proportional to the gamma radiation level, and serves as the input signal to the logarithmic radiation monitor. The monitor then provides an output voltage signal proportional to the logarithm of the input current. The output voltage signal of the main steam line monitor is also continuously recorded on the plant process computer point (PRM127).

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### DATA POINT LIBRARY REFERENCE FILE

Date:	04/20/12
Reactor Unit:	MO1
Data Feeder:	PCS
NRC ERDS Parameter:	MN STEAM RAD
Point ID:	PRM128
Plant Spec Point Desc.:	MAIN STEAM LINE RAD CH D
Generic/Cond Desc.:	RADIATION LEVEL OF THE MAIN STEAM LINE
Analog/Digital:	A
Engr Units/Dig States:	MR/H
Engr Units Conversion:	N/A
Minimum Instr Range:	1
Maximum Instr Range:	10E6
Zero Point Reference:	N/A
Reference Point Notes:	N/A
PROC or SENS:	S
Number of Sensors:	1
How Processed:	SIGNAL INPUT FROM RM-17-251D
Sensor Location:	C10 ADMIN 951' CONTROL ROOM
Alarm/Trip Set Points:	
NI Detector Power Supply	
Cut-off Power Level:	
NI Detector Power Supply	
Turn-on Power Level:	
Instrument Failure Mode:	
Temperature Compensation	
For DP Transmitters:	
Level Reference Leg:	
Unique System Desc.:	

The Main Steam Line Radiation Monitoring System provides continuous control room indication of the gamma radiation level of the main steam tunnel area lines immediately downstream of the outboard main steam isolation valves. When the gamma sensitive ion chamber (supplied by General Electric) is exposed to gamma radiation, producing current flow is proportional to the gamma radiation level, and serves as the input signal to the logarithmic radiation monitor. The monitor then provides an output voltage signal proportional to the logarithm of the input current. The output voltage signal of the main steam line monitor is also continuously recorded on the plant process computer point (PRM128).

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**DATA POINT LIBRARY REFERENCE FILE**

Date:	01/07/92
Reactor Unit:	MO1
Data Feeder:	PCS
NRC ERDS Parameter:	DW PRESS
Point ID:	D23C0010
Plant Spec Point Desc.:	VALIDATED DRYWELL PRESSURE
Generic/Cond Desc.:	DRYWELL PRESSURE
Analog/Digital:	A
Engr Units/Dig States:	PSIG
Engr Units Conversion:	N/A
Minimum Instr Range:	-5
Maximum Instr Range:	250
Zero Point Reference:	N/A
Reference Point Notes:	N/A
PROC or SENS:	P
Number of Sensors:	4
How Processed:	WEIGHTED AVERAGE OF CONSISTENT DW PRESS
Sensor Location:	SENSING LINES FROM DRYWELL
Alarm/Trip Set Points:	ALARMS LOW=0.1, HIGH=1.5
NI Detector Power Supply	N/A
Cut-off Power Level:	
NI Detector Power Supply	N/A
Turn-on Power Level:	
Instrument Failure Mode:	HIGH & LOW SENSOR
Temperature Compensation	N/A
For DP Transmitters:	
Level Reference Leg:	N/A
Unique System Desc.:	This point consists of either a weighted average of all consistent drywell pressure or an average of in-range drywell pressures if there are less than the required number of consistent singals. Four drywell pressure signals consist of one narrow range (-2 to 3), one wide range (0 to 80) and two accident (-5 to 250) ranges. Weighted averages produces average that is weighted based on instrument accuracy. Drywell internal design pressure is 56 PSIG at 281 Degrees F. At 2 PSIG, RPS initiates Reactor SCRAM and Primary Containment Isolation initiates Group 2 & 3.

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### DATA POINT LIBRARY REFERENCE FILE

Date:	01/07/92
Reactor Unit:	MO1
Data Feeder:	PCS
NRC ERDS Parameter:	DW TEMP
Point ID:	D23C0310
Plant Spec Point Desc.:	VALIDATED DRYWELL TEMPERATURE
Generic/Cond Desc.:	DRYWELL TEMPERATURE
Analog/Digital:	A
Engr Units/Dig States:	DEGF
Engr Units Conversion:	N/A
Minimum Instr Range:	0
Maximum Instr Range:	600
Zero Point Reference:	N/A
Reference Point Notes:	N/A
PROC or SENS:	P
Number of Sensors:	16
How Processed:	AVERAGE OF CONSISTENT DW TEMPERAURES
Sensor Location:	16 SENSORS AT 8 DRYWELL LOCATIONS
Alarm/Trip Set Points:	HI=150 DEGF
NI Detector Power Supply	N/A
Cut-off Power Level:	
NI Detector Power Supply	N/A
Turn-on Power Level:	
Instrument Failure Mode:	HIGH & LOW SENSOR
Temperature Compensation	N/A
For DP Transmitters:	
Level Reference Leg:	N/A
Unique System Desc.:	This point consists of either a weighted average bulk temperature of consistent regional temperatures or an unvalidated, non-weighted average of all in-range drywell temperatures. Regional weighting factors compensate for differences in drywell volume at the various elevations. Each location utilizes two sensors and are located in Drywell at: Elev 932' (East & West), Elev 951'(North & South), Elev 970' (East & West), and Elev 994' (North & South).

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### DATA POINT LIBRARY REFERENCE FILE

Date:	01/07/92
Reactor Unit:	MO1
Data Feeder:	PCS
NRC ERDS Parameter:	SP TEMP
Point ID:	D23C0210
Plant Spec Point Desc.:	VALIDATED TORUS TEMPERATURE
Generic/Cond Desc.:	SUPPRESSION POOL TEMPERATURE
Analog/Digital:	A
Engr Units/Dig States:	DEGF
Engr Units Conversion:	N/A
Minimum Instr Range:	30
Maximum Instr Range:	240
Zero Point Reference:	N/A
Reference Point Notes:	N/A
PROC or SENS:	P
Number of Sensors:	16
How Processed:	AVERAGE OF 2 SPOTMOS (8 SENSORS EACH)
Sensor Location:	2 SENSORS IN EACH OF 8 TORUS SRV BAYS
Alarm/Trip Set Points:	HIGH=90
NI Detector Power Supply	N/A
Cut-off Power Level:	
NI Detector Power Supply	N/A
Turn-on Power Level:	
Instrument Failure Mode:	HIGH & LOW SENSOR, SPOTMOS INOP
Temperature Compensation	N/A
For DP Transmitters:	
Level Reference Leg:	N/A
Unique System Desc.:	VALIDATED TORUS TEMPERATURE is the average of the inputs from two Suppression Pool Temperature Monitoring Systems (SPOTMOS). Each system generates an average of eight sensors. Each sensor is located in one of the eight bays that Safety Relief Valves discharge into.

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### DATA POINT LIBRARY REFERENCE FILE

Date:	01/07/92
Reactor Unit:	MO1
Data Feeder:	PCS
NRC ERDS Parameter:	SP LEVEL
Point ID:	G43C0015
Plant Spec Point Desc.:	VALIDATED TORUS WATER LEVEL
Generic/Cond Desc.:	SUPPRESSION POOL WATER LEVEL
Analog/Digital:	A
Engr Units/Dig States:	INCHES
Engr Units Conversion:	N/A
Minimum Instr Range:	-96
Maximum Instr Range:	180
Zero Point Reference:	N/A
Reference Point Notes:	0"=ELEVATION 910'= 530,000 GALLONS
PROC or SENS:	P
Number of Sensors:	4
How Processed:	WEIGHTED AVERAGE OF CONSISTENT LEVELS
Sensor Location:	LEVEL TAPS OFF TORUS SHELL
Alarm/Trip Set Points:	HIGH=2, LO=-2
NI Detector Power Supply	N/A
Cut-off Power Level:	
NI Detector Power Supply	N/A
Turn-on Power Level:	
Instrument Failure Mode:	HIGH & LOW SENSOR
Temperature Compensation	N/A
For DP Transmitters:	
Level Reference Leg:	N/A
Unique System Desc.:	This point consists of either a weighted average of all consistent torus water levels or an average of in-range torus water levels if there are less than the required number of consistent signals. Four torus water level signals consist of two narrow range (-15 to 15) and two wide range (-96 to 180). Weighted averages produce an average that is based on instrument accuracy. HPCI suction transfer occurs at 2". Tech Specs level greater than -4" and less than 2.9".

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### DATA POINT LIBRARY REFERENCE FILE

Date:	01/07/92
Reactor Unit:	MO1
Data Feeder:	PCS
NRC ERDS Parameter:	H2 CONC
Point ID:	PCT116
Plant Spec Point Desc.:	PCTMT H2 ANALYZER A
Generic/Cond Desc.:	DRYWELL OR TORUS HYDROGEN CONCENTRATION
Analog/Digital:	A
Engr Units/Dig States:	%
Engr Units Conversion:	N/A
Minimum Instr Range:	0
Maximum Instr Range:	20
Zero Point Reference:	N/A
Reference Point Notes:	N/A
PROC or SENS:	S
Number of Sensors:	1
How Processed:	SIGNAL OUTPUT FROM H2 ANALYZER
Sensor Location:	SAMPLE LINES UPPER DW,TORUS,CGCS IN & OUT
Alarm/Trip Set Points:	N/A
NI Detector Power Supply	N/A
Cut-off Power Level:	
NI Detector Power Supply	N/A
Turn-on Power Level:	
Instrument Failure Mode:	HIGH & LOW SENSOR, SYSTEM OFF
Temperature Compensation	N/A
For DP Transmitters:	
Level Reference Leg:	N/A
Unique System Desc.:	Analyzers are normally shutdown and values will usually read less than 0.75%. System is capable of analyzing samples from Drywell (elev 994'), Torus and Combustible Gas Control System inlet and outlet. Sample line and sample return valves close on Group 2 Isolation.



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### DATA POINT LIBRARY REFERENCE FILE

Date:	01/07/92
Reactor Unit:	MO1
Data Feeder:	PCS
NRC ERDS Parameter:	H2 CONC
Point ID:	PCT117
Plant Spec Point Desc.:	PCTMT H2 ANALYZER B
Generic/Cond Desc.:	DRYWELL OR TORUS HYDROGEN CONCENTRATION
Analog/Digital:	A
Engr Units/Dig States:	%
Engr Units Conversion:	N/A
Minimum Instr Range:	0
Maximum Instr Range:	20
Zero Point Reference:	N/A
Reference Point Notes:	N/A
PROC or SENS:	S
Number of Sensors:	1
How Processed:	SIGNAL OUTPUT FROM H2 ANALYZER
Sensor Location:	SAMPLE LINES UPPER DW, TORUS, CGCS IN & OUT
Alarm/Trip Set Points:	N/A
NI Detector Power Supply	N/A
Cut-off Power Level:	
NI Detector Power Supply	N/A
Turn-on Power Level:	
Instrument Failure Mode:	HIGH & LOW SENSOR, SYSTEM OFF
Temperature Compensation	N/A
For DP Transmitters:	
Level Reference Leg:	N/A
Unique System Desc.:	Analyzers are normally shutdown and values will usually read less than 0.75%. System is capable of analyzing samples from Drywell (elev 994'), Torus and Combustible Gas Control System inlet and outlet. Sample line and sample return valves close on Group 2 Isolation.

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### DATA POINT LIBRARY REFERENCE FILE

Date:	01/07/92
Reactor Unit:	MO1
Data Feeder:	PCS
NRC ERDS Parameter:	O2 CONC
Point ID:	PCT118
Plant Spec Point Desc.:	PCTMT O2 ANALYZER A
Generic/Cond Desc.:	DRYWELL OR TORUS OXYGEN CONCENTRATION
Analog/Digital:	A
Engr Units/Dig States:	%
Engr Units Conversion:	N/A
Minimum Instr Range:	0
Maximum Instr Range:	25
Zero Point Reference:	N/A
Reference Point Notes:	N/A
PROC or SENS:	S
Number of Sensors:	1
How Processed:	SIGNAL OUTPUT FROM O2 ANALYZER
Sensor Location:	SAMPLE LINES UPPER DW,TORUS,CGCS IN & OUT
Alarm/Trip Set Points:	N/A
NI Detector Power Supply	N/A
Cut-off Power Level:	
NI Detector Power Supply	N/A
Turn-on Power Level:	
Instrument Failure Mode:	HIGH & LOW SENSOR, SYSTEM OFF
Temperature Compensation	N/A
For DP Transmitters:	
Level Reference Leg:	N/A
Unique System Desc.:	Analyzers are normally shutdown and values will usually read less than 0.75%. System is capable of analyzing samples from Drywell (elev 994'), Torus and Combustible Gas Control System inlet and outlet. Sample line and sample return valves close on Group 2 Isolation. Normal operation concentrations are 2.4%.

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### DATA POINT LIBRARY REFERENCE FILE

Date:	01/07/92
Reactor Unit:	MO1
Data Feeder:	PCS
NRC ERDS Parameter:	O2 CONC
Point ID:	PCT119
Plant Spec Point Desc.:	PCTMT O2 ANALYZER B
Generic/Cond Desc.:	DRYWELL OR TORUS OXYGEN CONCENTRATION
Analog/Digital:	A
Engr Units/Dig States:	%
Engr Units Conversion:	N/A
Minimum Instr Range:	0
Maximum Instr Range:	25
Zero Point Reference:	N/A
Reference Point Notes:	N/A
PROC or SENS:	S
Number of Sensors:	1
How Processed:	SIGNAL OUTPUT FROM O2 ANALYZER
Sensor Location:	SAMPLE LINES UPPER DW, TORUS, CGCS IN & OUT
Alarm/Trip Set Points:	N/A
NI Detector Power Supply	N/A
Cut-off Power Level:	
NI Detector Power Supply	N/A
Turn-on Power Level:	
Instrument Failure Mode:	HIGH & LOW SENSOR, SYSTEM OFF
Temperature Compensation	N/A
For DP Transmitters:	
Level Reference Leg:	N/A
Unique System Desc.:	Analyzers are normally shutdown and values will usually read less than 0.75%. System is capable of analyzing samples from Drywell (elev 994'), Torus and Combustible Gas Control System inlet and outlet. Sample line and sample return valves close on Group 2 Isolation. Normal operation concentrations are 2.4%.

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**DATA POINT LIBRARY REFERENCE FILE**

Date:	01/07/92
Reactor Unit:	MO1
Data Feeder:	PCS
NRC ERDS Parameter:	CST LEVEL
Point ID:	CST100
Plant Spec Point Desc.:	CST TANK LEVEL A
Generic/Cond Desc.:	CONDENSATE STORAGE TANK LEVEL
Analog/Digital:	A
Engr Units/Dig States:	FEET
Engr Units Conversion:	N/A
Minimum Instr Range:	5
Maximum Instr Range:	30
Zero Point Reference:	N/A
Reference Point Notes:	N/A
PROC or SENS:	S
Number of Sensors:	1
How Processed:	SIGNAL FROM LEVEL TRANSMITTER
Sensor Location:	LEVEL TX ON WATER COLUMN IN RX BLDG
Alarm/Trip Set Points:	HI=24'(225,600gal) LO=11.5'(108,100gal)
NI Detector Power Supply	N/A
Cut-off Power Level:	
NI Detector Power Supply	N/A
Turn-on Power Level:	
Instrument Failure Mode:	LOW
Temperature Compensation	N/A
For DP Transmitters:	
Level Reference Leg:	N/A
Unique System Desc.:	Condensate Storage Tank (CST) Level A is the water level in the A CST. Two CSTs exist with a tank capacity of 230,000 gallons each. Makeup condensate water is provided through 3 electric pumps from the CST tanks to various plant systems. Each tank has suction line for Control Rod Drive, HPCI, Core Spray, RHR, and RCIC systems. At 7'(65,800gal) receive CST Low-Low Level alarm and condensate service pumps trip. At 2'8"(25,100gal) HPCI and RCIC transfer to Torus suction.

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### DATA POINT LIBRARY REFERENCE FILE

Date:	01/07/92
Reactor Unit:	MO1
Data Feeder:	PCS
NRC ERDS Parameter:	CST LEVEL
Point ID:	CST101
Plant Spec Point Desc.:	CST TANK LEVEL B
Generic/Cond Desc.:	CONDENSATE STORAGE TANK LEVEL
Analog/Digital:	A
Engr Units/Dig States:	FEET
Engr Units Conversion:	N/A
Minimum Instr Range:	5
Maximum Instr Range:	30
Zero Point Reference:	N/A
Reference Point Notes:	N/A
PROC or SENS:	S
Number of Sensors:	1
How Processed:	SIGNAL FROM LEVEL TRANSMITTER
Sensor Location:	LEVEL TX ON WATER COLUMN IN RX BLDG
Alarm/Trip Set Points:	HI=24'(225,600gal) LO=11.5'(108,100gal)
NI Detector Power Supply	N/A
Cut-off Power Level:	
NI Detector Power Supply	N/A
Turn-on Power Level:	
Instrument Failure Mode:	LOW
Temperature Compensation	N/A
For DP Transmitters:	
Level Reference Leg:	N/A
Unique System Desc.:	Condensate Storage Tank (CST) Level B is the water level in the B CST. Two CSTs exist with a tank capacity of 230,000 gallons each. Makeup condensate water is provided through 3 electric pumps from the CST tanks to various plant systems. Each tank has suction line for Control Rod Drive, HPCI, Core Spray, RHR, and RCIC systems. At 7'(65,800gal) receive CST Low-Low Level alarm and condensate service pumps trip. At 2'8"(25,100gal) HPCI and RCIC transfer to Torus suction.

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### DATA POINT LIBRARY REFERENCE FILE

Date:	3/15/12
Reactor Unit:	MO1
Data Feeder:	PCS
NRC ERDS Parameter:	WIND SPEED
Point ID:	MET122FR
Plant Spec Point Desc.:	MT 43M A WIND SPEED 15MRUN
Generic/Cond Desc.:	WIND SPEED AT THE REACTOR SITE
Analog/Digital:	A
Engr Units/Dig States:	MPH
Engr Units Conversion:	N/A
Minimum Instr Range:	0
Maximum Instr Range:	100.00
Zero Point Reference:	N/A
Reference Point Notes:	N/A
PROC or SENS:	P
Number of Sensors:	1
How Processed:	15 MINUTE AVERAGE OF 5 SECOND VALUES
Sensor Location:	PRIMARY MET TOWER AT 43 METER HEIGHT
Alarm/Trip Set Points:	N/A
NI Detector Power Supply	N/A
Cut-off Power Level:	
NI Detector Power Supply	N/A
Turn-on Power Level:	
Instrument Failure Mode:	HIGH & LOW SENSOR
Temperature Compensation	N/A
For DP Transmitters:	
Level Reference Leg:	N/A
Unique System Desc.:	Data is collected every five seconds, averaged every minute, and stored in data files as 15-minute average.

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### DATA POINT LIBRARY REFERENCE FILE

Date:	3/15/12
Reactor Unit:	MO1
Data Feeder:	PCS
NRC ERDS Parameter:	WIND SPEED
Point ID:	MET123FR
Plant Spec Point Desc.:	MT 43M B WIND SPEED 15MRUN
Generic/Cond Desc.:	WIND SPEED AT THE REACTOR SITE
Analog/Digital:	A
Engr Units/Dig States:	MPH
Engr Units Conversion:	N/A
Minimum Instr Range:	0
Maximum Instr Range:	100.00
Zero Point Reference:	N/A
Reference Point Notes:	N/A
PROC or SENS:	P
Number of Sensors:	1
How Processed:	15 MINUTE AVERAGE OF 5 SECOND VALUES
Sensor Location:	PRIMARY MET TOWER AT 43 METER HEIGHT
Alarm/Trip Set Points:	N/A
NI Detector Power Supply	N/A
Cut-off Power Level:	
NI Detector Power Supply	N/A
Turn-on Power Level:	
Instrument Failure Mode:	HIGH & LOW SENSOR
Temperature Compensation	N/A
For DP Transmitters:	
Level Reference Leg:	N/A
Unique System Desc.:	Data is collected every five seconds, averaged every minute, and stored in data files as 15-minute average.

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### DATA POINT LIBRARY REFERENCE FILE

Date:	3/15/12
Reactor Unit:	MO1
Data Feeder:	PCS
NRC ERDS Parameter:	WIND SPEED
Point ID:	MET120FR
Plant Spec Point Desc.:	MT 100M A WIND SPEED 15MRUN
Generic/Cond Desc.:	WIND SPEED AT THE REACTOR SITE
Analog/Digital:	A
Engr Units/Dig States:	MPH
Engr Units Conversion:	N/A
Minimum Instr Range:	0
Maximum Instr Range:	100.00
Zero Point Reference:	N/A
Reference Point Notes:	N/A
PROC or SENS:	P
Number of Sensors:	1
How Processed:	15 MINUTE AVERAGE OF 5 SECOND VALUES
Sensor Location:	PRIMARY MET TOWER AT 100 METER HEIGHT
Alarm/Trip Set Points:	N/A
NI Detector Power Supply	N/A
Cut-off Power Level:	
NI Detector Power Supply	N/A
Turn-on Power Level:	
Instrument Failure Mode:	HIGH & LOW SENSOR
Temperature Compensation	N/A
For DP Transmitters:	
Level Reference Leg:	N/A
Unique System Desc.:	Data is collected every five seconds, averaged every minute, and stored in data files as 15-minute average.



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### DATA POINT LIBRARY REFERENCE FILE

Date:	3/15/12
Reactor Unit:	MO1
Data Feeder:	PCS
NRC ERDS Parameter:	WIND SPEED
Point ID:	MET121FR
Plant Spec Point Desc.:	MT 100M B WIND SPEED 15MRUN
Generic/Cond Desc.:	WIND SPEED AT THE REACTOR SITE
Analog/Digital:	A
Engr Units/Dig States:	MPH
Engr Units Conversion:	N/A
Minimum Instr Range:	0
Maximum Instr Range:	100.00
Zero Point Reference:	N/A
Reference Point Notes:	N/A
PROC or SENS:	P
Number of Sensors:	1
How Processed:	15 MINUTE AVERAGE OF 5 SECOND VALUES
Sensor Location:	PRIMARY MET TOWER AT 100 METER HEIGHT
Alarm/Trip Set Points:	N/A
NI Detector Power Supply	N/A
Cut-off Power Level:	
NI Detector Power Supply	N/A
Turn-on Power Level:	
Instrument Failure Mode:	HIGH & LOW SENSOR
Temperature Compensation	N/A
For DP Transmitters:	
Level Reference Leg: N/A	
Unique System Desc.:	Data is collected every five seconds, averaged every minute, and stored in data files as 15-minute average.

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### DATA POINT LIBRARY REFERENCE FILE

Date:	3/15/12
Reactor Unit:	MO1
Data Feeder:	PCS
NRC ERDS Parameter:	WIND DIR
Point ID:	MET128FR
Plant Spec Point Desc.:	MT 43M A WIND DIR 15MRUN
Generic/Cond Desc.:	WIND DIRECTION AT THE REACTOR SITE
Analog/Digital:	A
Engr Units/Dig States:	DEGFR
Engr Units Conversion:	N/A
Minimum Instr Range:	0
Maximum Instr Range:	540.00
Zero Point Reference:	N/A
Reference Point Notes:	N/A
PROC or SENS:	P
Number of Sensors:	1
How Processed:	15 MINUTE AVERAGE OF 5 SECOND VALUES
Sensor Location:	PRIMARY MET TOWER AT 43 METER HEIGHT
Alarm/Trip Set Points:	N/A
NI Detector Power Supply	N/A
Cut-off Power Level:	
NI Detector Power Supply	N/A
Turn-on Power Level:	
Instrument Failure Mode:	HIGH & LOW SENSOR
Temperature Compensation	N/A
For DP Transmitters:	
Level Reference Leg:	N/A
Unique System Desc.:	Data is collected every five seconds, averaged every minute, and stored in data files as 15-minute average.

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### DATA POINT LIBRARY REFERENCE FILE

Date:	3/15/12
Reactor Unit:	MO1
Data Feeder:	PCS
NRC ERDS Parameter:	WIND DIR
Point ID:	MET129FR
Plant Spec Point Desc.:	MT 43M B WIND DIR 15MRUN
Generic/Cond Desc.:	WIND DIRECTION AT THE REACTOR SITE
Analog/Digital:	A
Engr Units/Dig States:	DEGFR
Engr Units Conversion:	N/A
Minimum Instr Range:	0
Maximum Instr Range:	540.00
Zero Point Reference:	N/A
Reference Point Notes:	N/A
PROC or SENS:	P
Number of Sensors:	1
How Processed:	15 MINUTE AVERAGE OF 5 SECOND VALUES
Sensor Location:	PRIMARY MET TOWER AT 43 METER HEIGHT
Alarm/Trip Set Points:	N/A
NI Detector Power Supply	N/A
Cut-off Power Level:	
NI Detector Power Supply	N/A
Turn-on Power Level:	
Instrument Failure Mode:	HIGH & LOW SENSOR
Temperature Compensation	N/A
For DP Transmitters:	
Level Reference Leg:	N/A
Unique System Desc.:	Data is collected every five seconds, averaged every minute, and stored in data files as 15-minute average.

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### DATA POINT LIBRARY REFERENCE FILE

Date:	3/15/12
Reactor Unit:	MO1
Data Feeder:	PCS
NRC ERDS Parameter:	WIND DIR
Point ID:	MET126FR
Plant Spec Point Desc.:	MT 100M A WIND DIR 15MRUN
Generic/Cond Desc.:	WIND DIRECTION AT THE REACTOR SITE
Analog/Digital:	A
Engr Units/Dig States:	DEGFR
Engr Units Conversion:	N/A
Minimum Instr Range:	0
Maximum Instr Range:	540.00
Zero Point Reference:	N/A
Reference Point Notes:	N/A
PROC or SENS:	P
Number of Sensors:	1
How Processed:	15 MINUTE AVERAGE OF 5 SECOND VALUES
Sensor Location:	PRIMARY MET TOWER AT 100 METER HEIGHT
Alarm/Trip Set Points:	N/A
NI Detector Power Supply	N/A
Cut-off Power Level:	
NI Detector Power Supply	N/A
Turn-on Power Level:	
Instrument Failure Mode:	HIGH & LOW SENSOR
Temperature Compensation	N/A
For DP Transmitters:	
Level Reference Leg:	N/A
Unique System Desc.:	Data is collected every five seconds, averaged every minute, and stored in data files as 15-minute average.

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### DATA POINT LIBRARY REFERENCE FILE

Date:	3/15/12
Reactor Unit:	MO1
Data Feeder:	PCS
NRC ERDS Parameter:	WIND DIR
Point ID:	MET127FR
Plant Spec Point Desc.:	MT 100M B WIND DIR 15MRUN
Generic/Cond Desc.:	WIND DIRECTION AT THE REACTOR SITE
Analog/Digital:	A
Engr Units/Dig States:	DEGFR
Engr Units Conversion:	N/A
Minimum Instr Range:	0
Maximum Instr Range:	540.00
Zero Point Reference:	N/A
Reference Point Notes:	N/A
PROC or SENS:	P
Number of Sensors:	1
How Processed:	15 MINUTE AVERAGE OF 5 SECOND VALUES
Sensor Location:	PRIMARY MET TOWER AT 100 METER HEIGHT
Alarm/Trip Set Points:	N/A
NI Detector Power Supply	N/A
Cut-off Power Level:	
NI Detector Power Supply	N/A
Turn-on Power Level:	
Instrument Failure Mode:	HIGH & LOW SENSOR
Temperature Compensation	N/A
For DP Transmitters:	
Level Reference Leg:	N/A
Unique System Desc.:	Data is collected every five seconds, averaged every minute, and stored in data files as 15-minute average.

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### DATA POINT LIBRARY REFERENCE FILE

Date:	3/15/12
Reactor Unit:	MO1
Data Feeder:	PCS
NRC ERDS Parameter:	STAB CLASS
PointID:	MET140FR
Plant Spec Point Desc.:	MT 43M-10M A DELTA AIR T 15MRUN
Generic/Cond Desc.:	AIR STABILITY AT THE REACTOR SITE
Analog/Digital:	A
Engr Units/Dig States:	DEGF
Engr Units Conversion:	N/A
Minimum Instr Range:	-9.0
Maximum Instr Range:	9.0
Zero Point Reference:	N/A
Reference Point Notes:	N/A
PROC or SENS:	PROC
Number of Sensors:	2
How Processed:	AVERAGED DIFFERENTIAL
Sensor Location:	PRIMARY MET AT 10 & 43 METER HEIGHT
Alarm/Trip Set Points:	N/A
NI Detector Power Supply	N/A
Cut-off Power Level:	
NI Detector Power Supply	N/A
Turn-on Power Level:	
Instrument Failure Mode:	HIGH & LOW SENSOR
Temperature Compensation	N/A
For DP Transmitters:	
Level Reference Leg:	N/A
Unique System Desc.:	Data is collected every five seconds, averaged every minute, and stored in data files as 15-minute average. This value represents the difference in temperature in degF/100ft.

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### DATA POINT LIBRARY REFERENCE FILE

Date:	3/15/12
Reactor Unit:	MO1
Data Feeder:	PCS
NRC ERDS Parameter:	STAB CLASS
PointID:	MET141FR
Plant Spec Point Desc.:	MT 43M-10M B DELTA AIR T 15MRUN
Generic/Cond Desc.:	AIR STABILITY AT THE REACTOR SITE
Analog/Digital:	A
Engr Units/Dig States:	DEGF
Engr Units Conversion:	N/A
Minimum Instr Range:	-9.0
Maximum Instr Range:	9.0
Zero Point Reference:	N/A
Reference Point Notes:	N/A
PROC or SENS:	PROC
Number of Sensors:	2
How Processed:	AVERAGED DIFFERENTIAL
Sensor Location:	PRIMARY MET AT 10 & 43 METER HEIGHT
Alarm/Trip Set Points:	N/A
NI Detector Power Supply	N/A
Cut-off Power Level:	
NI Detector Power Supply	N/A
Turn-on Power Level:	
Instrument Failure Mode:	HIGH & LOW SENSOR
Temperature Compensation	N/A
For DP Transmitters:	
Level Reference Leg:	N/A
Unique System Desc.:	Data is collected every five seconds, averaged every minute, and stored in data files as 15-minute average. This value represents the difference in temperature in degF/100ft.

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### DATA POINT LIBRARY REFERENCE FILE

Date:	3/15/12
Reactor Unit:	1
Data Feeder:	S
NRC ERDS Parameter:	AB CLASS
PointID:	MET138FR
Plant Spec Point Desc.:	MT 100M-10M A DELTA AIR T 15MRUN
Generic/Cond Desc.:	AIR STABILITY AT THE REACTOR SITE
Analog/Digital:	A
Engr Units/Dig States:	DEGF
Engr Units Conversion:	N/A
Minimum Instr Range:	-9.0
Maximum Instr Range:	9.0
Zero Point Reference:	N/A
Reference Point Notes:	N/A
PROC or SENS:	PROC
Number of Sensors:	2
How Processed:	AVERAGED DIFFERENTIAL
Sensor Location:	PRIMARY MET AT 10 & 100 METER HEIGHT
Alarm/Trip Set Points:	N/A
NI Detector Power Supply	N/A
Cut-off Power Level:	
NI Detector Power Supply	N/A
Turn-on Power Level:	
Instrument Failure Mode:	HIGH & LOW SENSOR
Temperature Compensation	N/A
For DP Transmitters:	
Level Reference Leg:	N/A
Unique System Desc.:	Data is collected every five seconds, averaged every minute, and stored in data files as 15-minute average. This value represents the difference in temperature in degF/100ft.



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### DATA POINT LIBRARY REFERENCE FILE

Date:	3/15/12
Reactor Unit:	MO1
Data Feeder:	PCS
NRC ERDS Parameter:	STAB CLASS
PointID:	MET139FR
Plant Spec Point Desc.:	MT 100M-10M B DELTA AIR T 15MRUN
Generic/Cond Desc.:	AIR STABILITY AT THE REACTOR SITE
Analog/Digital:	A
Engr Units/Dig States:	DEGF
Engr Units Conversion:	N/A
Minimum Instr Range:	-9.0
Maximum Instr Range:	9.0
Zero Point Reference:	N/A
Reference Point Notes:	N/A
PROC or SENS:	PROC
Number of Sensors:	2
How Processed:	AVERAGED DIFFERENTIAL
Sensor Location:	PRIMARY MET AT 10 & 100 METER HEIGHT
Alarm/Trip Set Points:	N/A
NI Detector Power Supply	N/A
Cut-off Power Level:	
NI Detector Power Supply	N/A
Turn-on Power Level:	
Instrument Failure Mode:	HIGH & LOW SENSOR
Temperature Compensation	N/A
For DP Transmitters:	
Level Reference Leg:	N/A
Unique System Desc.:	Data is collected every five seconds, averaged every minute, and stored in data files as 15-minute average. This value represents the difference in temperature in degF/100ft.

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## I. Contacts

Note: Please provide name, title, mailing address and phone number.

### A. **Survey Coordinator (i.e. contact for later clarification of questionnaire answers):**

Russell E. Van Dell  
Manager, Computer & Information Systems  
Xcel Energy, Inc.  
Monticello Nuclear Generating Plant  
2807 West County Road 75  
Monticello, MN 55362  
(763) 295-1326

### B. **Computer Hardware Specialist(s):**

Nai-Tai (Nelson) Fei Senior Engineer  
Xcel Energy, Inc.  
Monticello Nuclear Generating Plant  
2807 West County Road 75  
Monticello, MN 55362  
(763) 271-5180

### C. **Systems Software Specialist(s):**

Bob Awde  
Principal Engineer  
Xcel Energy, Inc.  
Monticello Nuclear Generating Plant  
2807 West County Road 75  
Monticello, MN 55362  
(763) 271-5103

### D. **Application-level Software Specialist(s):**

Nai-Tai (Nelson) Fei  
Senior Engineer  
Xcel Energy, Inc.  
Monticello Nuclear Generating Plant  
2807 West County Road 75  
Monticello, MN 55362  
(763) 271-5180

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**E. Telephone Systems Specialist(s):**

David Seestrom  
Instrument Engineer  
Xcel Energy, Inc.  
Monticello Nuclear Generating Plant  
2807 West County Road 75  
Monticello, MN 55362  
(763) 295-1376

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## Selection of Data Feeders

### 1. GENERAL DESCRIPTION

#### 1.1. Describe the product perspective (dependencies, interfaces, memory constraints.)

The ERDS PI to NRC interface is a vendor software product developed by OSIsoft for use in the Nuclear Industry to send data from a PI Server to an NRC provided VPN appliance. The windows based ERDS PI to NRC interface passes selected process data (temperatures, radiation levels, MET data, etc.) from PI Server(s) to the NRC during emergency events classified as an "Alert" of higher thru a VPN network connection.

The two primary data sources for ERDS data is from the PPCS and the Simulator Computer System (i.e. in support of EP drills). The plant process data will be acquired from the Engineering PI Server (MTAS05) while the simulator process data will be acquired from the Simulator PI Server (SPIRT). This data transfer functionality is achieved by running two separate and independent instances of the ERDS PI to NRC interface, one configured to transfer plant process data from MTAS05 and the other configured to transfer simulator process data from SPIRT.

A SPDS ERDS Display will be used to initiate/terminate data transfer to the NRC, display the current status of the NRC connection, number of NRC messages send, and display the current value/status of the process data being transferred to the NRC. Only "ERDS Enabled" SPDS workstations will have the capability of initiating/terminating process data transfer to the NRC. All other SPDS workstations will only be capable of displaying the value/status of the process data being sent to the NRC.

#### 1.2. Summarize the major functions.

The ERDS PI to NRC interface implements the data link from a PI Server to the NRC and supports the NRC-317 communications format (as was used for the prior modem communication) using a VPN connection. Both instances of the ERDS PI to NRC interface will be configured to execute as a windows service and thus will be able to startup automatically during a system reboot.

A SPDS ERDS Display will be used to initiate/terminate data transfer to the NRC, display the current status of the NRC connection, number of NRC messages send, and display the current value/status of the process data being transferred to the NRC.

#### 1.3. Describe the users (technical expertise and physical location.)

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The ERDS PI to NRC interface operates as a windows service and will not communicate directly to end users. Qualified Computer Engineers will be able to setup the required ERDS to PI interface parameters needed to support the data transfer capability to the NRC.

The SPDS ERDS Display will contain two command buttons that can be used by trained end users to initiate or terminate process data transfers to the NRC only on "ERDS Enabled" SPDS workstations.

1.4. Describe any constraints that restrict the scope (regulatory processes, budgetary, etc.)

ERDS is required to be operational and able to be activated within one hour of a declaration of an ALERT or higher emergency classification level per 10CFR50 Appendix E, Section VI. Therefore, the design function of the ERDS data transfer is to be activated from an "ERDS Enabled" SPDS ERDS Display within one hour of a declaration of an ALERT or higher emergency classification level and initiate transfer of ERDS process data to the NRC.