



March 3, 2004

L-MT-04-017
10 CFR 50, Appendix E
Section VI

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

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

Emergency Response Data System (ERDS) – Revision to Previously Submitted Data Point Library Information

Nuclear Management Company, LLC (NMC) is submitting a revised Data Point Library software specification for the Monticello Nuclear Generating Plant (MNGP) due to the revisions to the specification sheets listed below:

1. The high alarm set point of PRM121 and PRM122 (NRC ERDS Parameter: EFF GAS RAD) has been revised to be 1200 as indicated on sheet 19 and 20 respectively.

This revised ERDS software requirement specification (ERDS-SRS-1-5) is required to be reported to the USNRC within 30 days of the software change. The change was installed on February 24, 2004.

This letter makes no new commitments.

Thomas J. Palmisano
Site Vice President, Monticello Nuclear Generating Plant
Nuclear Management Company, LLC

Enclosure

cc: Regional Administrator, Region III, USNRC
Project Manager, Monticello, USNRC
Resident Inspector, Monticello, USNRC
Minnesota Dept. of Commerce: w/o enclosure

A026

ENCLOSURE 1

**MONTICELLO NUCLEAR GENERATING PLANT
Process Computer System – Emergency Response Data System (ERDS) – Data
Point Library**

61 pages follow

SRS	Title:	Process Computer System - Emergency Response Data System (ERDS) - Data Point Library	Number:	ERDS-SRS-1-5
			Sheet No:	1

Prepared By:	<u>Wen-Tao Jui</u>	Effective Date:	<u>2/25/2004</u>
Reviewed By:	<u>Bob Oude Jr.</u>	Approved By:	<u>Russell Van D...</u>

LIST OF PAGES

<u>SHEET</u>	<u>DESCRIPTION</u>	<u>REVISION and DATE</u>
1	LIST OF PAGES	Revision 3, 11/04/97
2	NI POWER RANGE	Revision 1, 4/14/92
3	NI INTER RANGE	Revision 1, 4/14/92
4	NI SOURC RNG	Revision 1, 4/14/92
5	REAC VES LEV	Revision 1, 4/14/92
6	RCS PRESSURE	Revision 2, 1/1/93
7	MAIN FD FLOW	Revision 1, 4/14/92
9	HPCI FLOW	Revision 2, 1/1/93
10	RCIC FLOW	Revision 1, 4/14/92
11	LPCI FLOW	Revision 1, 4/14/92
15	CR SPRAY FL	Revision 1, 4/14/92
17	DW ED SMP LV	Revision 4, 12/18/03
18	DW FD SMP LV	Revision 4, 12/18/03
19	EFF GAS RAD	Revision 5, 2/25/04
20	EFF GAS RAD	Revision 5, 2/25/04
23	EFF LIQ RAD	Revision 1, 4/14/92
29	COND A/E RAD	Revision 1, 4/14/92
31	DW RAD	Revision 1, 4/14/92
33	MN STEAM RAD	Revision 1, 4/14/92
34	DW PRESS	Revision 1, 4/14/92
35	DW TEMP	Revision 4, 12/18/03
36	SP TEMP	Revision 4, 12/18/03
37	SP LEVEL	Revision 1, 4/14/92
38	H2 CONC	Revision 1, 4/14/92
42	CST LEVEL	Revision 4, 12/18/03
43	CST LEVEL	Revision 4, 12/18/03
44	WIND SPEED	Revision 1, 4/14/92
48	WIND DIR	Revision 1, 4/14/92
52	STAB CLASS	Revision 1, 4/14/92
56	Contacts	Revision 4, 12/18/03
57	Contacts	Revision 4, 12/18/03
59	Data Feeder Information	Revision 4, 12/18/03

SRS

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

Number:
ERDS-SRS-1-5

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.

SRS

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

Number:
ERDS-SRS-1-5

Sheet No: 3

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.

SRS

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

Number:
ERDS-SRS-1-5

Sheet No: 4

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.

SRS

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

Number:
ERDS-SRS-1-5

Sheet No: 5

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").

SRS

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

Number:
ERDS-SRS-1-5

Sheet No: 6

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.

SRS

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

Number:
ERDS-SRS-1-5

Sheet No: 7

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.

SRS

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

Number:
ERDS-SRS-1-5

Sheet No: 8

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.

SRS

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

Number:
ERDS-SRS-1-5

Sheet No: 9

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.

SRS

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

Number:
ERDS-SRS-1-5

Sheet No: 10

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.

SRS

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

Number:
ERDS-SRS-1-5

Sheet No: 11

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.

SRS

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

Number:
ERDS-SRS-1-5

Sheet No: 12

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.

SRS

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

Number:
ERDS-SRS-1-5

Sheet No: 13

DATA POINT LIBRARY REFERENCE FILE

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.

SRS

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

Number:
ERDS-SRS-1-5

Sheet No: 14

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.

SRS

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

Number:
ERDS-SRS-1-5

Sheet No: 15

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.

SRS

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

Number:
ERDS-SRS-1-5

Sheet No: 16

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.

SRS

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

Number:
ERDS-SRS-1-5

Sheet No: 17

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:	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.:	This sump collects liquid effluent from valve stem leak-offs, Rx Recirc Pump and piping maintenance drains, vent cooler 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.

SRS

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

Number:
ERDS-SRS-1-5

Sheet No: 18

DATA POINT LIBRARY REFERENCE FILE

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:	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.:	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.

SRS	Title:	Process Computer System - Emergency Response Data System (ERDS) - Data Point Library	Number:	ERDS-SRS-1-5
			Sheet No:	19

DATA POINT LIBRARY REFERENCE FILE

Date: 01/07/92
Reactor Unit: MO1
Data Feeder: PCS
NRC ERDS Parameter: EFF GAS RAD
Point ID: PRM121
Plant Spec Point Desc.: STACK EFF MONITOR CH A
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: S
Number of Sensors: 1
How Processed: SIGNAL FROM ANALOG OUTPUT OF MONITOR
Sensor Location: FOUR ISOKINETIC PROBES IN OFF GAS STACK
Alarm/Trip Set Points: HI=1200, HI-HI=90000
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: HIGH & LOW SENSOR
Temperature Compensation: N/A
For DP Transmitters: N/A
Level Reference Leg: N/A
Unique System Desc.: STACK EFF MONITOR CH A is a wide range gas monitor consisting of isokinetic probe assembly, sample conditioning unit, sample detection unit, and Control Room panel. The detector assembly consists of low, mid, and high range detectors. Hi-Hi and/or INOP from both Channel A & B monitors will close valves to isolate off gas flow to the stack.

SRS

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

Number:
ERDS-SRS-1-5

Sheet No: 20

DATA POINT LIBRARY REFERENCE FILE

Date:	01/07/92
Reactor Unit:	MO1
Data Feeder:	PCS
NRC ERDS Parameter:	EFF GAS RAD
Point ID:	PRM122
Plant Spec Point Desc.:	STACK EFF MONITOR CH B
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:	S
Number of Sensors:	1
How Processed:	SIGNAL FROM ANALOG OUTPUT OF MONITOR
Sensor Location:	FOUR ISOKINETIC PROBES IN OFF GAS STACK
Alarm/Trip Set Points:	HI=1200, HI-HI=90000
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.:	STACK EFF MONITOR CH B is a wide range gas monitor consisting of isokinetic probe assembly, sample conditioning unit, sample detection unit, and Control Room panel. The detector assembly consists of low, mid, and high range detectors. Hi-Hi and/or INOP from both Channel A & B monitors will close valves to isolate off gas flow to the stack.

SRS

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

Number:
ERDS-SRS-1-5

Sheet No: 21

DATA POINT LIBRARY REFERENCE FILE

Date:	01/07/92
Reactor Unit:	MO1
Data Feeder:	PCS
NRC ERDS Parameter:	EFF GAS RAD
Point ID:	PRM123
Plant Spec Point Desc.:	RBV EFFLUENT MONITOR CH A
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:	S
Number of Sensors:	1
How Processed:	SIGNAL FROM ANALOG OUTPUT OF MONITOR
Sensor Location:	ISOKINETIC PROBES IN EACH RX BLDG VENT
Alarm/Trip Set Points:	HI=400, HI-HI=4500
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.:	Reactor Building Vent Effluent Monitor Channel A is a wide range gas monitor consisting of isokinetic probe assemblies, sample conditioning unit, sample detection unit, and Control Room panel. The detector assembly consists of low, mid, and high range detectors.

SRS	Title:	Process Computer System - Emergency Response Data System (ERDS) - Data Point Library	Number:	ERDS-SRS-1-5
			Sheet No:	22

DATA POINT LIBRARY REFERENCE FILE

Date: 01/07/92
Reactor Unit: MO1
Data Feeder: PCS
NRC ERDS Parameter: EFF GAS RAD
Point ID: PRM124
Plant Spec Point Desc.: RBV EFFLUENT MONITOR CH B
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: S
Number of Sensors: 1
How Processed: SIGNAL FROM ANALOG OUTPUT OF MONITOR
Sensor Location: ISOKINETIC PROBES IN EACH RX BLDG VENT
Alarm/Trip Set Points: HI=400, HI-HI=4500
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 For DP Transmitters: N/A
Level Reference Leg: N/A
Unique System Desc.: Reactor Building Vent Effluent Monitor Channel B is a wide range gas monitor consisting of isokinetic probe assemblies, sample conditioning unit, sample detection unit, and Control Room panel. The detector assembly consists of low, mid, and high range detectors.

SRS

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

Number:
ERDS-SRS-1-5

Sheet No: 23

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:	$\mu\text{Ci}/\text{Ml} = ((\text{PRM107 in CPS}) - 5) * (4.3\text{E}-7)$
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 ALARM AS SET BY PLANT CHEMIST
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
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. 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.

SRS

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

Number:
ERDS-SRS-1-5

Sheet No: **24**

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 ALARM AS SET BY PLANT CHEMIST
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.

SRS

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

Number:
ERDS-SRS-1-5

Sheet No: 25

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:	$\text{uCi/MI} = ((\text{PRM110 in CPM}) - 400) * (3.5\text{E}-9)$
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 ALARM AS SET BY PLANT CHEMIST
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.

SRS

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

Number:
ERDS-SRS-1-5

Sheet No: 26

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: $\text{uCi/MI} = ((\text{PRM111 in CPM}) - 400) * (3.5\text{E-}9)$
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 ALARM AS SET BY PLANT CHEMIST
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 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.

SRS

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

Number:
ERDS-SRS-1-5

Sheet No: 27

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: $\text{uCi/Ml} = ((\text{PRM112 in CPS}) - 2) * (1.4\text{E-}7)$
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 ALARM AS SET BY PLANT CHEMIST
NI Detector Power Supply: N/A
Cut-off Power Level: N/A
NI Detector Power Supply Turn-on Power Level: N/A
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. 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.

SRS

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

Number:
ERDS-SRS-1-5

Sheet No: 28

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:	$\text{uCi/MI} = ((\text{PRM113 in CPS}) - 2) * (1.4\text{E}-7)$
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 ALARM AS SET BY PLANT CHEMIST
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.

SRS

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

Number:
ERDS-SRS-1-5

Sheet No: 29

DATA POINT LIBRARY REFERENCE FILE

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:	TRIP ON BOTH MONITORS UP,DOWN OR INOP
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.

SRS

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

Number:
ERDS-SRS-1-5

Sheet No: 30

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:	TRIP ON BOTH MONITORS UP,DOWN OR INOP
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

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

Number:
ERDS-SRS-1-5

Sheet No: 31

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=50, HI-HI=100
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').

SRS

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

Number:
ERDS-SRS-1-5

Sheet No: 32

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=50, HI-HI=100
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').

SRS	Title:	Process Computer System - Emergency Response Data System (ERDS) - Data Point Library	Number:	ERDS-SRS-1-5
			Sheet No:	33

DATA POINT LIBRARY REFERENCE FILE

Date: 01/07/92
Reactor Unit: MO1
Data Feeder: PCS
NRC ERDS Parameter: MN STEAM RAD
Point ID:
Plant Spec Point Desc.: (not available)
Generic/Cond Desc.: RADIATION LEVEL OF THE MAIN STEAM LINE
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.

SRS

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

Number:
ERDS-SRS-1-5

Sheet No: 34

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.

SRS

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

Number:
ERDS-SRS-1-5

Sheet No: 35

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).

SRS	Title:	Process Computer System - Emergency Response Data System (ERDS) - Data Point Library	Number:	ERDS-SRS-1-5
			Sheet No:	36

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.

SRS

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

Number:
ERDS-SRS-1-5

Sheet No: 37

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".

SRS	Title:	Process Computer System - Emergency Response Data System (ERDS) - Data Point Library	Number:	ERDS-SRS-1-5
			Sheet No:	38

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: N/A
NI Detector Power Supply Turn-on Power Level: N/A
Instrument Failure Mode: HIGH & LOW SENSOR, SYSTEM OFF
Temperature Compensation For DP Transmitters: N/A
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.

SRS

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

Number:
ERDS-SRS-1-5

Sheet No: **39**

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.

SRS

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

Number:
ERDS-SRS-1-5

Sheet No: 40

DATA POINT LIBRARY REFERENCE FILE

Date:	01/07/92
Reactor Unit:	MO1
Data Feeder:	PCS
NRC ERDS Parameter:	H2 CONC
Point ID:	PCT118
Plant Spec Point Desc.:	PCTMT O2 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:	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%.

SRS

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

Number:
ERDS-SRS-1-5

Sheet No: 41

DATA POINT LIBRARY REFERENCE FILE

Date:	01/07/92
Reactor Unit:	MO1
Data Feeder:	PCS
NRC ERDS Parameter:	H2 CONC
Point ID:	PCT119
Plant Spec Point Desc.:	PCTMT O2 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:	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%.

SRS

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

Number:
ERDS-SRS-1-5

Sheet No: 42

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.

SRS

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

Number:
ERDS-SRS-1-5

Sheet No: 43

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.

SRS

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

Number:
ERDS-SRS-1-5

Sheet No: 44

DATA POINT LIBRARY REFERENCE FILE

Date:	01/07/92
Reactor Unit:	MO1
Data Feeder:	PCS
NRC ERDS Parameter:	WIND SPEED
Point ID:	MET102
Plant Spec Point Desc.:	PRIMARY MET TOWER 43M AVG WIND SPEED A
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 15 minutes, and stored in data files as 15-minute average.

SRS	Title:	Process Computer System - Emergency Response Data System (ERDS) - Data Point Library	Number:	ERDS-SRS-1-5
			Sheet No:	45

DATA POINT LIBRARY REFERENCE FILE

Date: 01/07/92
Reactor Unit: MO1
Data Feeder: PCS
NRC ERDS Parameter: WIND SPEED
Point ID: MET103
Plant Spec Point Desc.: PRIMARY MET TOWER 43M AVG WIND SPEED B
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: N/A
NI Detector Power Supply: N/A
Turn-on Power Level: N/A
Instrument Failure Mode: HIGH & LOW SENSOR
Temperature Compensation: N/A
For DP Transmitters: N/A
Level Reference Leg: N/A
Unique System Desc.: Data is collected every five seconds, averaged every 15 minutes, and stored in data files as 15-minute average.

SRS

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

Number:
ERDS-SRS-1-5

Sheet No: 46

DATA POINT LIBRARY REFERENCE FILE

Date:	01/07/92
Reactor Unit:	MO1
Data Feeder:	PCS
NRC ERDS Parameter:	WIND SPEED
Point ID:	MET104
Plant Spec Point Desc.:	PRIMARY MET TOWER 100M AVG WIND SPEED A
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 15 minutes, and stored in data files as 15-minute average.

SRS

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

Number:
ERDS-SRS-1-5

Sheet No: 47

DATA POINT LIBRARY REFERENCE FILE

Date:	01/07/92
Reactor Unit:	MO1
Data Feeder:	PCS
NRC ERDS Parameter:	WIND SPEED
Point ID:	MET105
Plant Spec Point Desc.:	PRIMARY MET TOWER 100M AVG WIND SPEED B
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 15 minutes, and stored in data files as 15-minute average.

SRS

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

Number:
ERDS-SRS-1-5

Sheet No: 48

DATA POINT LIBRARY REFERENCE FILE

Date:	01/07/92
Reactor Unit:	MO1
Data Feeder:	PCS
NRC ERDS Parameter:	WIND DIR
Point ID:	MET106
Plant Spec Point Desc.:	PRIMARY MET TOWER 43M AVG WIND DIRECT A
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 15 minutes, and stored in data files as 15-minute average.

SRS

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

Number:
ERDS-SRS-1-5

Sheet No: 49

DATA POINT LIBRARY REFERENCE FILE

Date:	01/07/92
Reactor Unit:	MO1
Data Feeder:	PCS
NRC ERDS Parameter:	WIND DIR
Point ID:	MET107
Plant Spec Point Desc.:	PRIMARY MET TOWER 43M AVG WIND DIRECT B
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 15 minutes, and stored in data files as 15-minute average.

SRS

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

Number:
ERDS-SRS-1-5

Sheet No: 50

DATA POINT LIBRARY REFERENCE FILE

Date:	01/07/92
Reactor Unit:	MO1
Data Feeder:	PCS
NRC ERDS Parameter:	WIND DIR
Point ID:	MET108
Plant Spec Point Desc.:	PRIMARY MET TOWER 100M AVG WIND DIRECT A
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 15 minutes, and stored in data files as 15-minute average.

SRS

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

Number:
ERDS-SRS-1-5

Sheet No: 51

DATA POINT LIBRARY REFERENCE FILE

Date:	01/07/92
Reactor Unit:	MO1
Data Feeder:	PCS
NRC ERDS Parameter:	WIND DIR
Point ID:	MET109
Plant Spec Point Desc.:	PRIMARY MET TOWER 100M AVG WIND DIRECT B
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 15 minutes, and stored in data files as 15-minute average.

SRS

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

Number:
ERDS-SRS-1-5

Sheet No: 52

DATA POINT LIBRARY REFERENCE FILE

Date:	01/07/92
Reactor Unit:	MO1
Data Feeder:	PCS
NRC ERDS Parameter:	STAB CLASS
PointID:	MET110
Plant Spec Point Desc.:	PRIMARY MET TOWER 43M AVG DELTA TEMP A
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 15 minutes, and stored in data files as 15-minute average. This value represents the difference in temperature in degF/100ft.

SRS

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

Number:
ERDS-SRS-1-5

Sheet No: 53

DATA POINT LIBRARY REFERENCE FILE

Date:	01/07/92
Reactor Unit:	MO1
Data Feeder:	PCS
NRC ERDS Parameter:	STAB CLASS
PointID:	MET111
Plant Spec Point Desc.:	PRIMARY MET TOWER 43M AVG DELTA TEMP B
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 15 minutes, and stored in data files as 15-minute average. This value represents the difference in temperature in degF/100ft.

SRS

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

Number:
ERDS-SRS-1-5

Sheet No: 54

DATA POINT LIBRARY REFERENCE FILE

Date:	01/07/92
Reactor Unit:	1
Data Feeder:	S
NRC ERDS Parameter:	AB CLASS
PointID:	MET112
Plant Spec Point Desc.:	PRIMARY MET TOWER 100M AVG DELTA TEMP A
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 15 minutes, and stored in data files as 15-minute average. This value represents the difference in temperature in degF/100ft.

SRS

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

Number:
ERDS-SRS-1-5

Sheet No: 55

DATA POINT LIBRARY REFERENCE FILE

Date:	01/07/92
Reactor Unit:	MO1
Data Feeder:	PCS
NRC ERDS Parameter:	STAB CLASS
PointID:	MET113
Plant Spec Point Desc.:	PRIMARY MET TOWER 100M AVG DELTA TEMP B
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 15 minutes, and stored in data files as 15-minute average. This value represents the difference in temperature in degF/100ft.

SRS

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

Number:
ERDS-SRS-1-5

Sheet No: **56**

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
Nuclear Management Company
Monticello Nuclear Generating Plant
2807 West County Road 75
Monticello, MN 55362
(763) 295-1326

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

Lee Lesmeister
Information Technology Analyst
Nuclear Management Company
Monticello Nuclear Generating Plant
2807 West County Road 75
Monticello, MN 55362
(763) 295-1388

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

Bob Awde
Principal Engineer
Nuclear Management Company
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
Nuclear Management Company
Monticello Nuclear Generating Plant
2807 West County Road 75
Monticello, MN 55362
(763) 271-5180

SRS

Title:

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

Number:

ERDS-SRS-1-5

Sheet No: 57

E. Telephone Systems Specialist(s):

David Seestrom
Instrument Engineer
Nuclear Management Company
Monticello Nuclear Generating Plant
2807 West County Road 75
Monticello, MN 55362
(763) 295-1376

SRS

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

Number:
ERDS-SRS-1-5

Sheet No: 58

II. Selection of Data Feeders

A. How many data feeders are there (six maximum)?

One - Process Computer System

B. Identify the selected data feeders and provide the following for each:

1. a short description of the categories of data points it will provide (e.g., met. rad. or plant data points, by unit) and
2. the rationale for selecting it if another system can also provide its categories of data points.
 - a) It is planned to provide both plant data points and meteorological information through the single feeder.
 - b) No other system is capable of providing requested information.

C. Which data feeder is the site time determining feeder? This should be the feeder which is providing the majority of the data points.

SRS

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

Number:
ERDS-SRS-1-5

Sheet No: 59

III. Data Feeder Information

Note: A new Section IV must be filled out for each feeder system selected.

General Questions

A. Identification of Data Feeder

1. What is the name in local parlance given to this data feeder (e.g., Emergency Response Information System)? Please give both the acronym and the words forming it.

PCS - Process Computer System

2. Is this the site time determining feeder?

Yes

3. How often will this feeder transmit an update set to the ERDS (in seconds)?

60 Seconds

B. Hardware/Software Environment

1. Identify the manufacturer and model number of the data feeder hardware.

Digital Equipment Corporation VAX-4000-108

2. Identify the operating system.

VAX OpenVMS V7.1

3. What method of timekeeping is implemented on this feeder system (Daylight Savings, Standard, Greenwich)?

Daylight Savings

4. In what time zone is this feeder located?

Central Standard Time Zone

SRS

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

Number:
ERDS-SRS-1-5

Sheet No: 60

C. Data Communication Details

1. Can this data feeder provide asynchronous serial data communication (RS-232-C) with full-modem control?

Yes

2. Will this feeder transmit in ASCII or EBCDIC?

ASCII

3. Can this feeder transmit at a serial baud rate of 2400 bps? If not, at what baud rate can it transmit?

Yes, 2400 bps can be used.

4. Does the operating system support XON/XOFF flow control?

Yes

- a) Are any problems foreseen with the NRC using XON/XOFF to control the transmission of data?

No, however the use of SUSPEND and RESUME to control the transmission of data works better as demonstrated in testing with Haliburton/NUS.

5. If it is not feasible to reconfigure a serial port for the ERDS linkup (i.e., change the baud rate, parity, etc.), please explain why.

Note Applicable.

6. Do any ports currently exist for the ERDS linkup?

Yes

- a) If not, is it possible to add additional ports?

Not Applicable.

SRS

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

Number:
ERDS-SRS-1-5

Sheet No: 61

- b) If yes, will the port be used solely by the ERDS or shared with other non-emergency-time users? Give details.

Port will be dedicated for ERDS.

D. Data Feeder Physical Environment and Management

1. Where is the data feeder located in terms of the TSC, EOF, and control room?

Computer Room located in Plant Administrative Building adjacent to Plant Control Room.

2. Is the data feeder protected from loss of supply of electricity?

Yes, PCS is provided with UPS (batteries with inverter and diesel generator).

3. Is there a human operator for this data feeder?

Yes

- a) If so, how many hours a day is the feeder attended?

It is planned to have the Shift Emergency Communicator (SEC) initiate the ERDS System per Emergency Implementing Procedures. An SEC is on duty 24 hours/day.