



Tennessee Valley Authority, Post Office Box 2000, Soddy-Daisy, Tennessee 37379

June 19, 1996

10 CFR 50, Appendix E

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

Gentlemen:

In the Matter of )  
Tennessee Valley Authority )

Docket No. 50-328

SEQUOYAH NUCLEAR PLANT (SQN) - EMERGENCY RESPONSE DATA SYSTEM  
(ERDS) - UNIT 2 DATA POINT LIBRARY UPDATE

In accordance with 10 CFR 50, Appendix E (VI.3.a), TVA is providing notification of the following changes to the ERDS Data Point Library. Enclosure 1 provides a copy of the "marked-up" listing. Enclosure 2 contains the revised listing.

Please direct questions concerning this issue to W. C. Ludwig at (423) 843-7460.

Sincerely,

*R. H. Shell*

R. H. Shell  
Manager  
SQN Site Licensing

Enclosures  
cc: See page 2

9606250342 960619  
PDR ADOCK 05000328  
F PDR

1/1  
#426

U.S. Nuclear Regulatory Commission  
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ENCLOSURE 1

EMERGENCY RESPONSE DATA SYSTEM

UNIT 2 REVISIONS

ORIGINAL MARK-UP

ERDS Point Number: 1

SIMULATION REAL/SIMULATED DATA

Date: 6/9/92

Reactor Unit: SE2

Data Feeder: 1

NRC ERDS Parameter: NL

Point ID: SIMULATION

Plant Specific Point Desc: INDICATES REAL OR SIMULATED DATA

Generic Cond Desc: REAL/SIMULATED DATA

Analog/Digital: D

Engr Units/Dig States: REAL/SIMUL

Engr Units Conversion: N/A

Minimum Instr Range: N/A

Maximum Instr Range: N/A

Zero Point Reference: N/A

Reference Point Notes: N/A

PROC or SENS: P

Number of Sensors: 0

How Processed: 0 IF REAL, 1 IF SIMULATED

Sensor Locations: N/A

Alarm/Trip Set Points: N/A

NID Power Cutoff Level: N/A

NID Power Cut-On Level: N/A

Instrument Failure Mode: N/A

Temperature Compensation : N

Level Reference Leg: N/A

Unique System Desc: THIS POINT IS USED TO INDICATE WHETHER THE DATA IS COMING  
FROM THE UNIT OR FROM THE SIMULATOR



ERDS Point Number: 2      NI POWER RNG      ZUN2000      Reactor Power

Date: 12/2/91

Reactor Unit: SE2

Data Feeder: 1

NRC ERDS Parameter: NI POWER RNG

Point ID: ZUN2000

Plant Specific Point Desc: ~~POWER RNG AVG~~ RANGE AVERAGE

Generic Cond Desc: Reactor Power

Analog/Digital: A

Engr Units/Dig States: %

Engr Units Conversion: 0-10V = 0-120% Power (Linear)

Minimum Instr Range: 0

Maximum Instr Range: 120

Zero Point Reference: N/A

Reference Point Notes: N/A

PROC or SENS: P

Number of Sensors: 8

How Processed: AVG

Sensor Locations: Upper & Lower excore detectors

Alarm/Trip Set Points: Rod Stop=103% Overpower Reactor Trip=109%

NID Power Cutoff Level: N/A

NID Power Cut-On Level: N/A

Instrument Failure Mode: Probable Downscale (No forcing function)

Temperature Compensation: N

Level Reference Leg: N/A

Unique System Desc: ~~From TSC~~ Upper & Lower detection inputs for

2-NE92-41,42,43,44. AVERAGE OF 2-XM-92-5005E (N-41),  
-5006E (N-42), -5007E (N-43), -5008E (N-44).  
INPUT FROM POINT ID'S ZN0041A, ZN0042A,  
ZN0043A, ZN0044A.

ERDS Point Number: 3      NI INTER RNG      2UN1015      Reactor Power - Intermediate Rng

Date: 12/2/91

Reactor Unit: SE2

Data Feeder: 1

NRC ERDS Parameter: NI INTER RNG

Point ID: 2UN1015

Plant Specific Point Desc: ~~INTER RNG FLUX (LOG)~~ INTERMEDIATE RANGE FLUX

Generic Cond Desc: Reactor Power - Intermediate Rng

Analog/Digital: A

Engr Units/Dig States: LOGPC %

Engr Units Conversion:  $OUTPUT(V) = [LOG(\%Power)] + 0$  N/A

Minimum Instr Range: -8.0

Maximum Instr Range: 2.301 120

Zero Point Reference: N/A

Reference Point Notes: N/A

PROC or SENS: P

Number of Sensors: 2

How Processed: AVG

Sensor Locations: AZ 0 deg & 180 deg Excore

Alarm/Trip Set Points: Rod Stop - 20% , Reactor Trip - 25% Pwr

NID Power Cutoff Level: N/A

NID Power Cut-On Level: N/A

Instrument Failure Mode: Probable Downscale (no forcing function)

Temperature Compensation: N

Level Reference Leg: N/A

Unique System Desc: Avg of XI-92-5003(channel N35) and 5004 (channel N36)

INPUT FROM POINT IDS 2N0035A  
2N0036A

ERDS Point Number: 4      NI SOURC RNG      2UN1014      Reactor Power - Source Range

Date: 12/2/91

Reactor Unit: SE2

Data Feeder: 1

NRC ERDS Parameter: NI SOURC RNG

Point ID: 2UN1014

Plant Specific Point Desc: ~~Source Range Flux (Leg)~~ SOURCE RANGE FLUX

Generic Cond Desc: Reactor Power - Source Range

Analog/Digital: A

Engr Units/Dig States: CPS

Engr Units Conversion:  $OUTPUT(V) = [Log(CPS)] * 1.667$  N/A

Minimum Instr Range:  $10E0$  1.0 E0

Maximum Instr Range:  $10E6$  1.0 E6

Zero Point Reference: N/A

Reference Point Notes: N/A

PROC or SENS: P

Number of Sensors: 4

How Processed: Avg.

Sensor Locations: AZ 0 deg. & 180 deg. Excore

Alarm/Trip Set Points: Reactor Trip -  $10E5$ -CPS 1.0 E5 CPS

NID Power Cutoff Level: N/A

NID Power Cut-On Level: N/A

Instrument Failure Mode: Probable Downscale (No forcing function)

Temperature Compensation: N

Level Reference Leg: N/A

Unique System Desc: Avg of XI-92-5001(channel N31) & 5002 (channel N32) Detectors  
(2 chambers/detector)

~~INPUT FROM POINT IDS~~ ZN0031A  
ZN0032A

ERDS Point Number: 5 REAC VES LEV ZUL6000 Reactor Vessel Water Level

Date: 12/2/91

Reactor Unit: SE2

Data Feeder: 1

NRC ERDS Parameter: REAC VES LEV

Point ID: ZUL6000

Plant Specific Point Desc: RVLIS LOWER RANGE AVERAGE

Generic Cond Desc: Reactor Vessel Water Level

Analog/Digital: A

Engr Units/Dig States: %

Engr Units Conversion: N/A

Minimum Instr Range: 0

Maximum Instr Range: 70

Zero Point Reference: RV BOT

Reference Point Notes: TAF = 62%

PROC or SENS: P

Number of Sensors: 2

How Processed: Average

Sensor Locations: Remote location in the Penetration Rooms

Alarm/Trip Set Points: High at 50 % Low at 0%

NID Power Cutoff Level: N/A

NID Power Cut-On Level: N/A

Instrument Failure Mode: Out of Range

Temperature Compensation: Y

Level Reference Leg: WET

Unique System Desc: This is the lower range portion of the Rx Vessel level indication. The lower range provides indication of the reactor vessel level from the bottom of the vessel to the hot leg during natural circulation conditions. Average of 2-LM-68-368E and -371E. Top of core = 62.3%.

ERDS Point Number: 6      TEMP CORE EX      2UT1003      Highest Core Exit Temperature

Date: 12/2/91  
Reactor Unit: SE2  
Data Feeder: 1  
NRC ERDS Parameter: TEMP CORE EX  
Point ID: 2UT1003  
Plant Specific Point Desc: CORE EXIT TEMP MAX  
Generic Cond Desc: Highest Core Exit Temperature

Analog/Digital: A  
Engr Units/Dig States: DEGF  
Engr Units Conversion: TYPE K TC Table  
Minimum Instr Range: ~~0~~ 200  
Maximum Instr Range: ~~700~~ 2300  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SENS: P  
Number of Sensors: ~~59~~ 65  
How Processed: HIGHEST  
Sensor Locations: Throughout core  
Alarm/Trip Set Points: ~~High at 700 DEGF Low at 0 DEGF~~ NO ALARMS

NID Power Cutoff Level: N/A  
NID Power Cut-On Level: N/A  
Instrument Failure Mode: Eliminates open TC's  
Temperature Compensation: N  
Level Reference Leg: N/A

Unique System Desc: INCORE Thermocouples processed through "Exosensor" system.

The system is divisionalized into 2 divisions. Total of  
~~60~~<sup>65</sup> elements with ~~one~~<sup>3</sup> TC inoperable. The numeric is the high-  
er of (2-XM-94-103-69) and (2-XM-94-103-75)  
2T10B1A      1      2T10B7A      2

200 DEGF IS LOWER CALIBRATED RANGE BUT  
WILL READ LOWER THAN THIS.

ERDS Point Number: 7 SUB MARGIN ZUT1005 Saturation Temp. - Highest CET

Date: 12/2/91  
Reactor Unit: SE2  
Data Feeder: 1  
NRC ERDS Parameter: SUB MARGIN  
Point ID: ZUT1005  
Plant Specific Point Desc: MIN SUBCOOL  
Generic Cond Desc: Saturation Temp. - Highest CET

Analog/Digital: A  
Engr Units/Dig States: DEGF  
Engr Units Conversion: TYPE K TC Table  
Minimum Instr Range: -35 -0  
Maximum Instr Range: 200 700  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SENS: P  
Number of Sensors: 59 65  
How Processed: ~~Highest~~ LOWEST SUBCOOLING  
Sensor Locations: Throughout Core  
Alarm/Trip Set Points: Low at 15 DEGF, High at 130 DEGF

NID Power Cutoff Level: N/A  
NID Power Cut-On Level: N/A  
Instrument Failure Mode: Eliminates open TC's  
Temperature Compensation: N  
Level Reference Leg: N/A  
Unique System Desc: INCORE Thermocouples processed through "Exosensor" System.  
The system is divisionalized into 2 divisions. Total of 60 65  
TC with <sup>3</sup>one TC inoperable. Input from ZT1074A  
(Z-XM-94-101-66) AND ZT1077A  
(Z-XM-94-102-72).

ERDS Point Number: 8      SG LEVEL 1/A      Z-UL1001      Steam Generator 1 Water Level

Date: 12/2/91  
Reactor Unit: SE2  
Data Feeder: 1  
NRC ERDS Parameter: SG LEVEL 1/A  
Point ID: Z-UL1001  
Plant Specific Point Desc: SG 1 NR LEVEL AVG  
Generic Cond Desc: Steam Generator 1 Water Level

Analog/Digital: A  
Engr Units/Dig States: % LEVEL  
Engr Units Conversion: N/A  
Minimum Instr Range: 0  
Maximum Instr Range: 100  
Zero Point Reference: Notes  
Reference Point Notes: Above "J" tubes

PROC or SENS: P  
Number of Sensors: 2  
How Processed: Average  
Sensor Locations: ~~Remote local~~ <sup>LOCATED</sup> outside of Polar Crane Wall  
Alarm/Trip Set Points: Low at 25 %, High at 70 %

NID Power Cutoff Level: N/A  
NID Power Cut-On Level: N/A  
Instrument Failure Mode: Out of Range  
Temperature Compensation: Y  
Level Reference Leg: WET

Unique System Desc: Steam Generator #1 Water Level. Average of <sup>Z</sup>LT-3-39 and -42  
0-100% span on SG narrow range level transmitters corresponds to 75-110% span on the SG wide range level instrumentation. Top of "U" tubes is approximately 71% on the wide range. Therefore, the entire narrow range span is above the "U" tubes. INPUT FROM POINT ID'S ZLO400A AND ZLO401A.

ERDS Point Number: 9 SG LEVEL 2/B ZUL1002 Steam Generator 2 Water Level

Date: 12/2/91  
Reactor Unit: SE2  
Data Feeder: 1  
NRC ERDS Parameter: SG LEVEL 2/B  
Point ID: Z UL1002  
Plant Specific Point Desc: SG 2 NR LEVEL AVG  
Generic Cond Desc: <sup>A</sup> Steam Generator 2 Water Level

Analog/Digital: A  
Engr Units/Dig States: % LEVEL  
Engr Units Conversion: N/A  
Minimum Instr Range: 0  
Maximum Instr Range: 100  
Zero Point Reference: Notes  
Reference Point Notes: Above "U" tubes

PROC or SENS: P  
Number of Sensors: 2  
How Processed: Average  
Sensor Locations: <sup>LOCATED</sup> ~~Remote locat~~ outside of Polar Crane Wall  
Alarm/Trip Set Points: Low at 25 %, High at 70 %

NID Power Cutoff Level: N/A  
NID Power Cut-On Level: N/A  
Instrument Failure Mode: Out of Range  
Temperature Compensation: Y  
Level Reference Leg: WET  
Unique System Desc: Steam Generator #2 Water Level. Average of 2-LT-3-52 and -55  
0-100% span on SG narrow range level transmitters corresponds to 75-100% span on the SG wide range level instrumentation. Top of "U" tubes is approximately 71% on the wide range. Therefore, the entire narrow range span is above the "U" tubes. *INPUT FROM POINT ID'S ZLO420A AND ZLO421A.*



ERDS Point Number: 10 SG LEVEL 3/C ZUL1003 Steam Generator 3 Water Level

Date: 12/2/91  
Reactor Unit: SE2  
Data Feeder: 1  
NRC ERDS Parameter: SG LEVEL 3/C  
Point ID: ZUL1003  
Plant Specific Point Desc: SG 3 NR LEVEL AVG  
Generic Cond Desc: <sup>A</sup>Steam Generator 3 Water Level

Analog/Digital: A  
Engr Units/Dig States: %LEVEL  
Engr Units Conversion: N/A  
Minimum Instr Range: 0  
Maximum Instr Range: 100  
Zero Point Reference: Notes  
Reference Point Notes: Above "U" tubes

PROC or SENS: P  
Number of Sensors: 2  
How Processed: AVERAGE  
Sensor Locations: <sup>LOCATED</sup>~~Remote locat~~ outside of Polar Crane Wall  
Alarm/Trip Set Points: Low at 25 %, High at 70 %

NID Power Cutoff Level: N/A  
NID Power Cut-On Level: N/A  
Instrument Failure Mode: Out of Range  
Temperature Compensation: Y  
Level Reference Lag: WET  
Unique System Desc: Steam Generator #3 Water Level. Average of 2-LT-3-94 and -97  
0-100% span on SG narrow range level transmitters corresponds to 75-100% span on the SG wide range level instrumentation. Top of "U" tubes is approximately 71% on the wide range. Therefore, the entire narrow range span is above the "U" tubes. <sup>INPUT FROM POINT ID'S ZL0440A AND ZL0441A.</sup>

ERDS Point Number: 11    SG LEVEL 4/D    ZUL1004    Steam Generator 4 Water Level

Date: 12/2/91  
Reactor Unit: SE2  
Data Feeder: 1  
NRC ERDS Parameter: SG LEVEL 4/D  
Point ID: ZUL1004  
Plant Specific Point Desc: SG 4 NR LEVEL AVG  
Generic Cond Desc: ~~SG~~ Steam Generator 4 Water Level

Analog/Digital: A  
Engr Units/Dig States: % LEVEL  
Engr Units Conversion: N/A  
Minimum Instr Range: 0  
Maximum Instr Range: 100  
Zero Point Reference: Notes  
Reference Point Notes: Above "U" tubes

PROC or SENS: P  
Number of Sensors: 2  
How Processed: AVERAGE  
Sensor Locations: ~~LOCATED~~ Remote locat outside of Polar Crane Wall  
Alarm/Trip Set Points: Low at 25 %, High at 70 %

NID Power Cutoff Level: N/A  
NID Power Cut-On Level: N/A  
Instrument Failure Mode: Out of Range  
Temperature Compensation: Y  
Level Reference Leg: WET  
Unique System Desc: Steam Generator #4 Water Level. Average of 2-LT-3-107 and -110. 0-100% span on SG narrow range level transmitters corresponds to 75-100% on the SG wide range level instrumentation. Top of "U" tubes is approximately 71% on the wide range. Therefore, the entire narrow range span is above the "U" tubes. *INPUT FROM POINT ID'S ZH0460A AND ZH0461A.*

ERDS Point Number: 12    SG PRESS 1/A    ZUP1002    Steam Generator 1 Pressure

Date: 12/2/91

Reactor Unit: SE2

Data Feeder: 1

NRC ERDS Parameter: SG PRESS 1/A

Point ID: ZUP1002

Plant Specific Point Desc: SG 1 MS PRESSURE AVG

Generic Cond Desc: <sup>SG</sup> Steam Generator 1 Pressure

Analog/Digital: A

Engr Units/Dig States: PSIG

Engr Units Conversion: N/A

Minimum Instr Range: 0

Maximum Instr Range: 1200

Zero Point Reference: N/A

Reference Point Notes: N/A

PROC or SENS: P

Number of Sensors: 2

How Processed: AVERAGE

Sensor Locations: Remote Location in Penetration Room

Alarm/Trip Set Points: Low at <sup>700</sup>~~600~~ PSIG, High at <sup>1020</sup>~~1200~~ PSIG

NID Power Cutoff Level: N/A

NID Power Cut-On Level: N/A

Instrument Failure Mode: Out of Range

Temperature Compensation: N

Level Reference Leg: WET

Unique System Desc: Steam Generator #1 Pressure. Average of 2-PT-1-2A and 2-PT-1-2B.

ERDS Point Number: 13    SG PRESS 2/B    Z-UP1003    Steam Generator 2 Pressure

Date: 12/2/91

Reactor Unit: SE2

Data Feeder: 1

NRC ERDS Parameter: SG PRESS 2/B

Point ID: Z-UP1003

Plant Specific Point Desc: SG 2 MS PRESSURE AVG

Generic Cond Desc: ~~SG~~ Steam Generator 2 Pressure

Analog/Digital: A

Engr Units/Dig States: PSIG

Engr Units Conversion: N/A

Minimum Instr Range: 0

Maximum Instr Range: 1200

Zero Point Reference: N/A

Reference Point Notes: N/A

PROC or SENS: P

Number of Sensors: 2

How Processed: AVERAGE

Sensor Locations: Remote location in East Valve Room

Alarm/Trip Set Points: Low at <sup>700</sup>~~600~~ PSIG, High at <sup>1020</sup>~~1200~~ PSIG

NID Power Cutoff Level: N/A

NID Power Cut-On Level: N/A

Instrument Failure Mode: Out of Range

Temperature Compensation: N

Level Reference Leg: WET

Unique System Desc: Steam Generator #2 Pressure. Average of 2-PT-1-9A and 2-PT-1-9B.

ERDS Point Number: 14 SG PRESS 3/C 2-UP1004 Steam Generator 3 Pressure

Date: 12/2/91  
Reactor Unit: SE2  
Data Feeder: 1  
NRC ERDS Parameter: SG PRESS 3/C  
Point ID: 2-UP1004  
Plant Specific Point Desc: SG 3 MS PRESSURE AVG  
Generic Cond Desc: ~~SG~~ Steam Generator 3 Pressure

Analog/Digital: A  
Engr Units/Dig States: PSIG  
Engr Units Conversion: N/A  
Minimum Instr Range: 0  
Maximum Instr Range: 1200  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SENS: P  
Number of Sensors: 2  
How Processed: AVERAGE  
Sensor Locations: Remote Location in East Valve Room  
Alarm/Trip Set Points: Low at <sup>700</sup>~~600~~ PSIG, High at <sup>1020</sup>~~1200~~ PSIG

NID Power Cutoff Level: N/A  
NID Power Cut-On Level: N/A  
Instrument Failure Mode: Out of Range  
Temperature Compensation: N  
Level Reference Leg: WET  
Unique System Desc: Steam Generator #3 Pressure. Average of 2-PT-1-20A and 2-PT-1-20B.

ERDS Point Number: 15 SG PRESS 4/D 2 UP1005 Steam Generator 4 Pressure

Date: 12/2/91

Reactor Unit: SE2

Data Feeder: 1

NRC ERDS Parameter: SG PRESS 4/D

Point ID: 2 UP1005

Plant Specific Point Desc: SG 4 MS PRESSURE AVG

Generic Cond Desc: Steam Generator 4 Pressure

Analog/Digital: A

Engr Units/Dig States: PSIG

Engr Units Conversion: N/A

Minimum Instr Range: 0

Maximum Instr Range: 1200

Zero Point Reference: N/A

Reference Point Notes: N/A

PROC or SENS: P

Number of Sensors: 2

How Processed: AVERAGE

Sensor Locations: Remote location in Penetration Room

Alarm/Trip Set Points: Low at <sup>700</sup>~~600~~ PSIG, High at <sup>1020</sup>~~1200~~ PSIG

NID Power Cutoff Level: N/A

NID Power Cut-On Level: N/A

Instrument Failure Mode: Out of Range

Temperature Compensation: N

Level Reference Leg: WET

Unique System Desc: Steam Generator #4 Pressure. Average of 2-PT-1-27A and 2-PT-1-27B.

ERDS Point Number: 16 MN FD FL 1/A

~~UF1000~~ ZW0410C

Stm Gen 1 Main Feedwater Flow

Date: 12/2/91

Reactor Unit: SE2

Data Feeder: 1

NRC ERDS Parameter: MN FD FL 1/A

Point ID: ~~UF1000~~ ZW0410C

Plant Specific Point Desc: SG-1 FW FLOW AVG SG #1 CORR FW 1/2 AVG

Generic Cond Desc: Stm Gen 1 Main Feedwater Flow

Analog/Digital: A

Engr Units/Dig States: ~~KBH~~ MLB/HR

Engr Units Conversion: N/A

Minimum Instr Range: 0

Maximum Instr Range: ~~4500~~ 4.5

Zero Point Reference: N/A

Reference Point Notes: N/A

PROC or SENS: P

Number of Sensors: 2 3

How Processed: AVERAGE

Sensor Locations: Stm Gen FW Line 1, Aux. Bldg

Alarm/Trip Set Points: High at ~~4500 KBH~~ Low at 0 KBH  
3.9 MLB/HR HI-HI AT 4.0 MLB/HR

NID Power Cutoff Level: N/A

NID Power Cut-On Level: N/A

Instrument Failure Mode: Out of Range

Temperature Compensation: Y

Level Reference Leg: WET

Unique System Desc: Steam Generator 1 Main Feedwater Flow. Average of (2-FT-3-35A)  
and (2-FT-3-35B) 2FC03A

2FC03A

CORRECTED FOR TEMPERATURE ZTC0418A  
(Z-TE-3-36)

ERDS Point Number: 17

MN FD FL 2/B

2U0430C

~~UF1001~~

Stm Gen 2 Main Feedwater Flow

Date: 12/2/91

Reactor Unit: SE2

Data Feeder: 1

NRC ERDS Parameter: MN FD FL 2/B

Point ID: ~~UF1001~~ 2U0430C

Plant Specific Point Desc: ~~SG-2 FW FLOW AVG~~ SG #2 CORR FW 1/2 AVG

Generic Cond Desc: Stm Gen 2 Main Feedwater Flow

Analog/Digital: A

Engr Units/Dig States: ~~KBH~~ MMB/HR

Engr Units Conversion: N/A

Minimum Instr Range: 0

Maximum Instr Range: ~~4500~~ 4.5

Zero Point Reference: N/A

Reference Point Notes: N/A

PROC or SENS: P

Number of Sensors: 23

How Processed: AVERAGE

Sensor Locations: Stm Gen FW Line 2, Aux. Bldg

Alarm/Trip Set Points: High at 4500 KBH Low at 0 KBH  
3.9 MMB/HR HI-HI AT 4.0 MMB/HR

NID Power Cutoff Level: N/A

NID Power Cut-On Level: N/A

Instrument Failure Mode: Out of Range

Temperature Compensation: Y

Level Reference Leg: WET

Unique System Desc: Steam Generator 2 Main Feedwater Flow. Average of (2-FT-3-48A)

and (2-FT-3-48B)

↑  
ZFO42AA

↑  
2FD423A

CORRECTED FOR TEMPERATURE ZFO438A  
(Z-TE-3-49).



ERDS Point Number: 18

MN FD FL 3/C

ZWD450C

~~UF1002~~

Stm Gen 3 Main Feedwater Flow

Date: 12/2/91

Reactor Unit: SE2

Data Feeder: 1

NRC ERDS Parameter: MN FD FL 3/C

Point ID: ~~UF1002~~ ZWD450C

Plant Specific Point Desc: ~~SG 3 FW FLOW AVG~~ SG #3 CORR FW 1/2 AVG

Generic Cond Desc: Stm Gen 3 Main Feedwater Flow

Analog/Digital: A

Engr Units/Dig States: KBH MLB/HR

Engr Units Conversion: N/A

Minimum Instr Range: 0

Maximum Instr Range: ~~4500~~ 4.5

Zero Point Reference: N/A

Reference Point Notes: N/A

PROC or SENS: P

Number of Sensors: 23

How Processed: AVERAGE

Sensor Locations: Stm Gen FW Line 3, Aux. Bldg

Alarm/Trip Set Points: High at ~~4500 KBH~~ Low at 0 KBH  
39 MLB/HR HI-HI AT 4.0 MLB/HR

NID Power Cutoff Level: N/A

NID Power Cut-On Level: N/A

Instrument Failure Mode: Out of Range

Temperature Compensation: Y

Level Reference Leg: WET

Unique System Desc: Steam Generator 3 Main Feedwater Flow. Average of (2-FT-3-90A)

and (2-FT-3-90B)

↑  
ZF0444A

↑  
ZF0443A

CORRECTED FOR TEMPERATURE ZT0458A  
(2-TE-3-91).

ERDS Point Number: 19 MN FD FL 4/D

Zu0470C  
~~UF1003~~

Stm Gen 4 Main Feedwater Flow

Date: 12/2/91

Reactor Unit: SE2

Data Feeder: 1

NRC ERDS Parameter: MN FD FL 4/D

Point ID: ~~UF1003~~ Zu0470C

Plant Specific Point Desc: ~~SG 4 FW FLOW AVG~~ SG #4 CORR FW 1/2 AVG

Generic Cond Desc: Stm Gen 4 Main Feedwater Flow

Analog/Digital: A

Engr Units/Dig States: ~~KBH~~ MLB/HR

Engr Units Conversion: N/A

Minimum Instr Range: 0

Maximum Instr Range: ~~4500~~ 4.5

Zero Point Reference: N/A

Reference Point Notes: N/A

PROC or SENS: P

Number of Sensors: 3

How Processed: AVERAGE

Sensor Locations: Stm Gen FW Line 4, Aux. Bldg

Alarm/Trip Set Points: High at ~~4500 KBH~~ Low at 0 KBH  
3.9 MLB/HR HI-HI AT 4.0 MLB/HR

NID Power Cutoff Level: N/A

NID Power Cut-On Level: N/A

Instrument Failure Mode: Out of Range

Temperature Compensation: Y

Level Reference Leg: WET

Unique System Desc: Steam Generator 4 Main Feedwater Flow. Average of

(2-FT-3-103A) and (2-FT-3-103B)

ZFO463A

ZFO464A

CORRECTED FUEL TEMPERATURE ZT0478A  
(2-TE-3-104).

ERDS Point Number: 20    AX FW FL 1/A    <sup>ZU0066</sup>  
~~2-FM3-163C~~    Stm Gen 1 Auxiliary FW Flow

Date: 9/24/95  
Reactor Unit: SE2  
Data Feeder: 1  
NRC ERDS Parameter: AX FW FL 1/A  
Point ID: ~~2-FM3-163C~~ ZU0066  
Plant Specific Point Desc: STM GEN 1 AFW INLET FLOW SG #1 AUX FEEDWATER FLOW  
Generic Cond Desc: Stm Gen 1 Auxiliary FW Flow

Analog/Digital: A  
Engr Units/Dig States: GPM  
Engr Units Conversion: ~~1.5 VDC=0-440 GPM~~ N/A  
Minimum Instr Range: 0  
Maximum Instr Range: 440  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SENS: SP  
Number of Sensors: 1  
How Processed: ~~N/A~~ Pseudo Point CAPS Flow AT 440 GPM  
Sensor Locations: Down Stream of MDAFW, TDAFW tie to S/G1  
Alarm/Trip Set Points: No Alarms

NID Power Cutoff Level: N/A  
NID Power Cut-On Level: N/A  
Instrument Failure Mode: Low  
Temperature Compensation: N  
Level Reference Leg: N/A

Unique System Desc: There are two electric and one turbine-driven AFWPS. Each electric pump feeds two SG's and the turbine-driven pump feeds all four SG's. The electric and turbine-driven AFWPs share the same piping to each SG. The flow element is located in the shared piping, maximum rated flow for MDAFWPs and turbine-driven AFWP, is 440 and 880 gpm, respectively. <sup>INPUT FROM 2-FM3-163C</sup>

ERDS Point Number: 21    AX FW FL 2/B    <sup>240067</sup>  
~~2-FM3-155C~~    Stm Gen 2 Auxiliary FW Flow

Date: 9/24/95

Reactor Unit: SE2

Data Feeder: 1

NRC ERDS Parameter: AX FW FL 2/B

Point ID: ~~2-FM3-155C~~ 240067

Plant Specific Point Desc: ~~STM GEN 2 AFW INLET FLOW~~ SG #2 AUX FEEDWATER FLOW

Generic Cond Desc: Stm Gen 2 Auxiliary FW Flow

Analog/Digital: A

Engr Units/Dig States: GPM

Engr Units Conversion: ~~1.5 VDC=0-440 GPM~~ N/A

Minimum Instr Range: 0

Maximum Instr Range: 440

Zero Point Reference: N/A

Reference Point Notes: N/A

PROC or SENS: SP

Number of Sensors: 1

How Processed: ~~N/A~~ PSEUDO POINT CAPS FLOW AT 440 GPM

Sensor Locations: Downstream of MDAPFW, TDAFW tie to S/G 2

Alarm/Trip Set Points: No alarms

NID Power Cutoff Level: N/A

NID Power Cut-On Level: N/A

Instrument Failure Mode: Low

Temperature Compensation: N

Level Reference Leg: N/A

Unique System Desc: There are two electric and one turbine-driven AFWPS. Each electric pump feeds two SG's and the turbine-driven pump feeds all four SG's. The electric and turbine-driven AFWPs share the same piping to each SG. The flow element is located in the shared piping, maximum rated flow for MDAPFWs and turbine-driven AFWP, is 440 and 880 gpm, respectively. INPUT FROM 2-FM3-155C.

ERDS Point Number: 22    AX FW FL 3/C    <sup>240068</sup>  
~~-2-FM3-147C-~~    Stm Gen 3 Auxiliary FW Flow

Date: 9/24/95

Reactor Unit: SE2

Data Feeder: 1

NRC ERDS Parameter: AX FW FL 3/C

Point ID: ~~-2-FM3-147C-~~ 240068

Plant Specific Point Desc: ST-1 GEN-3 AFW INLET FLOW SG #3 Aux Feedwater Flow

Generic Cond Desc: Stm Gen 3 Auxiliary FW Flow

Analog/Digital: A

Engr Units/Dig States: GPM

Engr Units Conversion: ~~1.5 VDC=0-440 GPM~~ N/A

Minimum Instr Range: 0

Maximum Instr Range: 440

Zero Point Reference: N/A

Reference Point Notes: N/A

PROC or SENS: 8.7

Number of Sensors: 1

How Processed: ~~N/A~~ Pseudo Point Caps Flow at 440 GPM

Sensor Locations: Downstream of MDAFW, TDAFW tie to S/G 3

Alarm/Trip Set Points: No Alarms

NID Power Cutoff Level: N/A

NID Power Cut-On Level: N/A

Instrument Failure Mode: Low

Temperature Compensation: N

Level Reference Leg: N/A

Unique System Desc: There are two electric and one turbine-driven AFWPS. Each electric pump feeds two SG's and the turbine-driven pump feeds all four SG's. The electric and turbine-driven AFWPs share the same piping to each SG. The flow element is located in the shared piping, maximum rated flow for MDAFWPs and turbine-driven AFWP, is 440 and 880 gpm, respectively. Input From 2-FM3-147C

ERDS Point Number: 23 AX FW FL 4/D <sup>Zu0069</sup>  
~~-2-FM3-170C-~~ Stm Gen 4 Auxiliary FW Flow

Date: 9/24/95

Reactor Unit: SE2

Data Feeder: 1

NRC ERDS Parameter: AX FW FL 4/D

Point ID: ~~-2-FM3-170C-~~ Zu0069

Plant Specific Point Desc: ~~-STM GEN 4 AFW INLET FLOW-~~ SG # 4 AUX FEEDWATER FLOW

Generic Cond Desc: Stm Gen 4 Auxiliary FW Flow

Analog/Digital: A

Engr Units/Dig States: GPM

Engr Units Conversion: ~~-1.5 VDC=0-440 GPM~~ N/A

Minimum Instr Range: 0

Maximum Instr Range: 440

Zero Point Reference: N/A

Reference Point Notes: N/A

PROC or SENS: SP

Number of Sensors: 1

How Processed: ~~N/A~~ Pseudo Point Caps Flow at 440 GPM

Sensor Locations: Downstream of MDAFW, TDAFW tie to S/G 4

Alarm/Trip Set Points: No Alarms

NID Power Cutoff Level: N/A

NID Power Cut-On Level: N/A

Instrument Failure Mode: Low

Temperature Compensation: N

Level Reference Leg: N/A

Unique System Desc: There are two electric and one turbine-driven AFWPS. Each electric pump feeds two SG's and the turbine-driven pump feeds all four SG's. The electric and turbine-driven AFWPs share the same piping to each SG. The flow element is located in the shared piping, maximum rated flow for MDAFWPs and Turbine-driven AFWP, is 440 and 880 gpm, respectively. <sup>INLET FROM 2-FM3-170C.</sup>



ERDS Point Number: 24 HL TEMP 1/A

ZT0419A

~~2-TM68-1B~~

Stm Gen 1 Inlet Temperature

Date: 5/20/92

Reactor Unit: SE2

Data Feeder: 1

NRC ERDS Parameter: HL TEMP 1/A

Point ID: ~~2-TM68-1B~~ ZT0419A

Plant Specific Point Desc: LP-1 HL WID RNG TEMP LOOP 1 HOT LEG WIDE RANGE TEMP

Generic Cond Desc: Stm Gen 1 Inlet Temperature

Analog/Digital: A

Engr Units/Dig States: DEGF

Engr Units Conversion: 1-5 VDC=0-700 DEGF

Minimum Instr Range: 0

Maximum Instr Range: 700

Zero Point Reference: N/A

Reference Point Notes: N/A

PROC or SENS: S

Number of Sensors: 1

How Processed: N/A

Sensor Locations: On Loop 1 RCS hot leg piping

Alarm/Trip Set Points: No Alarms

NID Power Cutoff Level: N/A

NID Power Cut-On Level: N/A

Instrument Failure Mode: Low

Temperature Compensation: N

Level Reference Leg: N/A

Unique System Desc: RCS hot leg temperature is used in event recovery to provide information for manual control of RCS temperature, control of the ECCS pumps and RCPs, and verifying natural circulation or increase blow down. The temperature indication is also used to control RCS pressure and temperature within required limits. INPUT FROM Z-TE-6B-1.

ERDS Point Number: 25 HL TEMP 2/B

ZT0439A

~~2-TM68-24B~~

Stm Gen 2 Inlet Temperature

Date: 5/20/92

Reactor Unit: SE2

Data Feeder: 1

NRC ERDS Parameter: HL TEMP 2/B

Point ID: ~~2-TM68-24B~~ ZT0439A

Plant Specific Point Desc: ~~LP 2 HL WID RNG TEMP~~ LOOP 2 HOT LEG WIDE RANGE TEMP

Generic Cond Desc: Stm Gen 2 Inlet Temperature

Analog/Digital: A

Engr Units/Dig States: DEGF

Engr Units Conversion: 1-5 VDC=0-700 DEGF

Minimum Instr Range: 0

Maximum Instr Range: 700

Zero Point Reference: N/A

Reference Point Notes: N/A

PROC or SENS: S

Number of Sensors: 1

How Processed: N/A

Sensor Locations: On loop 2 RCS Hot Leg Piping

Alarm/Trip Set Points: No Alarms

NID Power Cutoff Level: N/A

NID Power Cut-On Level: N/A

Instrument Failure Mode: Low

Temperature Compensation: N

Level Reference Leg: N/A

Unique System Desc: RCS hot leg temperature is used in event recovery to provide information for manual control of RCS temperature, control of the ECCS pumps and RCPs, and verifying natural circulation or increase blow down. The temperature indication is also used to control RCS pressure and temp. within required limits. INPUT FROM Z-TE-68-Z4.



ERDS Point Number: 26

HL TEMP 3/C

ZT0459A

~~-2-TM68-43B~~

Stm Gen 3 Inlet Temperature

Date: 5/20/92

Reactor Unit: SE2

Data Feeder: 1

NRC ERDS Parameter: HL TEMP 3/C

Point ID: ~~-2-TM68-43B~~ ZT0459A

Plant Specific Point Desc: ~~LP 3 HL WID RNG TEMP LOOP 3 HOT LEG WIDE RANGE TEMP~~

Generic Cond Desc: Stm Gen 3 Inlet Temperature

Analog/Digital: A

Engr Units/Dig States: DEGF

Engr Units Conversion: 1.5 VDC=0-700 DEGF

Minimum Instr Range: 0

Maximum Instr Range: 700

Zero Point Reference: N/A

Reference Point Notes: N/A

PROC or SENS: S

Number of Sensors: 1

How Processed: N/A

Sensor Locations: On loop 3 RCS Hot Leg Piping

Alarm/Trip Set Points: No Alarms

NID Power Cutoff Level: N/A

NID Power Cut-On Level: N/A

Instrument Failure Mode: Low

Temperature Compensation: N

Level Reference Leg: N/A

Unique System Desc: RCS hot leg temp. is used in event recovery to provide information for manual control of RCS temperature, control of the ECCS pumps and RCPs, and verifying natural circulation or increase blow down. The temperature indication is also used to control RCS pressure and temp. within required limits. INPUT FROM Z-TE-68-43

ERDS Point Number: 27 HL TEMP 4/D

ZT0479A

~~-2-TM68-65B~~

Stm Gen 4 Inlet Temperature

Date: 5/20/92

Reactor Unit: SE2

Data Feeder: 1

NRC ERDS Parameter: HL TEMP 4/D

Point ID: ~~-2-TM68-65B~~ ZT0479A

Plant Specific Point Desc: LP 4 HL WID RNG TEMP LOOP 4 HOT LEG WIDE RANGE TEMP

Generic Cond Desc: Stm Gen 4 Inlet Temperature

Analog/Digital: A

Engr Units/Dig States: DEGF

Engr Units Conversion: 1-5 VDC=C-700 DEGF

Minimum Instr Range: 0

Maximum Instr Range: 700

Zero Point Reference: N/A

Reference Point Notes: N/A

PROC or SENS: S

Number of Sensors: 1

How Processed: N/A

Sensor Locations: On loop 4 RCS Hot Leg Piping

Alarm/Trip Set Points: No Alarms

NID Power Cutoff Level: N/A

NID Power Cut-On Level: N/A

Instrument Failure Mode: Low

Temperature Compensation: N

Level Reference Leg: N/A

Unique System Desc: RCS hot leg temperature is used in event recovery to provide information for manual control of RCS temperature, control of the ECCS pumps and RCPs, and verifying natural circulation or increase blow down. The temp. indication is also used to control RCS pressure and temperature within required limits. INPUT FROM Z-TE-68-65.

ERDS Point Number: 28 CL TEMP 1/A <sup>ZT0406A</sup>  
~~-2-TE68-18-~~ Stm Gen 1 Outlet Temperature

Date: 5/20/92

Reactor Unit: SE2

Data Feeder: 1

NRC ERDS Parameter: CL TEMP 1/A

Point ID: ~~2-TE68-18~~ ZT0406A

Plant Specific Point Desc: LP-1 CL-WID-RNG-TEMP LOOP 1 COLD LEG WIDE RANGE TEMP

Generic Cond Desc: Stm Gen 1 Outlet Temperature

Analog/Digital: A

Engr Units/Dig States: DEGF

Engr Units Conversion: 1.5 VDC=0-700 DEGF

Minimum Instr Range: 0

Maximum Instr Range: 700

Zero Point Reference: N/A

Reference Point Notes: N/A

PROC or SENS: S

Number of Sensors: 1

How Processed: N/A

Sensor Locations: On loop 1 RCS Cold Leg Piping

Alarm/Trip Set Points: No Alarms

NID Power Cutoff Level: N/A

NID Power Cut-On Level: N/A

Instrument Failure Mode: Low

Temperature Compensation: N

Level Reference Leg: N/A

Unique System Desc: RCS cold leg temperature is used in event recovery to maintain proper relationship between RCS pressure and temperature while cooling down, and providing information to manually control RCS temperature by controlling AFW flow, steam generator pressure, and RHR. The temperature indication is also used in maintaining stable plant conditions and verifying natural circulation.

INPUT FROM Z-TE-68-18

ERDS Point Number: 29 CL TEMP 2/B

ZT04Z6A  
~~-2-TE68-41-~~

Stm Gen 2 Outlet Temperature

Date: 5/20/92

Reactor Unit: SE2

Data Feeder: 1

NRC ERDS Parameter: CL TEMP 2/B

Point ID: ~~-2-TE68-41-~~ ZT04Z6A

Plant Specific Point Desc: LP-2-CL-WID-RNG-TEMP LOOP 2 COLD LEG WIDE RANGE TEMP

Generic Cond Desc: Stm Gen 2 Outlet Temperature

Analog/Digital: A

Engr Units/Dig States: DEGF

Engr Units Conversion: 1-5 VDC=0-700 DEGF

Minimum Instr Range: 0

Maximum Instr Range: 700

Zero Point Reference: N/A

Reference Point Notes: N/A

PROC or SENS: S

Number of Sensors: 1

How Processed: N/A

Sensor Locations: On loop 2 RCS Cold Leg Piping

Alarm/Trip Set Points: No Alarms

NID Power Cutoff Level: N/A

NID Power Cut-On Level: N/A

Instrument Failure Mode: Low

Temperature Compensation: N

Level Reference Leg: N/A

Unique System Desc: RCS cold leg temperature is used in event recovery to maintain proper relationship between RCS pressure and temperature while cooling down, and providing information to manually control RCS temperature by controlling AFW flow, steam generator pressure, and RHR. The temperature indication is also used in maintaining stable plant conditions and verify natural circulation.

INPUT FROM Z-TE-68-A1.

ERDS Point Number: 30 CL TEMP 3/C

ZTO446A  
~~2-TE68-60~~

Stm Gen 3 Outlet Temperature

Date: 5/20/92

Reactor Unit: SE2

Data Feeder: 1

NRC ERDS Parameter: CL TEMP 3/C

Point ID: ~~2-TE68-60~~ ZTO446A

Plant Specific Point Desc: ~~LP 3 CL WID RING TEMP~~ LOOP 3 COLD LEG WIDE RANGE TEMP

Generic Cond Desc: Stm Gen 3 Outlet Temperature

Analog/Digital: A

Engr Units/Dig States: DEGF

Engr Units Conversion: 1-5 VDC=0-700 DEGF

Minimum Instr Range: 0

Maximum Instr Range: 700

Zero Point Reference: N/A

Reference Point Notes: N/A

PROC or SENS: S

Number of Sensors: 1

How Processed: N/A

Sensor Locations: On loop 3 RCS Cold Leg Piping

Alarm/Trip Set Points: No Alarms

NID Power Cutoff Level: N/A

NID Power Cut-On Level: N/A

Instrument Failure Mode: Low

Temperature Compensation: N

Level Reference Leg: N/A

Unique System Desc: RCS Cold Leg Temperature is used in event recovery to maintain proper relationship between RCS pressure and temperature while cooling down, and providing information to manually control RCS temperature by controlling AFW flow, steam generator pressure, and RHR. The temperature indication is also used in maintaining stable plant conditions and verify natural circulation.

INPUT FROM Z-TE-68-60

ERDS Point Number: 31 CL TEMP 4/D

Z.T.O 466A

~~-2-TE68-83-~~

Stm Gen 4 Outlet Temperature

Date: 5/20/92

Reactor Unit: SE2

Data Feeder: 1

NRC ERDS Parameter: CL TEMP 4/D

Point ID: ~~-2-TE68-83~~ Z.T.O 466A

Plant Specific Point Desc: ~~LP 4 CL WID RNG TEMP~~ LOOP 4 COLD LEG WIDE RANGE TEMP

Generic Cond Desc: Stm Gen 4 Outlet Temperature

Analog/Digital: A

Engr Units/Dig States: DEGF

Engr Units Conversion: 1-5 VDC=0-700 DEGF

Minimum Instr Range: 0

Maximum Instr Range: 700

Zero Point Reference: N/A

Reference Point Notes: N/A

PROC or SENS: S

Number of Sensors: 1

How Processed: N/A

Sensor Locations: On loop 4 RCS Cold Leg Piping

Alarm/Trip Set Points: No Alarms

NID Power Cutoff Level: N/A

NID Power Cut-On Level: N/A

Instrument Failure Mode: Low

Temperature Compensation: N

Level Reference Leg: N/A

Unique System Desc: RCS Cold Leg temperature is used in event recovery to maintain proper relationship between RCS pressure and temp. while cooling down, and providing information to manually control RCS temperature by controlling AFW flow, steam generator pressure, and RHR. The temperature indication is also used in maintaining stable plant conditions and verify natural circulation. INPUT FROM Z-TE-68-83.

ERDS Point Number: 32    RCS PRESSURE    ZUP1000    Reactor Coolant System Pressure

Date: 5/21/92

Reactor Unit: SE2

Data Feeder: 1

NRC ERDS Parameter: RCS PRESSURE

Point ID: ZUP1000

Plant Specific Point Desc: ~~RCS WIDE RNG PRESS AVG~~ RCS WIDE RANGE PRESSURE AVERAGE

Generic Cond Desc: Reactor Coolant System Pressure

Analog/Digital: A

Engr Units/Dig States: PSIG

Engr Units Conversion: ~~1.5 VDC = 0-3000 PSIG~~ N/A

Minimum Instr Range: 0

Maximum Instr Range: 3000

Zero Point Reference: N/A

Reference Point Notes: N/A

PROC or SENS: P

Number of Sensors: 3

How Processed: AVERAGE

Sensor Locations: RCS Hot Legs 1,3,4

Alarm/Trip Set Points: Low 1865 PSIG RxTrip. High 2390 PSIG RxTr

NID Power Cutoff Level: N/A

NID Power Cut-On Level: N/A

Instrument Failure Mod's: Low

Temperature Compensation: N

Level Reference Leg: N/A

Unique System Desc: RCS pressure determined by this point is the average of 3 signals which measure wide range hot leg pressures. (2-PT-68-62, -66, and -3<sup>9</sup>) RCS pressure indication is utilized by the operators to identify events for SI actuation and termination, starting and stopping RHR pumps, and controlling cooldown to prevent PTS. The alarm trip setpoints are actuated by pressurized pressure transmitters at the given setpoints.

ERDS Point Number: 33      PRZR LEVEL      ZUL1005      Primary System Pressurizer Level

Date: 5/21/92

Reactor Unit: SE2

Data Feeder: 1

NRC ERDS Parameter: PRZR LEVEL

Point ID: ZUL1005

Plant Specific Point Desc: ~~PRZR LEV AVG~~ PZR LEVEL AVERAGE

Generic Cond Desc: Primary System Pressurizer Level

Analog/Digital: A

Engr Units/Dig States: % LEVEL

Engr Units Conversion: ~~61.6 gals/% at 652 deg F and 2235 psia~~ N/A

Minimum Instr Range: 0

Maximum Instr Range: 100

Zero Point Reference: Notes

Reference Point Notes: Top of HTR = 14%

PROC or SENS: P

Number of Sensors: 3

How Processed: Average

Sensor Locations: TAPs from Pressurizer

Alarm/Trip Set Points: High at 92% Rx Trip

NID Power Cutoff Level: N/A

NID Power Cut-On Level: N/A

Instrument Failure Mode: Low

Temperature Compensation: N

Level Reference Leg: WET

Unique System Desc: The pressurizer level is an averaged signal from 3 level transmitters/ (2-LT-68-320, -335, -339), Zero reference is bottom of cylindrical shell. Approximately 63 cu ft of water remains in the pressurizer below zero reference at 652 deg F and 2235 psia. Top of heater represents approximately 14% level. Heaters shutdown and letdown isolated at approximately 17% level.



ERDS Point Number: 34    RCS CHG/MU    Z-UF1016    Primary System Charging / Makeup

Date: 5/21/92  
Reactor Unit: SE2  
Data Feeder: 1  
NRC ERDS Parameter: RCS CHG/MU  
Point ID: Z-UF1016  
Plant Specific Point Desc: NET CHG FLO  
Generic Cond Desc: Primary System Charging / Makeup

Analog/Digital: A  
Eng: Units/Dig States: GPM  
Engr Units Conversion: N/A  
Minimum Instr Range: -200  
Maximum Instr Range: 176  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SENS: P  
Number of Sensors: 6  
How Processed: Subtraction  
Sensor Locations: <sup>C</sup>OP Pmp, RCP Seal/Leakoff, RCS Letdown  
Alarm/Trip Set Points: No Alarms

NID Power Cutoff Level: N/A  
NID Power Cut-On Level: N/A  
Instrument Failure Mode: Multiple due to number of sensors  
Temperature Compensation: N  
Level Reference Leg: N/A  
Unique System Desc:

The net charging flow is calculated by subtracting RCP seal return, and CVCS letdown flow from the discharge flow of the charging pump. The design charging flow is between 55 and 100 GPM during normal operation. *INPUT FROM*  
*Point ID's ZF012BA, ZF0134A,*  
*ZF1018A, ZF1020A, ZF1022A AND*  
*ZF1024A.*

ERDS Point Number: 35    HP SI FLOW    ZUF1010    High Pressure Safety Inj. Flow

Date: 5/21/92  
Reactor Unit: SE2  
Data Feeder: 1  
NRC ERDS Parameter: HP SI FLOW  
Point ID: ZUF1010  
Plant Specific Point Desc: SI FLOW TOTAL  
Generic Cond Desc: High Pressure Safety Inj. Flow

Analog/Digital: A  
Engr Units/Dig States: GPM  
Engr Units Conversion: N/A  
Minimum Instr Range: 0  
Maximum Instr Range: 1600  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SENS: P  
Number of Sensors: 2  
How Processed: Sum  
Sensor Locations: Discharge of Safety Injection Pumps  
Alarm/Trip Set Points: No Alarms

NID Power Cutoff Level: N/A  
NID Power Cut-On Level: N/A  
Instrument Failure Mode: Low  
Temperature Compensation: N  
Level Reference Leg: N/A

Unique System Desc: The total flow is measured by adding the discharge flow rates from two Safety Injection Pumps. The total accident flow rates for cold leg injection or recirculation and hot leg recirculation can be monitored by this point. Safety Injection Pumps on miniflow will not show flow since miniflow path is upstream of flow element. The design flow rate is 425 GPM @ 2500 ft of head for each SI Pump.

(Sum of 2-FT-63-20 and -151) INPUT FROM POINT  
IDS ZF1059A & ZF1066A.

ERDS Point Number: 36    LP SI FLOW    Z-UF1011    Low Pressure Safety Inj. Flow

Date: 5/21/92  
Reactor Unit: SE2  
Data Feeder: 1  
NRC ERDS Parameter: LP SI FLOW  
Point ID: Z UF1011  
Plant Specific Point Desc: RHR COLD LEG TOTAL FLOW  
Generic Cond Desc: Low Pressure Safety Inj. Flow

Analog/Digital: A  
Engr Units/Dig States: GPM  
Engr Units Conversion: N/A  
Minimum Instr Range: 0  
Maximum Instr Range: 11000  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SENS: P  
Number of Sensors: 4  
How Processed: Average  
Sensor Locations: RHR Cold Legs 2,3, and 1,4 Piping  
Alarm/Trip Set Points: None

NID Power Cutoff Level: N/A  
NID Power Cut-On Level: N/A  
Instrument Failure Mode: Low  
Temperature Compensation: N  
Level Reference Leg: N/A

Unique System Desc: The RHR Cold Leg Flow Rate value is calculated by summing the average flow from cold legs 2 and 3 with the average flow from cold legs 1 and 4. The design flow rate for a RHR pump is 3000 GPM at 375 feet of head. Flow sensors include 2-FT-63-91A and -91B, 2-FT-63-92A and -92B.

ERDS Point Number: 37    CNTMT SMP WR    2 UL1011    Containment Sump Wide Rng Lvl

Date: 5/20/92  
Reactor Unit: SE2  
Data Feeder: 1  
NRC ERDS Parameter: CNTMT SMP WR  
Point ID: 2 UL1011  
Plant Specific Point Desc: ~~CNTMT SUMP LEV AVG~~ CONTAINMENT SUMP LEV AVG  
Generic Cond Desc: Containment Sump Wide Rng Lvl  
  
Analog/Digital: A  
Engr Units/Dig States: % LEVEL  
Engr Units Conversion: 1% = 2.4 inches of water N/A  
Minimum Instr Range: 0  
Maximum Instr Range: 100  
Zero Point Reference: CNTFLR  
Reference Point Notes: The containment floor is elevation 680  
  
PROC or SENS: P  
Number of Sensors: 4  
How Processed: Average, Redundant Sensor Algorithm  
Sensor Locations: Containment Sump  
Alarm/Trip Set Points: 11% Containment Sump Swapover  
  
NID Power Cutoff Level: N/A  
NID Power Cut-On Level: N/A  
Instrument Failure Mode: Low  
Temperature Compensation: N  
Level Reference Leg: N/A  
Unique System Desc: The containment average sump level is calculated by a redundant sensor algorithm using four sump level transmitters. LT-63-176, -177, -178, and -179. The transfer from RWST to containment sump setpoint is 11%, which is approximately 2.5 feet above containment floor elevation. Gallons/% level varies with level in a nearly linear relationship. (78,000 gallons)

ERDS Point Number: 38

EFF GAS RAD

ZR910ZXA

~~1-RM90-400~~

Release Rt of Radioactive Gases

Date: 12/2/91

Reactor Unit: SE2

Data Feeder: 1

NRC ERDS Parameter: EFF GAS RAD

Point ID: ~~1-RM90-400~~ ZR910ZXA

Plant Specific Point Desc: Unit 1 Shield Bldg Release Rate

Generic Cond Desc: Release Rt of Radioactive Gases

Analog/Digital: A

Engr Units/Dig States: uCi/sec

Engr Units Conversion: N/A

Minimum Instr Range: ~~10E-2 uCi/sec~~ 1.0 E-2

Maximum Instr Range: ~~10E+0 uCi/sec~~ 1.0 E+0

Zero Point Reference: N/A

Reference Point Notes: N/A

PROC or SENS: S

Number of Sensors: 1

How Processed: Sampled Totalized times flow rate

Sensor Locations: Auxiliary Bldg

Alarm/Trip Set Points: 31,000 uCi/sec

NID Power Cutoff Level: N/A

NID Power Cut-On Level: N/A

Instrument Failure Mode: Low on Loss of power

Temperature Compensation: N

Level Reference Leg: N/A

Unique System Desc: Unit 1 shield Bldg Exhaust. To obtain true release rate,  
Unit 2 monitor must also be checked. Flow path for Unit 1.

~~can be either the Unit 1 or the Unit 2 stack.~~

INPUT FROM 1-RM-90-400

ERDS Point Number: 39

EFF GAS RAD

229102A

~~2-RM90-400~~

Release Rt. of Radioactive Gases

Date: 12/2/91

Reactor Unit: SE2

Data Feeder: 1

NRC ERDS Parameter: EFF GAS RAD

Point ID: ~~2-RM90-400~~ 229102A

Plant Specific Point Desc: Unit 2 Shield Bldg Release Rate SHIELD BUILDING VENT RADIATION

Generic Cond Desc: Release Rt. of Radioactive Gases

Analog/Digital: A

Engr Units/Dig States: uCi/sec

Engr Units Conversion: N/A

Minimum Instr Range: ~~10E-2 uCi/sec~~ 1.0 E-2

Maximum instr Range: ~~10E10 uCi/sec~~ 1.0 E10

Zero Point Reference: N/A

Reference Point Notes: N/A

PROC or SENS: P/S

Number of Sensors: 8

How Processed: Sampled Totalized times flow rate

Sensor Locations: Auxiliary Bldg

Alarm/Trip Set Points: 31,000 uCi/sec

NID Power Cutoff Level: N/A

NID Power Cut-On Level: N/A

Instrument Failure Mode: Low on Loss of Power

Temperature Compensation: N

Level Reference Leg: N/A

Unique System Desc: Unit 2 shield bldg exhaust. To obtain true release rate,  
Unit 1 monitor must also be checked. Flow path for Unit 1  
can be either the Unit 1 or the Unit 2 stack.  
INPUT FROM 2-RM-90-400.

ERDS Point Number: 40

EFF LIQ RAD

ORIOZZA

~~0-RE90-122~~

Radioactivity of Released Liquid

Date: 12/2/91

Reactor Unit: SE2

Data Feeder: 1

NRC ERDS Parameter: EFF LIQ RAD

Point ID: ~~0-RE90-122~~ ORIOZZA

Plant Specific Point Desc: WDS Liquid Effluent RADIATION

Generic Cond Desc: Radioactivity of Released Liquid

Analog/Digital: A

Engr Units/Dig States: CPM

Engr Units Conversion: N/A

Minimum Instr Range: ~~10E0 CPM~~ 1.0 E1

Maximum Instr Range: ~~10E7 CPM~~ 1.0 E7

Zero Point Reference: N/A

Reference Point Notes: N/A

PROC or SENS: S

Number of Sensors: 1

How Processed: Sum

Sensor Locations: Auxiliary Bldg

Alarm/Trip Set Points: Variable

NID Power Cutoff Level: N/A

NID Power Cut-On Level: N/A

Instrument Failure Mode: Low on loss of power

Temperature Compensation: N

Level Reference Leg: N/A

Unique System Desc: Waste Disposal System Liquid Effluent

This computer point is in counts per minute.

INPUT FROM 0-RE-90-122.



ERDS Point Number: 41    COND A/E RAD    2UR1006    Cond Air Ejector Radioactivity

Date: 12/2/91

Reactor Unit: SE2

Data Feeder: 1

NRC ERDS Parameter: COND A/E RAD

Point ID: 2UR1006

Plant Specific Point Desc: ~~Low Range COND VAC PUMP AIR EXH RAD MON~~ *COND VAC EXH LOW RNL RELEASE RATE*

Generic Cond Desc: Cond Air Ejector Radioactivity

Analog/Digital: A

Engr Units/Dig States: uCi/sec

Engr Units Conversion: N/A

Minimum Instr Range: ~~-1.7E+39~~ *0.0 E0*

Maximum Instr Range: ~~-1.7E+39~~ *1.0 E8*

Zero Point Reference: N/A

Reference Point Notes: N/A

PROC or SENS: P

Number of Sensors: 2

How Processed: Cond Flow \* Dose

Sensor Locations: Turbine Bldg

Alarm/Trip Set Points: Variable

NID Power Cutoff Level: N/A

NID Power Cut On Level: N/A

Instrument Failure Mode: Low on loss of power

Temperature Compensation: N

Level Reference Leg: N/A

Unique System Desc: Condenser Air Ejector Noble Gas Monitor

This is one of three computer points needed to cover full range. This point uses inputs from 2-FT2-256 and 2-RE80-119 to compute dose rates.



ERDS Point Number: 42      COND A/E RAD      ZUR1007      Cond Air Ejector Radioactivity

Date: 12/2/91

Reactor Unit: SE2

Data Feeder: 1

NRC ERDS Parameter: COND A/E RAD

Point ID: ZUR1007

Plant Specific Point Desc: ~~Mid-Rng COND VAC PUMP AIR EXH RAD MON~~ *COND VAC EXH MID RNG RELEASE RATE*

Generic Cond Desc: Cond Air Ejector Radioactivity

Analog/Digital: A

Engr Units/Dig States: uCi/sec

Engr Units Conversion: N/A

Minimum Instr Range: ~~.17E+39~~ *0.0 EB*

Maximum Instr Range: ~~.17E+39~~ *1.0 EB*

Zero Point Reference: N/A

Reference Point Notes: N/A

PROC or SENS: P

Number of Sensors: 2

How Processed: COND FLOW \* DOSE

Sensor Locations: Turbine Bldg.

Alarm/Trip Set Points: Variable

NID Power Cutoff Level: N/A

NID Power Cut-On Level: N/A

Instrument Failure Mode: Low on Loss of Power

Temperature Compensation: N

Level Reference Leg: N/A

Unique System Desc: Condenser Air Ejector Noble Gas Monitor

This is one of three computer points needed to cover full <sup>404A</sup> range. This point uses inputs from 2-FT2-256 & 2-RE500-99 to compute dose rates.

ERDS Point Number: 43    COND A/E RAD    ZUR1008    Cond Air Ejector Radioactivity

Date: 12/2/91

Reactor Unit: SE2

Data Feeder: 1

NRC ERDS Parameter: COND A/E RAD

Point ID: ZUR1008

Plant Specific Point Desc: ~~High Rng COND VAC PUMP AIR EXH RAD MON~~

Generic Cond Desc: Cond Air Ejector Radioactivity

Analog/Digital: A

Engr Units/Dig States: uCi/sec

Engr Units Conversion: N/A

Minimum Instr Range: ~~-17E+39~~ 0.0 ED

Maximum Instr Range: ~~17E+39~~ 1.0 EB

Zero Point Reference: N/A

Reference Point Notes: N/A

PROC or SENS: P

Number of Sensors: 2

How Processed: COND FLOW \* DOSE

Sensor Locations: Turbine Bldg

Alarm/Trip Set Points: Variable

NID Power Cutoff Level: N/A

NID Power Cut-On Level: N/A

Instrument Failure Mode: Low on Loss of Power

Temperature Compensation: N

Level Reference Leg: N/A

Unique System Desc: Condenser Air Ejector Noble Gas Monitor

This is one of three computer points needed to cover full range. This point uses inputs from 2-FT2-256 & 2-RE90-404B to compute dose rates.

ERDS Point Number: 44    CNTMNT RAD    ZUR6021    Containment Radiation Level

Date: 12/2/91  
Reactor Unit: SE2  
Data Feeder: 1  
NRC ERDS Parameter: CNTMNT RAD  
Point ID: ZUR6021  
Plant Specific Point Desc: <sup>CNTMNT</sup> UPPER ~~CONTAINMENT~~ RADIATION  
Generic Cond Desc: Containment Radiation Level  
  
Analog/Digital: A  
Engr Units/Dig States: ~~B/hour~~ R/HR  
Engr Units Conversion: N/A  
Minimum Instr Range: ~~1.0E0 B/hour~~ 1.0E0  
Maximum Instr Range: ~~1.0E8 B/hour~~ 1.0E8  
Zero Point Reference: N/A  
Reference Point Notes: N/A  
  
PROC or SENS: P  
Number of Sensors: 2  
How Processed: Average  
Sensor Locations: Upper Containment  
Alarm/Trip Set Points: 100 ~~B/hour~~ R/HR  
  
NID Power Cutoff Level: N/A  
NID Power Cut-On Level: N/A  
Instrument Failure Mode: Low on Loss of Power  
Temperature Compensation: N  
Level Reference Leg: N/A  
Unique System Desc: Upper Containment High Range Area Monitors  
Inputs are 2-RE90-271 & 2-RE90-272.

ERDS Point Number: 45    CNTMNT RAD    ZUR6022    Lower Containment Radiation Lvl

Date: 12/2/91  
Reactor Unit: SE2  
Data Feeder: 1  
NRC ERDS Parameter: CNTMNT RAD  
Point ID: ZUR6022  
Plant Specific Point Desc: <sup>CNTMNT</sup> LOWER CONTAINMENT RADIATION  
Generic Cond Desc: Lower Containment Radiation Lvl

Analog/Digital: A  
Engr Units/Dig States: ~~R/hour~~ R/HR  
Engr Units Conversion: N/A  
Minimum Instr Range: ~~10E0 R/hour~~ 1.0 ED  
Maximum Instr Range: ~~10E8 R/hour~~ 1.0 EB  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SENS: P  
Number of Sensors: 2  
How Processed: Average  
Sensor Locations: Lower Containment  
Alarm/Trip Set Points: 100 ~~B/hour~~ R/HR

NID Power Cutoff Level: N/A  
NID Power Cut-On Level: N/A  
Instrument Failure Mode: Low on Loss of Power  
Temperature Compensation: N  
Level Reference Leg: N/A  
Unique System Desc: Lower Containment High Range Area Monitor  
Inputs are 2-R590-273 and 2-R590-274.

ERDS Point Number: 46    MAIN SL 1/A    ZUR1001    Stm Gen 1 Steam Line Rad Level

Date: 12/2/91

Reactor Unit: SE2

Data Feeder: 1

NRC ERDS Parameter: MAIN SL 1/A

Point ID: ZUR1001

Plant Specific Point Desc: ~~MAIN STEAM LINE 1 RAD LEVEL~~ SG #1 RELEASE RATE

Generic Cond Desc: Stm Gen 1 Steam Line Rad Level

Analog/Digital: A

Engr Units/Dig States:  $\mu\text{Ci/sec}$

Engr Units Conversion: N/A

Minimum Instr Range:  ~~$-1.7\text{E}+39$~~  0.0 E0

Maximum Instr Range:  ~~$-1.7\text{E}+39$~~  1.0 E0

Zero Point Reference: N/A

Reference Point Notes: N/A

PROC or SENS: P

Number of Sensors: 2

How Processed: Sampled Totalized

Sensor Locations: Main Steam Line prior to ATM reliefs

Alarm/Trip Set Points:  $8.5 * 10\text{E}-3$

NID Power Cutoff Level: N/A

NID Power Cut-On Level: N/A

Instrument Failure Mode: Low on loss of power

Temperature Compensation: N

Level Reference Leg: N/A

Unique System Desc: Main Steam Line #1 Radioactivity Monitor

SUPPLEMENT WITH  
STATEMENT:

"IF CODE SAFETIES  
HFT, 1 IS ASSUMED  
STUCK OPEN UNTIL  
PRESSURE < 50 PSIG."

This value is calculated as the product of main steam line release rate, steam radioactivity, specific vol. of steam, and a conversion constant. The PORV's for each steam generator are monitored. If a PORV is 'NOT CLOSED', this vlv is assumed to contribute 890000 lb/hr flow to atmosphere.

There are 5 code safety valves for each S/G.

The main steam line header pressure is monitored to determine condition of each valve. Each open valve contributes 890000 lb/hr to flow rate. (Rad Mon 2-RM-90-421)

ERDS Point Number: 47      MAIN SL 2/B      ZUR1002      Stm Gen 2 Steam Line Rad Level

Date: 12/2/91  
Reactor Unit: SE2  
Data Feeder: 1  
NRC ERDS Parameter: MAIN SL 2/B  
Point ID: ZUR1002  
Plant Specific Point Desc: ~~MN STEAM LINE 2 RAD LEV~~ SG #2 RELEASE RATE  
Generic Cond Desc: Stm Gen 2 Steam Line Rad Level

Analog/Digital: A  
Engr Units/Dig States: uCi/sec  
Engr Units Conversion: N/A  
Minimum Instr Range: ~~-17E+39~~ 0.0 ED  
Maximum Instr Range: ~~-17E+39~~ 1.0 EB  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SENS: P  
Number of Sensors: 2  
How Processed: Sampled Totalized  
Sensor Locations: Main Steam Line prior to ATM reliefs  
Alarm/Trip Set Points:  $8.5 \times 10^{-3}$

NID Power Cutoff Level: N/A  
NID Power Cut-On Level: N/A  
Instrument Failure Mode: Low on Loss of Power  
Temperature Compensation: N  
Level Reference Leg: N/A

Unique System Desc: Main Steam Line #2 Radioactivity Monitor. This value is calculated as product of main steam line release rate, steam radioactivity, specific vol. of steam, and a conversion constant. PORV's for each steam generator are monitored.

SUPPLEMENT WITH  
STATEMENT:

"IF CODE SAFETIES  
LIFT, I IS ASSUMED  
STUCK OPEN UNTIL  
PRESSURE < 50 PSIG."

If PORV is 'NOT CLOSED', valve is assumed to contribute 890000 lb/hr flow to atmosphere. 5 code safety valves for each S/G. Main steam line header pressure is monitored to determine condition of valves. Each open valve is assumed to contribute an additional 890000 lb/hr to flow rate.

(Rad Mon 2-RM-90-422)

ERDS Point Number: 48    MAIN SL 3/C    ZUR1003    Stm Gen 3 Steam Line Rad Level

Date: 12/2/91  
Reactor Unit: SE2  
Data Feeder: 1  
NRC ERDS Parameter: MAIN SL 3/C  
Point ID: ZUR1003  
Plant Specific Point Desc: ~~MAIN STEAM LINE 3 RAD LEV~~ *SG#3 RELEASE RATE*  
Generic Cond Desc: Stm Gen 3 Steam Line Rad Level

Analog/Digital: A  
Eng. Units/Dig States: uCi/sec  
Engr Units Conversion: N/A  
Minimum Instr Range: ~~-17E+39~~ *0.0 E0*  
Maximum Instr Range: ~~17E+39~~ *1.0 E8*  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SENS: P  
Number of Sensors: 2  
How Processed: Sampled Totalized  
Sensor Locations: Main Steam line prior to ATM reliefs  
Alarm/Trip Set Points:  $8.5 * 10E-3$

NID Power Cutoff Level: N/A  
NID Power Cut-On Level: N/A  
Instrument Failure Mode: Low on loss of power  
Temperature Compensation: N  
Level Reference Leg: N/A

Unique System Desc: Main Steam Line #3 Radioactivity Monitor. Value calculated as product of main steam line release rate, steam radioactivity, specific vol. of steam, and conversion constant.

*SUPPLEMENT WITH  
STATEMENT:*

*"IF CODE SAFETIES  
LIFT, I IS ASSUMED  
STUCK OPEN UNTIL  
PRESSURE < 50 PSIG."*

PORV's for each steam generator are monitored. If a PORV is 'NOT CLOSED', valve assumed to contribute 890000 lb/hr flow to atmosphere. 5 code safety valves exist for each S/G. The main steam line header pressure is monitored to determine condition of valves. Each open valve is assumed to contribute an additional 890000 lb/hr to the flow rate.

Rad Mon 2-RM-90-423

ERDS Point Number: 49    MAIN SL 4/D    ZUR1004    Stm Gen 4 Steam Line Rad Level

Date: 12/2/91

Reactor Unit: SE2

Data Feeder: 1

NRC ERDS Parameter: MAIN SL 4/D

Point ID: ZUR1004

Plant Specific Point Desc: ~~MAIN STEAM LINE 4 RAD LEV~~ SG # 4 RELEASE RATE

Generic Cond Desc: Stm Gen 4 Steam Line Rad Level

Analog/Digital: A

Engr Units/Dig States: uCi/sec

Engr Units Conversion: N/A

Minimum Instr Range: ~~-17E+39~~ 0.0 E0

Maximum Instr Range: ~~17E+39~~ 1.0 E8

Zero Point Reference: N/A

Reference Point Notes: N/A

PROC or SENS: P

Number of Sensors: 2

How Processed: Sampled Totalized

Sensor Locations: Main Steam Line prior to ATM reliefs

Alarm/Trip Set Points:  $8.5 * 10E-3$

NID Power Cutoff Level: N/A

NID Power Cut-On Level: N/A

Instrument Failure Mode: Low on loss of power

Temperature Compensation: N

Level Reference Leg: N/A

Unique System Desc: Main Steam Line #4 Radioactivity Monitor. Value calculated as product of main steam line release rate, steam radioactivity, specific vol. of steam, and conversion constant.

SUPPLEMENT WITH  
STATEMENT:

" IF CODE SAFETIES  
LFT, I IS ASSUMED  
STUCK OPEN UNTIL  
PRESSURE < 50 PSIG "

PORV's for each steam generator are monitored. If a

PORV 'NOT CLOSED', valve assumed to contribute 890000 lb/hr flow to atmosphere. 5 code safety valves exist for each S/G

Main steam line header pressure is monitored to determine condition of valves. Each open valve assumed to contribute an additional 890000 lb/hr to flow rate. Rad Mon 2-RM-90-424



ERDS Point Number: 50 SG BD RAD 1A

ZR1020A

~~-2-RE90-120-~~

Stm Gen Header Blowdown Rad Level

Date: 12/2/91

Reactor Unit: SE2

Data Feeder: 1

NRC ERDS Parameter: SG BD RAD 1A

Point ID: ~~-2-RE90-120-~~ ZR1020A

Plant Specific Point Desc: ~~Steam Generator Blowdown Liquid Monitor~~ SG BLOWDOWN RADIATION

Generic Cond Desc: Stm Gen Header Blowdown Rad Level

Analog/Digital: A

Engr Units/Dig States: CPM

Engr Units Conversion: N/A

Minimum Instr Range: ~~10E0 CPM~~ 1.0 E1

Maximum Instr Range: ~~10E7 CPM~~ 1.0 E7

Zero Point Reference: N/A

Reference Point Notes: N/A

PROC or SENS: S

Number of Sensors: 1

How Processed: ~~Sum~~ N/A

Sensor Locations: Turbine Bldg

Alarm/Trip Set Points: Variable

NID Power Cutoff Level: N/A

NID Power Cut-On Level: N/A

Instrument Failure Mode: Low in loss of power

Temperature Compensation: N

Level Reference Leg: N/A

Unique System Desc: Steam Generator Blowdown Header Liquid Monitor.

This is one of two monitors, one of which is valved out.

The monitor is for the header and not individual loops.

INPUT FROM Z-RE-90-120

ERDS Point Number: 51

SG BD RAD 2B

ZR1021A

~~2-RE90-121~~

Stm Gen Header Blowdown Rad Lev

Date: 12/2/91

Reactor Unit: SE2

Data Feeder: 1

NRC ERDS Parameter: SG BD RAD 2B

Point ID: ~~2-RE90-121~~ ZR1021A

Plant Specific Point Desc: ~~Steam Generator Blowdown Liquid Monitor~~ SG BLOWDOWN RADIATION

Generic Cond Desc: Stm Gen Header Blowdown Rad Lev

Analog/Digital: A

Engr Units/Dig States: CPM

Engr Units Conversion: N/A

Minimum Instr Range: ~~10E0 CPM~~ 1.0 E1

Maximum Instr Range: ~~10E7 CPM~~ 1.0 E7

Zero Point Reference: N/A

Reference Point Notes: N/A

PROC or SENS: S

Number of Sensors: 1

How Processed: ~~Sum~~ N/A

Sensor Locations: Turbine Bldg

Alarm/Trip Set Points: Variable

NID Power Cutoff Level: N/A

NID Power Cut-On Level: N/A

Instrument Failure Mode: Low on loss of power

Temperature Compensation: N

Level Reference Leg: N/A

Unique System Desc: Steam Generator Blowdown Header Liquid Monitor

This is one of two monitors, one of which is valved out.

The monitor is for the header and not individual loops.

INPUT FROM 2-RE-90-121.

ERDS Point Number: 52    CTMNT PRESS    ZUP6000    Containment Pressure

Date: 12/2/91

Reactor Unit: SE2

Data Feeder: 1

NRC ERDS Parameter: CTMNT PRESS

Point ID: ZUP6000

Plant Specific Point Desc: CNTMT PRESSURE AVERAGE

Generic Cond Desc: Containment Pressure

Analog/Digital: A

Engr Units/Dig States: PSIG

Engr Units Conversion: N/A

Minimum Instr Range: -1

Maximum Instr Range: 15

Zero Point Reference: N/A

Reference Point Notes: N/A

PROC or SENS: P

Number of Sensors: 2

How Processed: Avg

Sensor Locations: Annulus

Alarm/Trip Set Points: High - 2.81 PSIG    High-High 12.0 PSIG

NID Power Cutoff Level: N/A

NID Power Cut-On Level: N/A

Instrument Failure Mode: Out of Range

Temperature Compensation: N

Level Reference Leg: N/A

Unique System Desc: Containment Pressure. This is actually a differential between containment and the annulus. Average of 2-PDT-30-44 and -45.

ERDS Point Number: 53 CTMNT TEMP <sup>ZQV002D</sup>  
~~UT1004~~ Containment Temperature

Date: 12/2/91

Reactor Unit: SE2

Data Feeder: 1

NRC ERDS Parameter: CTMNT TEMP

Point ID: ~~UT1004~~ - ZQV002D

Plant Specific Point Desc: ~~CONTAINMENT TEMP MAX DEV~~ CALCULATED LOWER CTMT

Generic Cond Desc: Containment Temperature TEMP - LCT TEMP

Analog/Digital: A

Engr Units/Dig States: DEGF

Engr Units Conversion: N/A

Minimum Instr Range: 0

Maximum Instr Range: 200

Zero Point Reference: N/A

Reference Point Notes: N/A

PROC or SENS: P

Number of Sensors: 19

How Processed: ~~Maximum Value~~ WEIGHTED AVERAGE

Sensor Locations: TE-212A, TE-212B, TE-212C & TE-212D LOWER CONTAINMENT

Alarm/Trip Set Points: Low at 60 DEGF, High at 130 DEGF

NID Power Cutoff Level: N/A

NID Power Cut-On Level: N/A

Instrument Failure Mode: Fail Low

Temperature Compensation: N

Level Reference Lag: N/A

Unique System Desc: Maximum Containment Air Temperature. The temperature element is inside the Polar Crane Wall at intake for lower compartment cooler. The value displayed is the maximum of 2-TE-30-212A, -212B, -212C, or -212D.

WEIGHTED AVERAGE OF 19 LOWER  
CONTAINMENT TEMP. ELEMENTS.

ERDS Point Number: 54    H2 CONC    ZUY1005    Containment H2 Concentration

Date: 12/2/91  
Reactor Unit: SE2  
Data Feeder: 1  
NRC ERDS Parameter: Z-H2 CONC  
Point ID: UY1005  
Plant Specific Point Desc: H2 CONC AVG  
Generic Cond Desc: Containment H2 Concentration

Analog/Digital: A  
Engr Units/Dig States: % H2 ✓  
Engr Units Conversion: N/A  
Minimum Instr Range: 0  
Maximum Instr Range: 10  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SENS: P  
Number of Sensors: 2  
How Processed: Avg  
Sensor Locations: Sample line from both uppr & lowr cntmnt  
Alarm/Trip Set Points: High at 10 %

NID Power Cutoff Level: N/A  
NID Power Cut-On Level: N/A  
Instrument Failure Mode: Downscale on loss of power  
Temperature Compensation: N  
Level Reference Leg: N/A  
Unique System Desc: Samples H2 gas concentration in containment. Average of  
2-H2AN43-200 and 2-H2AN43-210. ANALYZERS  
ARE NORMALLY VALVED OUT

ERDS Point Number: 55    RWST LEVEL    ZUL1000    Refueling Water Storage Tank Lev

Date: 5/20/92  
Reactor Unit: SE2  
Data Feeder: 1  
NRC ERDS Parameter: RWST LEVEL  
Point ID: ZUL1000  
Plant Specific Point Desc: ~~RWST LEVEL~~ LEV AVG  
Generic Cond Desc: Refueling Water Storage Tank Lev

Analog/Digital: A  
Engr Units/Dig States: % LEVEL  
Engr Units Conversion: ~~-1% is 3500 Gals~~ N/A  
Minimum Instr Range: 0  
Maximum instr Range: 100.0  
Zero Point Reference: 27.6"  
Reference Point Notes: 25,000 gal below zero reference

PROC or SENS: P  
Number of Sensors: 2  
How Processed: Average, Redundant Sensor Algorithm  
Sensor Locations: RWST taps 25,000 Gals in trnk ~~below butt~~ <sup>AT 0% LEVEL</sup>  
Alarm/Trip Set Points: Low level 27.4%

NID Power Cutoff Level: N/A  
NID Power Cut-On Level: N/A  
Instrument Failure Mode: Low  
Temperature Compensation: N  
Level Reference Leg: N/A

Unique System Desc: The RWST average level is calculated by a redundant sensor algorithm from the 2 RWST level transmitters. The low level setpoint is 27.4% of span which is 106 inches above the lower tap of the RWST. The RWST tank capacity is 380,000 gallons. 0% = 25,000 gallons, 100% = 380,000 gallons.

Input From Z-LT-63-50 and -51.

ERDS Point Number: 56      WIND SPEED      MET001      Wind Speed - Upper Level

Date: 12/2/91  
Reactor Unit: SE2  
Data Feeder: 1  
NRC ERDS Parameter: WIND SPEED  
Point ID: MET001  
Plant Specific Point Desc: 91M VECTOR WIND SPEED (15 MIN AVG)  
Generic Cond Desc: Wind Speed - Upper Level

Analog/Digital: A  
Engr Units/Dig States: m/sec  
Engr Units Conversion: N/A  
Minimum Instr Range: 0  
Maximum Instr Range: 44.6  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SENS: S  
Number of Sensors: 1  
How Processed: N/A  
Sensor Locations: At the 91 Meter Level of the Met Tower  
Alarm/Trip Set Points: No Alarms

NID Power Cutoff Level: N/A  
NID Power Cut-On Level: N/A  
Instrument Failure Mode: LOW  
Temperature Compensation: N  
Level Reference Leg: N/A  
Unique System Desc:

ERDS Point Number: 57 WIND SPEED MET002 Wind Speed - Intermediate Level

Date: 12/2/91  
Reactor Unit: SE2  
Data Feeder: 1  
NRC ERDS Parameter: WIND SPEED  
Point ID: MET002  
Plant Specific Point Desc: 46M VECTOR WIND SPEED (15 MIN AVG)  
Generic Cond Desc: Wind Speed - Intermediate Level

Analog/Digital: A  
Engr Units/Dig States: m/sec  
Engr Units Conversion: N/A  
Minimum Instr Range: 0  
Maximum Instr Range: 44.6  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SENS: S  
Number of Sensors: 1  
How Processed: N/A  
Sensor Locations: At the 46 Meter Level of the Met Tower  
Alarm/Trip Set Points: No Alarms

NID Power Cutoff Level: N/A  
NID Power Cut-On Level: N/A  
Instrument Failure Mode: LOW  
Temperature Compensation: N  
Level Reference Leg: N/A  
Unique System Desc:



ERDS Point Number: 58      WIND SPEED      MET003      Wind Speed - Lower Level

Date: 12/2/91  
Reactor Unit: SE2  
Data Feeder: 1  
NRC ERDS Parameter: WIND SPEED  
Point ID: MET003  
Plant Specific Point Desc: 10M VECTOR WIND SPEED (15 MIN AVG)  
Generic Cond Desc: Wind Speed - Lower Level

Analog/Digital: A  
Engr Units/Dig States: m/sec  
Engr Units Conversion: N/A  
Minimum Instr Range: 0  
Maximum Instr Range: 44.6  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SENS: S  
Number of Sensors: 1  
How Processed: N/A  
Sensor Locations: At the 10 Meter Level of the Met Tower  
Alarm/Trip Set Points: No Alarms

NID Power Cutoff Level: N/A  
NID Power Cut-On Level: N/A  
Instrument Failure Mode: LOW  
Temperature Compensation: N  
Level Reference Leg: N/A  
Unique System Desc:

ERDS Point Number: 59      WIND DIR      MET004      Wind Direction - Upper Level

Date: 12/2/91  
Reactor Unit: SE2  
Data Feeder: 1  
NRC ERDS Parameter: WIND DIR  
Point ID: MET004  
Plant Specific Point Desc: 91M VECTOR WIND DIR (15 MIN AVG)  
Generic Cond Desc: Wind Direction - Upper Level

Analog/Digital: A  
Engr Units/Dig States: DEG  
Engr Units Conversion: N/A  
Minimum Instr Range: 0  
Maximum Instr Range: 360  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SENS: S  
Number of Sensors: 1  
How Processed: N/A  
Sensor Locations: At the 91 Meter Level of the Met Tower  
Alarm/Trip Set Points: No Alarms

NID Power Cutoff Level: N/A  
NID Power Cut-On Level: N/A  
Instrument Failure Mode: LOW  
Temperature Compensation: N  
Level Reference Leg: N/A  
Unique System Desc:

ERDS Point Number: 60    WIND DIR    MET005    Wind Direction - Intermed. Level

Date: 12/2/91  
Reactor Unit: SE2  
Data Feeder: 1  
NRC ERDS Parameter: WIND DIR  
Point ID: MET005  
Plant Specific Point Desc: 46M VECTOR WIND DIR (15 MIN AVG)  
Generic Cond Desc: Wind Direction - Intermed. Level

Analog/Digital: A  
Engr Units/Dig States: DEG  
Engr Units Conversion: N/A  
Minimum Instr Range: 0  
Maximum Instr Range: 360  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SENS: S  
Number of Sensors: 1  
How Processed: N/A  
Sensor Locations: At the 46 Meter Level of the Met Tower  
Alarm/Trip Set Points: No Alarms

NID Power Cutoff Level: N/A  
NID Power Cut-On Level: N/A  
Instrument Failure Mode: LOW  
Temperature Compensation: N  
Level Reference Leg: N/A  
Unique System Desc:

ERDS Point Number: 61    WIND DIR    MET006    Wind Direction - Lower Level

Date: 12/2/91  
Reactor Unit: SE2  
Data Feeder: 1  
NRC ERDS Parameter: WIND DIR  
Point ID: MET006  
Plant Specific Point Desc: 10M VECTOR WIND DIR (15 MIN AVG)  
Generic Cond Desc: Wind Direction - Lower Level

Analog/Digital: A  
Engr Units/Dig States: DEG  
Engr Units Conversion: N/A  
Minimum Instr Range: 0  
Maximum Instr Range: 360  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SENS: S  
Number of Sensors: 1  
How Processed: N/A  
Sensor Locations: At the 10 Meter Level of the Met Tower  
Alarm/Trip Set Points: No Alarms

NID Power Cutoff Level: N/A  
NID Power Cut-On Level: N/A  
Instrument Failure Mode: LOW  
Temperature Compensation: N  
Level Reference Leg: N/A  
Unique System Desc:

ERDS Point Number: 62      STAB CLASS      MET007      Air Stability-Upper

Date: 12/2/91  
 Reactor Unit: SE2  
 Data Feeder: 1  
 NRC ERDS Parameter: STAB CLASS  
 Point ID: MET007  
 Plant Specific Point Desc: Stability Class Upper  
 Generic Cond Desc: Air Stability-Upper

Analog/Digital: A  
 Engr Units/Dig States: STABA  
 Engr Units Conversion: SEE BELOW  
 Minimum Instr Range: SEE BELOW  
 Maximum Instr Range: SEE BELOW  
 Zero Point Reference: N/A  
 Reference Point Notes: N/A

PROC or SENS: P  
 Number of Sensors: 2  
 How Processed: SEE BELOW  
 Sensor Locations: MET TOWER  
 Alarm/Trip Set Points: No Alarms

NID Power Cutoff Level: N/A  
 NID Power Cut-On Level: N/A  
 Instrument Failure Mode: LOW  
 Temperature Compensation: N  
 Level Reference Leg: N/A  
 Unique System Desc: Differential Temperature Upper-Lower (deg C)

Difference		Stability Class	Point Value
>	<=		
	-1.9	A	1
-1.9	-1.7	B	2
-1.7	-1.5	C	3
-1.5	-0.5	D	4
-0.5	1.5	E	5
1.5	4.0	F	6
4.0		G	7

ERDS Point Number: 63

STAB CLASS

MET008

Air Stability - ~~INTERMEDIATE~~

Date: 12/2/91

Reactor Unit: SE2

Data Feeder: 1

NRC ERDS Parameter: STAB CLASS

Point ID: MET008

Plant Specific Point Desc: Stability Class Intermediate

Generic Cond Desc: Air Stability - ~~INTERMEDIATE~~

Analog/Digital: A

Engr Units/Dig States: STABA

Engr Units Conversion: SEE BELOW

Minimum Instr Range: SEE BELOW

Maximum Instr Range: SEE BELOW

Zero Point Reference: N/A

Reference Point Notes: N/A

PROC or SENS: P

Number of Sensors: 2

How Processed: SEE BELOW

Sensor Locations: MET TOWER

Alarm/Trip Set Points: No Alarms

NID Power Cutoff Level: N/A

NID Power Cut-On Level: N/A

Instrument Failure Mode: LOW

Temperature Compensation: N

Level Reference Leg: N/A

Unique System Desc: Differential Temperature Upper-Intermediate (deg C)

>	<=	Stability Class	Point Value
	-1.9	A	1
-1.9	-1.7	B	2
-1.7	-1.5	C	3
-1.5	-0.5	D	4
-0.5	1.5	E	5
1.5	4.0	F	6
4.0		G	7

ERDS Point Number: 64      STAB CLASS      MET009      Air Stability - *Lower*

Date: 12/2/91  
Reactor Unit: SE2  
Data Feeder: 1  
NRC ERDS Parameter: STAB CLASS  
Point ID: MET009  
Plant Specific Point Desc: Stability Class Lower  
Generic Cond Desc: Air Stability - *Lower*

Analog/Digital: A  
Engr Units/Dig States: STABA  
Engr Units Conversion: *SEE BELOW*  
Minimum Instr Range: *SEE BELOW*  
Maximum Instr Range: *SEE BELOW*  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SENS: P  
Number of Sensors: 2  
How Processed: *SEE BELOW*  
Sensor Locations: *MET TOWER*  
Alarm/Trip Set Points: No Alarms

NID Power Cutoff Level: N/A  
NID Power Cut-On Level: N/A  
Instrument Failure Mode: LOW  
Temperature Compensation: N  
Level Reference Leg: N/A  
Unique System Desc: Differential Temperature Intermediate-Lower (deg C)

>	<=	Stability Class	Point Value
	-1.9	A	1
-1.9	-1.7	B	2
-1.7	-1.5	C	3
-1.5	-0.5	D	4
-0.5	1.5	E	5
1.5	4.0	F	6
4.0		G	7

ERDS Point Number: 65 SG LEVEL 1/A

~~2-LT3-43~~ ZL0403A

Steam Gen 1 Wide Range Water Lev

Date: 11/5/92

Reactor Unit: SE2

Data Feeder: 1

NRC ERDS Parameter: SG LEVEL 1/A

Point ID: ~~2-LT3-43~~ ZL0403A

Plant Specific Point Desc: ~~SG 1 WIDE RNG LEVEL~~ SG #1 WIDE RANGE LEVEL

Generic Cond Desc: Steam Gen 1 Wide Range Water Lev

Analog/Digital: A

Engr Units/Dig States: % LEVEL

Engr Units Conversion: 1% = 5.7"

Minimum Instr Range: 0.0

Maximum Instr Range: 100.0

Zero Point Reference: LOWTAP

Reference Point Notes: See Below

PROC or SENS: S

Number of Sensors: 1

How Processed: ~~Scanned~~ N/A

Sensor Locations: See Below

Alarm/Trip Set Points: Low at 0%, High at 100%

NID Power Cutoff Level: N/A

NID Power Cut-On Level: N/A

Instrument Failure Mode: Sensor Out Low

Temperature Compensation: N

Level Reference Leg: WET

Unique System Desc: LT is calibrated for design operating conditions. 0% corresponds to lower tap on SG located just above tube plate. 100% corresponds to the upper tap which is 170" above the top of "U" tubes. Top of "U" tubes is approximately 70% level.  
INPUT FROM Z-LT-3-43.



ERDS Point Number: 66

SG LEVEL 2/B

ZLO423A  
~~-2-LT3-56~~

Steam Gen 2 Wide Range Water Lev

Date: 11/5/92

Reactor Unit: SE2

Data Feeder: 1

NFC ERDS Parameter: SG LEVEL 2/B

Point ID: ~~2-LT3-56~~ ZLO423A

Plant Specific Point Desc: ~~SG 2 WIDE RANGE LEVEL~~ SG # 2 WIDE RANGE LEVEL

Generic Cond Desc: Steam Gen 2 Wide Range Water Lev

Analog/Digital: A

Engr Units/Dig States: % LEVEL

Engr Units Conversion: 1% = 5.7"

Minimum Instr Range: 0.0

Maximum Instr Range: 100.0

Zero Point Reference: LOWTAP

Reference Point Notes: See Below

PROC or SENS: S

Number of Sensors: 1

How Processed: ~~Scanned~~ N/A

Sensor Locations: See Below

Alarm/Trip Set Points: Low at 0%, High at 100%

NID Power Cutoff Level: N/A

NID Power Cut-On Level: N/A

Instrument Failure Mode: Sensor Out Low

Temperature Compensation: N

Level Reference Leg: WET

Unique System Desc: LT is calibrated for design operating conditions. 0% corresponds to lower tapon SG located just above tube plate. 100% corresponds to the upper tap which is 170" above the top of "U" tubes. Top of "U" tubes is approximately 70% level.  
INPUT FROM 2-LT-3-56.

ERDS Point Number: 67

SG LEVEL 3/C

ZLO443A

~~-2-LT3-98-~~

Steam Gen 3 Wide Range Water Lev

Date: 11/5/92

Reactor Unit: SE2

Data Order: 1

NRG ERDS Parameter: SG LEVEL 3/C

Point ID: ~~-2-LT3-98-~~ ZLO443APlant Specific Point Desc: ~~-SG 3 WIDE RANGE LEVEL~~ SG # 3 WIDE RANGE LEVEL

Generic Cond Desc: Steam Gen 3 Wide Range Water Lev

Analog/Digital: A

Engr Units/Dig States: % LEVEL

Engr Units Conversion: 1% = 5.7"

Minimum Instr Range: 0.0

Maximum Instr Range: 100.0

Zero Point Reference: LOWTAP

Reference Point Notes: See Below

PROC or SENS: S

Number of Sensors: 1

How Processed: Scanned N/A

Sensor Locations: See Below

Alarm/Trip Set Points: Low on 0%, High on 100%

NID Power Cutoff Level: N/A

NID Power Cut-On Level: N/A

Instrument Failure Mode: Sensor Out Low

Temperature Compensation: N

Level Reference Leg: WET

Unique System Desc: LT is calibrated for design operating conditions. 0% corresponds to lower tap on SG located just above tube plate. 100% corresponds to the upper tap which is 170" above the top of "U" tubes. Top of "U" tubes is approximately 70% level.

INPUT FROM 2-LT-3-98.

ERDS Point Number: 68

SG LEVEL 4/D

ZLO463A

~~2-LT3-111~~

Steam Gen 4 Wide Range Water Lev

Date: 11/5/92

Reactor Unit: SE2

Data Feeder: 1

NRC ERDS Parameter: SG LEVEL 4/D

Point ID: ~~2-LT3-111~~ ZLO463A

Plant Specific Point Desc: ~~SG 4 WIDE RNG LEVEL~~ SG # 4 WIDE RANGE LEVEL

Generic Cond Desc: Steam Gen 4 Wide Range Water Lev

Analog/Digital: A

Engr Units/Dig States: % ~~LOW~~

Engr Units Conversion: 1% = 5.7"

Minimum Instr Range: 0.0

Maximum Instr Range: 100.0

Zero Point Reference: LOWTAP

Reference Point Notes: See Below

PROC or SENS: S

Number of Sensors: 1

How Processed: ~~Scanned~~ N/A

Sensor Locations: See Below

Alarm/Trip Set Points: Low at 0%, High at 100%

NID Power Cutoff Level: N/A

NID Power Cut-On Level: N/A

instrument Failure Mode: Sensor Out Low

Temperature Compensation: N

Level Reference Leg: WET

Unique System Desc: LT is calibrated for design operating conditions. 0% corresponds to lower tap on SG located just above tube plate. 100% corresponds to the upper tap which is 170" above the top of "U" tubes. Top of "U" tubes is approximately 70% level.

INPUT FROM Z-LT-3-111.

ENCLOSURE 2

EMERGENCY RESPONSE DATA SYSTEM

UNIT 2 REVISED LISTING

## SEQUOYAH UNIT 2 - ERDS DATA POINT LIBRARY

1	NL	SIMULATION	INDICATES REAL OR SIMULATED DATA
2	NI POWER RNG	2UN2000	POWER RANGE AVERAGE
3	NI INTER RNG	2UN1015	INTERMEDIATE RANGE FLUX
4	NI SOURC RNG	2UN1014	SOURCE RANGE FLUX
5	REAC VES LEV	2UL6000	RVLIS LOWER RANGE AVERAGE
6	TEMP CORE EX	2UT1003	CORE EXIT TEMP MAX
7	SUB MARGIN	2UT1005	MIN SUBCOOL
8	SG LEVEL 1/A	2UL1001	SG #1 NR LEVEL AVG
9	SG LEVEL 2/B	2UL1002	SG #2 NR LEVEL AVG
10	SG LEVEL 3/C	2UL1003	SG #3 NR LEVEL AVG
11	SG LEVEL 4/D	2UL1004	SG #4 NR LEVEL AVG
12	SG PRESS 1/A	2UP1002	SG #1 MS PRESSURE AVG
13	SG PRESS 2/B	2UP1003	SG #2 MS PRESSURE AVG
14	SG PRESS 3/C	2UP1004	SG #3 MS PRESSURE AVG
15	SG PRESS 4/D	2UP1005	SG #4 MS PRESSURE AVG
16	MN FD FL 1/A	2U0410C	SG #1 CORR FW 1/2 AVG
17	MN FD FL 2/B	2U0430C	SG #2 CORR FW 1/2 AVG
18	MN FD FL 3/C	2U0450C	SG #3 CORR FW 1/2 AVG
19	MN FD FL 4/D	2U0470C	SG #4 CORR FW 1/2 AVG
20	AX FW FL 1/A	2U0066	SG #1 AUX FEEDWATER FLOW
21	AX FW FL 2/B	2U0067	SG #2 AUX FEEDWATER FLOW
22	AX FW FL 3/C	2U0068	SG #3 AUX FEEDWATER FLOW
23	AX FW FL 4/D	2U0069	SG #4 AUX FEEDWATER FLOW
24	HL TEMP 1/A	2T0419A	LOOP 1 HOT LEG WIDE RANGE TEMP
25	HL TEMP 2/B	2T0439A	LOOP 2 HOT LEG WIDE RANGE TEMP
26	HL TEMP 3/C	2T0459A	LOOP 3 HOT LEG WIDE RANGE TEMP
27	HL TEMP 4/D	2T0479A	LOOP 4 HOT LEG WIDE RANGE TEMP
28	CL TEMP 1/A	2T0406A	LOOP 1 COLD LEG WIDE RANGE TEMP
29	CL TEMP 2/B	2T0426A	LOOP 2 COLD LEG WIDE RANGE TEMP
30	CL TEMP 3/C	2T0446A	LOOP 3 COLD LEG WIDE RANGE TEMP
31	CL TEMP 4/D	2T0466A	LOOP 4 COLD LEG WIDE RANGE TEMP
32	RCS PRESSURE	2UP1000	RCS WIDE RANGE PRESSURE AVERAGE

33	PRZR LEVEL	2UL1005	PZR LEVEL AVERAGE
34	RCS CHG/MU	2UF1016	NET CHG FLO
35	HP SI FLOW	2UF1010	SI FLOW TOTAL
36	LP SI FLOW	2UF1011	RHR COLD LEG TOTAL FLOW
37	CNTMT SMP WR	2UL1011	CONTAINMENT SUMP LEV AVG
38	EFF GAS RAD	2R9102XA	UNIT 1 SHIELD BLDG RELEASE RATE
39	EFF GAS RAD	2R9102A	SHIELD BUILDING VENT RADIATION
40	EFF LIQ RAD	0R1022A	WDS LIQUID EFFLUENT RADIATION
41	COND A/E RAD	2UR1006	COND VAC EXH LOW RNG RELEASE RATE
42	COND A/E RAD	2UR1007	COND VAC EXH MID RNG RELEASE RATE
43	COND A/E RAD	2UR1008	COND VAC EXH HI RNG RELEASE RATE
44	CNTMNT RAD	2UR6021	UPPER CNTMT RADIATION
45	CNTMNT RAD	2UR6022	LOWER CNTMT RADIATION
46	MAIN SL 1/A	2UR1001	SG #1 RELEASE RATE
47	MAIN SL 2/B	2UR1002	SG #2 RELEASE RATE
48	MAIN SL 3/C	2UR1003	SG #3 RELEASE RATE
49	MAIN SL 4/D	2UR1004	SG #4 RELEASE RATE
50	SG BD RAD 1A	2R1020A	SG BLOWDOWN RADIATION
51	SG BD RAD 2B	2R1021A	SG BLOWDOWN RADIATION
52	CTMNT PRESS	2UP6000	CNTMT PRESSURE AVERAGE
53	CTMNT TEMP	2QV0020	CALCULATED LOWER CTMT TEMP - LCTTEMP
54	H2 CONC	2UY1005	H2 CONC AVG
55	RWST LEVEL	2UL1000	RWST LEV AVG
56	WIND SPEED	MET001	91M VECTOR WIND SPEED (15 MIN AVG)
57	WIND SPEED	MET002	46M VECTOR WIND SPEED (15 MIN AVG)
58	WIND SPEED	MET003	10M VECTOR WIND SPEED (15 MIN AVG)
59	WIND DIR	MET004	91M VECTOR WIND DIR (15 MIN AVG)
60	WIND DIR	MET005	46M VECTOR WIND DIR (15 MIN AVG)
61	WIND DIR	MET006	10M VECTOR WIND DIR (15 MIN AVG)
62	STAB CLASS	MET007	Stability Class Upper
63	STAB CLASS	MET008	Stability Class Intermediate
64	STAB CLASS	MET009	Stability Class Lower
65	SG LEVEL 1/A	2L0403A	SG #1 WIDE RANGE LEVEL
66	SG LEVEL 2/B	2L0423A	SG #2 WIDE RANGE LEVEL

67	SG LEVEL 3/C	2L0443A	SG #3 WIDE RANGE LEVEL
68	SG LEVEL 4/D	2L0463A	SG #4 WIDE RANGE LEVEL
69	NL	2PA003	TOTAL REACTOR COOLANT FLOW



ERDS Point Number: 1      NL      SIMULATION      Real/Simulated Data

Date: 5/30/96  
Reactor Unit: SE2  
Data Feeder: 1  
NRC ERDS Parameter: NL  
Point ID: SIMULATION  
Plant Specific Point Desc: INDICATES REAL OR SIMULATED DATA  
Generic Cond Desc: Real/Simulated Data

Analog/Digital: D  
Engr Units/Dig States: REAL/SIMUL  
Engr Units Conversion: N/A  
Minimum Instr Range: N/A  
Maximum Instr Range: N/A  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SENS: P  
Number of Sensors: 0  
How Processed: 0 If Real, 1 if Simulated  
Sensor Locations: N/A  
Alarm/Trip Set Points: N/A

NID Power Cutoff Level: N/A  
NID Power Cut-On Level: N/A  
Instrument Failure Mode: N/A  
Temperature Compensation: N  
Level Reference Leg: N/A

Unique System Desc: This Point is used to indicate whether the data is coming from the Unit or from the Simulator.



ERDS Point Number: 2      NI POWER RNG      2UN2000      Reactor Power

Date: 5/30/96

Reactor Unit: SE2

Data Feeder: 1

NRC ERDS Parameter: NI POWER RNG

Point ID: 2UN2000

Plant Specific Point Desc: POWER RANGE AVERAGE

Generic Cond Desc: Reactor Power

Analog/Digital: A

Engr Units/Dig States: %

Engr Units Conversion: 0-10V = 0-120% Power (Linear)

Minimum Instr Range: 0

Maximum Instr Range: 120

Zero Point Reference: N/A

Reference Point Notes: N/A

PROC or SENS: P

Number of Sensors: 8

How Processed: Average

Sensor Locations: Upper & Lower excore detectors

Alarm/Trip Set Points: Rod Stop=103%, Overpwr Reactor Trip=109%

NID Power Cutoff Level: N/A

NID Power Cut-On Level: N/A

Instrument Failure Mode: Probable Downscale (No forcing function)

Temperature Compensation: N

Level Reference Leg: N/A

Unique System Desc: Upper & Lower detection inputs for  
2-NE-92-41, -42, -43, -44. Average of 2-XM-92-5005E (N-41),  
-5006E (N-42), -5007E (N-43), -5008E (N-44). Input from  
Point ID's 2N0041A, 2N0042A, 2N0043A, 2N0044A.

ERDS Point Number: 3      NI INTER RNG      2UN1015      Reactor Power - Intermediate Rng

Date: 5/30/96

Reactor Unit: SE2

Data Feeder: 1

NRC ERDS Parameter: NI INTER RNG

Point ID: 2UN1015

Plant Specific Point Desc: INTERMEDIATE RANGE FLUX

Generic Cond Desc: Reactor Power - Intermediate Rng

Analog/Digital: A

Engr Units/Dig States: %

Engr Units Conversion: N/A

Minimum Instr Range: 0

Maximum Instr Range: 120

Zero Point Reference: N/A

Reference Point Notes: N/A

PROC or SENS: P

Number of Sensors: 2

How Processed: Average

Sensor Locations: AZ 0 deg & 180 deg Excore

Alarm/Trip Set Points: Rod Stop - 20%, Reactor Trip - 25% Pwr

NID Power Cutoff Level: N/A

NID Power Cut-On Level: N/A

Instrument Failure Mode: Probable Downscale (no forcing function)

Temperature Compensation: N

Level Reference Leg: N/A

Unique System Desc: Average of XI-92-5003 (channel N35) and -5004 (channel N36).

Input from Point ID's 2N0035A and 2N0036A.

ERDS Point Number: 4      NI SOURC RNG      2UN1014      Reactor Power - Source Range

Date: 5/30/96  
Reactor Unit: SE2  
Data Feeder: 1  
NRC ERDS Parameter: NI SOURC RNG  
Point ID: 2UN1014  
Plant Specific Point Desc: SOURCE RANGE FLUX  
Generic Cond Desc: Reactor Power - Source Range

Analog/Digital: A  
Engr Units/Dig States: CPS  
Engr Units Conversion: N/A  
Minimum Instr Range: 1.0 E0  
Maximum Instr Range: 1.0 E6  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SENS: P  
Number of Sensors: 4  
How Processed: Average  
Sensor Locations: AZ 0 deg. & 180 deg. Excore  
Alarm/Trip Set Points: Reactor Trip - 1 E5 CPS

NID Power Cutoff Level: N/A  
NID Power Cut-On Level: N/A  
Instrument Failure Mode: Probable Downscale (No forcing function)  
Temperature Compensation: N  
Level Reference Leg: N/A  
Unique System Desc: Average of XI-92-5001(channel N31) & -5002 (channel N32)  
(2 chambers/detector).  
Input from Point ID's 2N0031A and 2N0032A.

ERDS Point Number: 5      REAC VES LEV      2UL6000      Reactor Vessel Water Level

Date: 5/30/96  
Reactor Unit: SE2  
Data Feeder: 1  
NRC ERDS Parameter: REAC VES LEV  
Point ID: 2UL6000  
Plant Specific Point Desc: RVLIS LOWER RANGE AVERAGE  
Generic Cond Desc: Reactor Vessel Water Level

Analog/Digital: A  
Engr Units/Dig States: %  
Engr Units Conversion: N/A  
Minimum Instr Range: 0  
Maximum Instr Range: 70  
Zero Point Reference: RV BOT  
Reference Point Notes: TAF = 62%,

PROC or SENS: P  
Number of Sensors: 2  
How Processed: Average  
Sensor Locations: Remote location in the Penetration Rooms  
Alarm/Trip Set Points: High at 50 %, Low at 0%

NID Power Cutoff Level: N/A  
NID Power Cut-On Level: N/A  
Instrument Failure Mode: Out of Range

Temperature Compensation : Y

Level Reference Leg: WET

Unique System Desc: This is the lower range portion of the Rx Vessel level indication. The lower range provides indication of the reactor vessel level from the bottom of the vessel to the hot leg during natural circulation conditions. Average of 2-LM-68-368E and -371E. Top of core = 62.3%.

ERDS Point Number: 6      TEMP CORE EX      2UT1003      Highest Core Exit Temperature

Date: 5/30/96  
Reactor Unit: SE2  
Data Feeder: 1  
NRC ERDS Parameter: TEMP CORE EX  
Point ID: 2UT1003  
Plant Specific Point Desc: CORE EXIT TEMP MAX  
Generic Cond Desc: Highest Core Exit Temperature

Analog/Digital: A  
Engr Units/Dig States: DEGF  
Engr Units Conversion: TYPE K TC Table  
Minimum Instr Range: 200  
Maximum Instr Range: 2300  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SENS: P  
Number of Sensors: 65  
How Processed: Highest  
Sensor Locations: Throughout core  
Alarm/Trip Set Points: No Alarms

NID Power Cutoff Level: N/A  
NID Power Cut-On Level: N/A  
Instrument Failure Mode: Eliminates open TC's  
Temperature Compensation: N  
Level Reference Leg: N/A  
Unique System Desc: INCORE Thermocouples processed through "Exosensor" System.  
The system is divisionalized into 2 divisions. Total of  
65 elements with 3 TC's inoperable. The numeric is the high-  
er of 2T1081A (2-XM-94-101-69) and 2T1087A (2-XM-94-102-75).  
200 DEGF is lower calibrated range but will read lower than  
this.

ERDS Point Number: 7      SUB MARGIN      2UT1005      Saturation Temp. - Highest CET

Date: 5/30/96  
Reactor Unit: SE2  
Data Feeder: 1  
NRC ERDS Parameter: SUB MARGIN  
Point ID: 2UT1005  
Plant Specific Point Desc: MIN SUBCOOL  
Generic Cond Desc: Saturation Temp. - Highest CET

Analog/Digital: A  
Engr Units/Dig States: DEGF  
Engr Units Conversion: TYPE K TC Table  
Minimum Instr Range: -35  
Maximum Instr Range: 200  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SENS: P  
Number of Sensors: 65  
How Processed: Lowest Subcooling  
Sensor Locations: Throughout Core  
Alarm/Trip Set Points: Low at 15 DEGF, High at 130 DEGF

NID Power Cutoff Level: N/A  
NID Power Cut-On Level: N/A  
Instrument Failure Mode: Eliminates open TC's  
Temperature Compensation: N  
Level Reference Leg: N/A  
Unique System Desc: INCORE Thermocouples processed through "Exosensor" System.  
The system is divisionalized into 2 divisions. Total of 65  
TC with 3 TC's inoperable. Input from 2T1074A  
(2-XM-94-101-66) and 2T1077A (2-XM-94-102-72).

ERDS Point Number: 8      SG LEVEL 1/A      2UL1001      Steam Generator 1 Water Level

Date: 5/30/96  
Reactor Unit: SE2  
Data Feeder: 1  
NRC ERDS Parameter: SG LEVEL 1/A  
Point ID: 2UL1001  
Plant Specific Point Desc: SG #1 NR LEVEL AVG  
Generic Cond Desc: Steam Generator 1 Water Level

Analog/Digital: A  
Engr Units/Dig States: % LEVEL  
Engr Units Conversion: N/A  
Minimum Instr Range: 0  
Maximum Instr Range: 100  
Zero Point Reference: Notes  
Reference Point Notes: Above "U" tubes

PROC or SENS: P  
Number of Sensors: 2  
How Processed: Average  
Sensor Locations: Located outside of Polar Crane Wall  
Alarm/Trip Set Points: Low at 25 %, High at 70 %

NID Power Cutoff Level: N/A  
NID Power Cut-On Level: N/A  
Instrument Failure Mode: Out of Range  
Temperature Compensation : Y  
Level Reference Leg: WET

Unique System Desc: Steam Generator #1 Water Level. Avg. of 2-LT-3-39 and -42.  
0-100% span on SG narrow range level transmitters corresponds to 75-100% span on the SG wide range level instrumentation. Top of "U" tubes is approximately 71% on the wide range. Therefore, the entire narrow range span is above the "U" tubes. Input from Point ID's 2L0400A and 2L0401A.

ERDS Point Number: 9      SG LEVEL 2/B      2UL1002      Steam Generator 2 Water Level

Date: 5/30/96  
Reactor Unit: SE2  
Data Feeder: 1  
NRC ERDS Parameter: SG LEVEL 2/B  
Point ID: 2UL1002  
Plant Specific Point Desc: SG #2 NR LEVEL AVG  
Generic Cond Desc: Steam Generator 2 Water Level

Analog/Digital: A  
Engr Units/Dig States: % LEVEL  
Engr Units Conversion: N/A  
Minimum Instr Range: 0  
Maximum Instr Range: 100  
Zero Point Reference: Notes  
Reference Point Notes: Above "U" tubes

PROC or SENS: P  
Number of Sensors: 2  
How Processed: Average  
Sensor Locations: Located outside of Polar Crane Wall  
Alarm/Trip Set Points: Low at 25 %, High at 70 %

NID Power Cutoff Level: N/A  
NID Power Cut-On Level: N/A  
Instrument Failure Mode: Out of Range  
Temperature Compensation: Y  
Level Reference Leg: WET  
Unique System Desc: Steam Generator #2 Water Level. Avg. of 2-LT-3-52 and -55.

0-100% span on SG narrow range level transmitters corresponds to 75-100% span on the SG wide range level instrumentation. Top of "U" tubes is approximately 71% on the wide range. Therefore, the entire narrow range span is above the "U" tubes. Input from Point ID's 2L0420A and 2L0421A.



ERDS Point Number: 10 SG LEVEL 3/C 2UL1003 Steam Generator 3 Water Level

Date: 5/30/96  
Reactor Unit: SE2  
Data Feeder: 1  
NRC ERDS Parameter: SG LEVEL 3/C  
Point ID: 2UL1003  
Plant Specific Point Desc: SG #3 NR LEVEL AVG  
Generic Cond Desc: Steam Generator 3 Water Level

Analog/Digital: A  
Engr Units/Dig States: % LEVEL  
Engr Units Conversion: N/A  
Minimum Instr Range: 0  
Maximum Instr Range: 100  
Zero Point Reference: Notes  
Reference Point Notes: Above "U" tubes

PROC or SENS: P  
Number of Sensors: 2  
How Processed: Average  
Sensor Locations: Located outside of Polar Crane Wall  
Alarm/Trip Set Points: Low at 25 %, High at 70 %

NID Power Cutoff Level: N/A  
NID Power Cut-On Level: N/A  
Instrument Failure Mode: Out of Range  
Temperature Compensation : Y

Level Reference Leg: WET

Unique System Desc: Steam Generator #3 Water Level. Avg. of 2-LT-3-94 and -97.  
0-100% span on SG narrow range level transmitters corresponds to 75-100% span on the SG wide range level instrumentation. Top of "U" tubes is approximately 71% on the wide range. Therefore, the entire narrow range span is above the "U" tubes. Input from Point ID's 2L0440A and 2L0441A.

ERDS Point Number: 11    SG LEVEL 4/D    2UL1004    Steam Generator 4 Water Level

Date: 5/30/96  
Reactor Unit: SE2  
Data Feeder: 1  
NRC ERDS Parameter: SG LEVEL 4/D  
Point ID: 2UL1004  
Plant Specific Point Desc: SG #4 NR LEVEL AVG  
Generic Cond Desc: Steam Generator 4 Water Level

Analog/Digital: A  
Engr Units/Dig States: % LEVEL  
Engr Units Conversion: N/A  
Minimum Instr Range: 0  
Maximum Instr Range: 100  
Zero Point Reference: Notes  
Reference Point Notes: Above "U" tubes

PROC or SENS: P  
Number of Sensors: 2  
How Processed: Average  
Sensor Locations: Located outside of Polar Crane Wall  
Alarm/Trip Set Points: Low at 25 %. High at 70 %

NID Power Cutoff Level: N/A  
NID Power Cut-On Level: N/A  
Instrument Failure Mode: Out of Range  
Temperature Compensation : Y  
Level Reference Leg: WET  
Unique System Desc: Steam Generator #4 Water Level. Avg. of 2-LT-3-107 and -110.  
0-100% span on SG narrow range level transmitters  
corresponds to 75-100% on the SG wide range level instru-  
mentation. Top of "U" tubes is approximately 71% on the  
wide range. Therefore, the entire narrow range span is above  
the "U" tubes. Input from Point ID's 2L0460A an 2L0461A.

ERDS Point Number: 12    SG PRESS 1/A    2UP1002    Steam Generator 1 Pressure

Date: 5/30/96  
Reactor Unit: SE2  
Data Feeder: 1  
NRC ERDS Parameter: SG PRESS 1/A  
Point ID: 2UP1002  
Plant Specific Point Desc: SG #1 MS PRESSURE AVG  
Generic Cond Desc: Steam Generator 1 Pressure

Analog/Digital: A  
Engr Units/Dig States: PSIG  
Engr Units Conversion: N/A  
Minimum Instr Range: 0  
Maximum Instr Range: 1200  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SENS: P  
Number of Sensors: 2  
How Processed: Average  
Sensor Locations: Remote Location in Penetration Room  
Alarm/Trip Set Points: Low at 700 PSIG, High at 1020 PSIG

NID Power Cutoff Level: N/A  
NID Power Cut-On Level: N/A  
Instrument Failure Mode: Out of Range  
Temperature Compensation: N  
Level Reference Leg: WET  
Unique System Desc: Steam Generator #1 Pressure. Average of 2-PT-1-2A and 2-PT-1-2B.

ERDS Point Number: 13    SG PRESS 2/B    2UP1003    Steam Generator 2 Pressure

Date: 5/30/96

Reactor Unit: SE2

Data Feeder: 1

N/C ERDS Parameter: SG PRESS 2/B

Point ID: 2UP1003

Plant Specific Point Desc: SG #2 MS PRESSURE AVG

Generic Cond Desc: Steam Generator 2 Pressure

Analog/Digital: A

Engr Units/Dig States: PSIG

Engr Units Conversion: N/A

Minimum Instr Range: 0

Maximum Instr Range: 1200

Zero Point Reference: N/A

Reference Point Notes: N/A

PROC or SENS: P

Number of Sensors: 2

How Processed: Average

Sensor Locations: Remote location in East Valve Room

Alarm/Trip Set Points: Low at 700 PSIG, High at 1020 PSIG

NID Power Cutoff Level: N/A

NID Power Cut-On Level: N/A

Instrument Failure Mode: Out of Range

Temperature Compensation: N

Level Reference Leg: WET

Unique System Desc: Steam Generator #2 Pressure. Average of 2-PT-1-9A and 2-PT-1-9B.

ERDS Point Number: 14 SG PRESS 3/C 2UP1004 Steam Generator 3 Pressure

Date: 5/30/96  
Reactor Unit: SE2  
Data Feeder: 1  
NRC ERDS Parameter: SG PRESS 3/C  
Point ID: 2UP1004  
Plant Specific Point Desc: SG #3 MS PRESSURE AVG  
Generic Cond Desc: Steam Generator 3 Pressure

Analog/Digital: A  
Engr Units/Dig States: PSIG  
Engr Units Conversion: N/A  
Minimum Instr Range: 0  
Maximum Instr Range: 1200  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SENS: P  
Number of Sensors: 2  
How Processed: Average  
Sensor Locations: Remote Location in East Valve Room  
Alarm/Trip Set Points: Low at 700 PSIG, High at 1020 PSIG

NID Power Cutoff Level: N/A  
NID Power Cut-On Level: N/A  
Instrument Failure Mode: Out of Range  
Temperature Compensation: N  
Level Reference Leg: WET  
Unique System Desc: Steam Generator #3 Pressure. Average of 2-PT-1-20A and 2-PT-1-20B.

ERDS Point Number: 15 SG PRESS 4/D 2UP1005 Steam Generator 4 Pressure

Date: 5/30/96  
Reactor Unit: SE2  
Data Feeder: 1  
NRC ERDS Parameter: SG PRESS 4/D  
Point ID: 2UP1005  
Plant Specific Point Desc: SG #4 MS PRESSURE AVG  
Generic Cond Desc: Steam Generator 4 Pressure

Analog/Digital: A  
Engr Units/Dig States: PSIG  
Engr Units Conversion: N/A  
Minimum Instr Range: 0  
Maximum Instr Range: 1200  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SENS: P  
Number of Sensors: 2  
How Processed: Average  
Sensor Locations: Remote location in Penetration Room  
Alarm/Trip Set Points: Low at 700 PSIG, High at 1020 PSIG

NID Power Cutoff Level: N/A  
NID Power Cut-On Level: N/A  
Instrument Failure Mode: Out of Range  
Temperature Compensation: N  
Level Reference Leg: WET  
Unique System Desc: Steam Generator #4 Pressure. Average of 2-PT-1-27A and 2-PT-1-27B.

ERDS Point Number: 16    MN FD FL 1/A    2U0410C    Stm Gen 1 Main Feedwater Flow

Date: 5/30/96  
Reactor Unit: SE2  
Data Feeder: 1  
NRC ERDS Parameter: MN FD FL 1/A  
Point ID: 2U0410C  
Plant Specific Point Desc: SG #1 CORR FW 1/2 AVG  
Generic Cond Desc: Stm Gen 1 Main Feedwater Flow

Analog/Digital: A  
Engr Units/Dig States: MLB/HR  
Engr Units Conversion: N/A  
Minimum Instr Range: 0  
Maximum Instr Range: 4.5  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SENS: P  
Number of Sensors: 3  
How Processed: Average  
Sensor Locations: Stm Gen FW Line 1, Aux. Bldg  
Alarm/Trip Set Points: High at 3.9 MLB/HR, Hi-Hi at 4.0 MLB/HR

NID Power Cutoff Level: N/A  
NID Power Cut-On Level: N/A  
Instrument Failure Mode: Out of Range  
Temperature Compensation: Y  
Level Reference Leg: WET  
Unique System Desc: Steam Generator 1 Main Feedwater Flow. Average of 2F0403A  
(2-FT-3-35A) and 2F0404A (2-FT-3-35B). Corrected for  
temperature 2T0418A (2-TE-3-36).

ERDS Point Number: 17    MN FD FL 2/B    2U0430C    Stm Gen 2 Main Feedwater Flow

Date: 5/30/96  
Reactor Unit: SE2  
Data Feeder: 1  
NRC ERDS Parameter: MN FD FL 2/B  
Point ID: 2U0430C  
Plant Specific Point Desc: SG #2 CORR FW 1/2 AVG  
Generic Cond Desc: Stm Gen 2 Main Feedwater Flow

Analog/Digital: A  
Engr Units/Dig States: MLB/HR  
Engr Units Conversion: N/A  
Minimum Instr Range: 0  
Maximum Instr Range: 4.5  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SENS: P  
Number of Sensors: 3  
How Processed: Average  
Sensor Locations: Stm Gen FW Line 2, Aux. Bldg  
Alarm/Trip Set Points: High at 3.9 MLB/HR, Hi-Hi at 4.0 MLB/HR

NID Power Cutoff Level: N/A  
NID Power Cut-On Level: N/A  
Instrument Failure Mode: Out of Range  
Temperature Compensation: Y  
Level Reference Leg: WET  
Unique System Desc: Steam Generator 2 Main Feedwater Flow. Average of 2F0423A  
(2-FT-3-48A) and 2F0424A (2-FT-3-48B). Corrected for  
Temperature 2T0438A (2-TE-3-49).



ERDS Point Number: 18    MN FD FL 3/C    2U0450C    Stm Gen 3 Main Feedwater Flow

Date: 5/30/96  
Reactor Unit: SE2  
Data Feeder: 1  
NRC ERDS Parameter: MN FD FL 3/C  
Point ID: 2U0450C  
Plant Specific Point Desc: SG #3 CORR FW 1/2 AVG  
Generic Cond Desc: Stm Gen 3 Main Feedwater Flow  
  
Analog/Digital: A  
Engr Units/Dig States: MLB/HR  
Engr Units Conversion: N/A  
Minimum Instr Range: 0  
Maximum Instr Range: 4.5  
Zero Point Reference: N/A  
Reference Point Notes: N/A  
  
PROC or SENS: P  
Number of Sensors: 3  
How Processed: Average  
Sensor Locations: Stm Gen FW Line 3, Aux. Bldg  
Alarm/Trip Set Points: High at 3.9 MLB/HR, Hi-Hi at 4.0 MLB/HR

NID Power Cutoff Level: N/A  
NID Power Cut-On Level: N/A  
Instrument Failure Mode: Out of Range  
Temperature Compensation: Y  
Level Reference Leg: WET  
Unique System Desc: Steam Generator 3 Main Feedwater Flow. Average of 2F0443A  
(2-FT-3-90A) and 2F0444A (2-FT-3-90B). Corrected for  
Temperature 2T0458A (2-TE-3-91).

ERDS Point Number: 19    MN FD FL 4/D    2U0470C    Stm Gen 4 Main Feedwater Flow

Date: 5/30/96  
Reactor Unit: SE2  
Data Feeder: 1  
NRC ERDS Parameter: MN FD FL 4/D  
Point ID: 2U0470C  
Plant Specific Point Desc: SG #4 CORR FW 1/2 AVG  
Generic Cond Desc: Stm Gen 4 Main Feedwater Flow

Analog/Digital: A  
Engr Units/Dig States: MLB/HR  
Engr Units Conversion: N/A  
Minimum Instr Range: 0  
Maximum Instr Range: 4.5  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SENS: P  
Number of Sensors: 3  
How Processed: Average  
Sensor Locations: Stm Gen FW Line 4, Aux. Bldg  
Alarm/Trip Set Points: High at 3.9 MLB/HR, Hi-Hi at 4.0 MLB/HR

NID Power Cutoff Level: N/A  
NID Power Cut-On Level: N/A  
Instrument Failure Mode: Out of Range  
Temperature Compensation: Y  
Level Reference Leg: WET  
Unique System Desc: Steam Generator 4 Main Feedwater Flow. Average of 2F0463A  
(2-FT-3-103A) and 2F0464A (2-FT-3-103B). Corrected for  
Temperature 2T0478A (2-TE-3-104).

ERDS Point Number: 20    AX FW FL 1/A    2U0066    Stm Gen 1 Auxiliary FW Flow

Date: 5/30/96  
Reactor Unit: SE2  
Data Filter: 1  
NRC ERDS Parameter: AX FW FL 1/A  
Point ID: 2U0066  
Plant Specific Point Desc: SG #1 AUX FEEDWATER FLOW  
Generic Cond Desc: Stm Gen 1 Auxiliary FW Flow  
  
Analog/Digital: A  
Engr Units/Dig States: GPM  
Engr Units Conversion: N/A  
Minimum Instr Range: 0  
Maximum Instr Range: 440  
Zero Point Reference: N/A  
Reference Point Notes: N/A  
  
PROC or SENS: P  
Number of Sensors: 1  
How Processed: Pseudo point caps flow at 440 GPM  
Sensor Locations: Downstream of MDAFW, TDAFW tie to S/G 1  
Alarm/Trip Set Points: No Alarms

NID Power Cutoff Level: N/A  
NID Power Cut-On Level: N/A  
Instrument Failure Mode: Low  
Temperature Compensation: N  
Level Reference Leg: N/A  
Unique System Desc: There are two electric and one turbine-driven AFWPS. Each electric pump feeds two SG's and the turbine-driven pump feeds all four SG's. The electric and turbine-driven AFWPs share the same piping to each SG. The flow element is located in the shared piping, maximum rated flow for MDAFWPs and turbine-driven AFWP, is 440 and 880 gpm, respectively. Input from 2-FM3-163C.

ERDS Point Number: 21    AX FW FL 2/B    2U0067    Stm Gen 2 Auxiliary FW Flow

Date: 5/30/96  
Reactor Unit: SE2  
Data Feeder: 1  
NR<sup>2</sup> ERDS Parameter: AX FW FL 2/B  
Point ID: 2U0067  
Plant Specific Point Desc: SG #2 AUX FEEDWATER FLOW  
Generic Cond Desc: Stm Gen 2 Auxiliary FW Flow

Analog/Digital: A  
Engr Units/Dig States: GPM  
Engr Units Conversion: N/A  
Minimum Instr Range: 0  
Maximum Instr Range: 440  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SENS: P  
Number of Sensors: 1  
How Processed: Pseudo point caps flow at 440 GPM  
Sensor Locations: Downstream of MDAFW, TDAFW tie to S/G 2  
Alarm/Trip Set Points: No alarms

NID Power Cutoff Level: N/A  
NID Power Cut-On Level: N/A  
Instrument Failure Mode: Low  
Temperature Compensation: N  
Level Reference Leg: N/A

Unique System Desc: There are two electric and one turbine-driven AFWPS. Each electric pump feeds two SG's and the turbine-driven pump feeds all four SG's. The electric and turbine-driven AFWPs share the same piping to each SG. The flow element is located in the shared piping, maximum rated flow for MDAFWPs and turbine-driven AFWP, is 440 and 880 gpm, respectively. Input from 2-FM3-155C.

ERDS Point Number: 22    AX FW FL 3/C    2U0068    Stm Gen 3 Auxiliary FW Flow

Date: 5/30/96  
Reactor Unit: SE2  
Data Feeder: 1  
NRC ERDS Parameter: AX FW FL 3/C  
Point ID: 2U0068  
Plant Specific Point Desc: SG #3 AUX FEEDWATER FLOW  
Generic Cond Desc: Stm Gen 3 Auxiliary FW Flow

Analog/Digital: A  
Engr Units/Dig States: GPM  
Engr Units Conversion: N/A  
Minimum Instr Range: 0  
Maximum Instr Range: 440  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SENS: P  
Number of Sensors: 1  
How Processed: Pseudo point caps flow at 440 GPM  
Sensor Locations: Downstream of MDAFW, TDAFW tie to S/G 3  
Alarm/Trip Set Points: No Alarms

NID Power Cutoff Level: N/A  
NID Power Cut-On Level: N/A  
Instrument Failure Mode: Low  
Temperature Compensation: N  
Level Reference Leg: N/A

Unique System Desc: There are two electric and one turbine-driven AFWPS. Each electric pump feeds two SG's and the turbine-driven pump feeds all four SG's. The electric and turbine-driven AFWPs share the same piping to each SG. The flow element is located in the shared piping, maximum rated flow for MDAFWPs and turbine-driven AFWP, is 440 and 880 gpm, respectively. Input from 2-FM3-147C.

ERDS Point Number: 23    AX FW FL 4/D    2U0069    Stm Gen 4 Auxiliary FW Flow

Date: 5/30/96  
Reactor Unit: SE2  
Data Feeder: 1  
NRC ERDS Parameter: AX FW FL 4/D  
Point ID: 2U0069  
Plant Specific Point Desc: SG #4 AUX FEEDWATER FLOW  
Generic Cond Desc: Stm Gen 4 Auxiliary FW Flow

Analog/Digital: A  
Engr Units/Dig States: GPM  
Engr Units Conversion: N/A  
Minimum Instr Range: 0  
Maximum Instr Range: 440  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SENS: P  
Number of Sensors: 1  
How Processed: Pseudo point caps flow at 440 GPM  
Sensor Locations: Downstream of MDAPW, TDAFW tie to S/G 4  
Alarm/Trip Set Points: No Alarms

NID Power Cutoff Level: N/A  
NID Power Cut-On Level: N/A  
Instrument Failure Mode: Low  
Temperature Compensation: N  
Level Reference Leg: N/A

Unique System Desc: There are two electric and one turbine-driven AFWPS. Each electric pump feeds two SG's and the turbine-driven pump feeds all four SG's. The electric and turbine-driven AFWPs share the same piping to each SG. This flow element is located in the shared piping, maximum rated flow for MDAPWPs and Turbine-driven AFWP, is 440 and 880 gpm, respectively. Input from 2-FM3-170C.



ERDS Point Number: 24    HL TEMP 1/A    2T0419A    Stm Gen 1 Inlet Temperature

Date: 5/30/96  
Reactor Unit: SE2  
Data Feeder: 1  
NRC ERDS Parameter: HL TEMP 1/A  
Point ID: 2T0419A  
Plant Specific Point Desc: LOOP 1 HOT LEG WIDE RANGE TEMP  
Generic Cond Desc: Stm Gen 1 Inlet Temperature

Analog/Digital: A  
Engr Units/Dig States: DEGF  
Engr Units Conversion: 1-5 VDC=0-700 DEGF  
Minimum Instr Range: 0  
Maximum Instr Range: 700  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SENS: S  
Number of Sensors: 1  
How Processed: N/A  
Sensor Locations: On Loop 1 RCS Hot Leg piping  
Alarm/Trip Set Points: No Alarms

NID Power Cutoff Level: N/A  
NID Power Cut-On Level: N/A  
Instrument Failure Mode: Low  
Temperature Compensation: N  
Level Reference Leg: N/A

Unique System Desc: RCS hot leg temperature is used in event recovery to provide information for manual control of RCS temperature, control of the ECCS pumps and RCPs, and verifying natural circulation or increase blow down. The temperature indication is also used to control RCS pressure and temperature within required limits.  
Input from 2-TE-68-1.

ERDS Point Number: 25    HL TEMP 2/B    2T0439A    Stm Gen 2 Inlet Temperature

Date: 5/30/96  
Reactor Unit: SE2  
Data Feeder: 1  
NRC ERDS Parameter: HL TEMP 2/B  
Point ID: 2T0439A  
Plant Specific Point Desc: LOOP 2 HOT LEG WIDE RANGE TEMP  
Generic Cond Desc: Stm Gen 2 Inlet Temperature

Analog/Digital: A  
Engr Units/Dig States: DEGF  
Engr Units Conversion: 1-5 VDC=0-700 DEGF  
Minimum Instr Range: 0  
Maximum Instr Range: 700  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SENS: S  
Number of Sensors: 1  
How Processed: N/A  
Sensor Locations: On Loop 2 RCS Hot Leg Piping  
Alarm/Trip Set Points: No Alarms

NID Power Cutoff Level: N/A  
NID Power Cut-On Level: N/A  
Instrument Failure Mode: Low  
Temperature Compensation: N  
Level Reference Leg: N/A

Unique System Desc: RCS hot leg temperature is used in event recovery to provide information for manual control of RCS temperature, control of the ECCS pumps and RCPs, and verifying natural circulation or increase blow down. The temperature indication is also used to control RCS pressure and temperature within required limits.  
Input from: 2-TE-68-24.



ERDS Point Number: 26    HL TEMP 3/C    2T0459A    Stm Gen 3 Inlet Temperature

Date: 5/30/96  
Reactor Unit: SE2  
Data Feeder: 1  
NRC ERDS Parameter: HL TEMP 3/C  
Point ID: 2T0459A  
Plant Specific Point Desc: LOOP 3 HOT LEG WIDE RANGE TEMP  
Generic Cond Desc: Stm Gen 3 Inlet Temperature

Analog/Digital: A  
Engr Units/Dig States: DEGF  
Engr Units Conversion: 1-5 VDC=0-700 DEGF  
Minimum Instr Range: 0  
Maximum Instr Range: 700  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SENS: S  
Number of Sensors: 1  
How Processed: N/A  
Sensor Locations: On Loop 3 RCS Hot Leg Piping  
Alarm/Trip Set Points: No Alarms

NID Power Cutoff Level: N/A  
NID Power Cut-On Level: N/A  
Instrument Failure Mode: Low  
Temperature Compensation: N  
Level Reference Lag: N/A

Unique System Desc: RCS hot leg temperature is used in event recovery to provide information for manual control of RCS temperature, control of the ECCS pumps and RCPs, and verifying natural circulation or increase blow down. The temperature indication is also used to control RCS pressure and temperature within required limits.  
Input from: 2-TE-68-43.

ERDS Point Number: 27    HL TEMP 4/D    2T0479A    Stm Gen 4 Inlet Temperature

Date: 5/30/96  
Reactor Unit: SE2  
Data Feeder: 1  
NRC ERDS Parameter: HL TEMP 4/D  
Point ID: 2T0479A  
Plant Specific Point Desc: LOOP 4 HOT LEG WIDE RANGE TEMP  
Generic Cond Desc: Stm Gen 4 Inlet Temperature

Analog/Digital: A  
Engr Units/Dig States: DEGF  
Engr Units Conversion: 1-5 VDC=0-700 DEGF  
Minimum Instr Range: 0  
Maximum Instr Range: 700  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SENS: S  
Number of Sensors: 1  
How Processed: N/A  
Sensor Locations: On Loop 4 RCS Hot Leg Piping  
Alarm/Trip Set Points: No Alarms

NID Power Cutoff Level: N/A  
NID Power Cut-On Level: N/A  
Instrument Failure Mode: Low  
Temperature Compensation: N  
Level Reference Leg: N/A

Unique System Desc: RCS hot leg temperature is used in event recovery to provide information for manual control of RCS temperature, control of the ECCS pumps and RCPs, and verifying natural circulation or increase blow down. The temperature indication is also used to control RCS pressure and temperature within required limits.  
Input from 2-TE-68-65.

ERDS Point Number: 28    CL TEMP 1/A    2T0406A    Stm Gen 1 Outlet Temperature

Date: 5/30/96  
Reactor Unit: SE2  
Data Feeder: 1  
NRC ERDS Parameter: CL TEMP 1/A  
Point ID: 2T0406A  
Plant Specific Point Desc: LOOP 1 COLD LEG WIDE RANGE TEMP  
Generic Cond Desc: Stm Gen 1 Outlet Temperature

Analog/Digital: A  
Engr Units/Dig States: DEGF  
Engr Units Conversion: 1-5 VDC=0-700 DEGF  
Minimum Instr Range: 0  
Maximum Instr Range: 700  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SENS: S  
Number of Sensors: 1  
How Processed: N/A  
Sensor Locations: On Loop 1 RCS Cold Leg Piping  
Alarm/Trip Set Points: No Alarms

NID Power Cutoff Level: N/A  
NID Power Cut-On Level: N/A  
Instrument Failure Mode: Low  
Temperature Compensation: N  
Level Reference Leg: N/A

Unique System Desc: RCS cold leg temperature is used in event recovery to maintain proper relationship between RCS pressure and temperature while cooling down, and providing information to manually control RCS temperature by controlling AFW flow, steam generator pressure, and RHR. The temperature indication is also used in maintaining stable plant conditions and verifying natural circulation.  
Input from 2-TE-68-18.

ERDS Point Number: 29    CL TEMP 2/B    2T0426A    Stm Gen 2 Outlet Temperature

Date: 5/30/96  
Reactor Unit: SE2  
Data Feeder: 1  
NRC ERDS Parameter: CL TEMP 2/B  
Point ID: 2T0426A  
Plant Specific Point Desc: LOOP 2 COLD LEG WIDE RANGE TEMP  
Generic Cond Desc: Stm Gen 2 Outlet Temperature

Analog/Digital: A  
Engr Units/Dig States: DEGF  
Engr Units Conversion: 1-5 VDC=0-700 DEGF  
Minimum Instr Range: 0  
Maximum Instr Range: 700  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SENS: S  
Number of Sensors: 1  
How Processed: N/A  
Sensor Locations: On Loop 2 RCS Cold Leg Piping  
Alarm/Trip Set Points: No Alarms

NID Power Cutoff Level: N/A  
NID Power Cut-On Level: N/A  
Instrument Failure Mode: Low  
Temperature Compensation: N  
Level Reference Leg: N/A

Unique System Desc: RCS cold leg temperature is used in event recovery to maintain proper relationship between RCS pressure and temperature while cooling down, and providing information to manually control RCS temperature by controlling AFW flow, steam generator pressure and RHR. The temperature indication is also used in maintaining stable plant conditions and verifying natural circulation.  
Input from 2-TE-68-41.

ERDS Point Number: 30 CL TEMP 3/C 2T0446A Stm Gen 3 Outlet Temperature

Date: 5/30/96  
Reactor Unit: SE2  
Data Feeder: 1  
NRC ERDS Parameter: CL TEMP 3/C  
Point ID: 2T0446A  
Plant Specific Point Desc: LOOP 3 COLD LEG WIDE RANGE TEMP  
Generic Cond Desc: Stm Gen 3 Outlet Temperature

Analog/Digital: A  
Engr Units/Dig States: DEGF  
Engr Units Conversion: 1-5 VDC=0-700 DEGF  
Minimum Instr Range: 0  
Maximum Instr Range: 700  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SENS: S  
Number of Sensors: 1  
How Processed: N/A  
Sensor Locations: On Loop 3 RCS Cold Leg Piping  
Alarm/Trip Set Points: No Alarms

NID Power Cutoff Level: N/A  
NID Power Cut-On Level: N/A  
Instrument Failure Mode: Low  
Temperature Compensation: N  
Level Reference Leg: N/A

Unique System Desc: RCS cold leg temperature is used in event recovery to maintain proper relationship between RCS pressure and temperature while cooling down, and providing information to manually control RCS temperature by controlling AFW flow, steam generator pressure, and RHR. The temperature indication is also used in maintaining stable plant conditions and verifying natural circulation.  
Input from 2-TE-68-60.

ERDS Point Number: 31      CL TEMP 4/D      2T0466A      Stm Gen 4 Outlet Temperature

Date: 5/30/96  
Reactor Unit: SE2  
Data Feeder: 1  
NRC ERDS Parameter: CL TEMP 4/D  
Point ID: 2T0466A  
Plant Specific Point Desc: LOOP 4 COLD LEG WIDE RANGE TEMP  
Generic Cond Desc: Stm Gen 4 Outlet Temperature

Analog/Digital: A  
Engr Units/Dig States: DEGF  
Engr Units Conversion: 1-5 VDC=0-700 DEGF  
Minimum Instr Range: 0  
Maximum Instr Range: 700  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SENS: S  
Number of Sensors: 1  
How Processed: N/A  
Sensor Locations: On Loop 4 RCS Cold Leg Piping  
Alarm/Trip Set Points: No Alarms

NID Power Cutoff Level: N/A  
NID Power Cut-On Level: N/A  
Instrument Failure Mode: Low  
Temperature Compensation: N  
Level Reference Leg: N/A

Unique System Desc: RCS cold leg temperature is used in event recovery to maintain proper relationship between RCS pressure and temperature while cooling down, and providing information to manually control RCS temperature by controlling AFW flow, steam generator pressure, and RHR. The temperature indication is also used in maintaining stable plant conditions and verifying natural circulation.  
Input from 2-TE-68-83.

ERDS Point Number: 32    RCS PRESSURE    2UP1000    Reactor Coolant System Pressure

Date: 5/30/96  
Reactor Unit: SE2  
Data Feeder: 1  
NRC ERDS Parameter: RCS PRESSURE  
Point ID: 2UP1000  
Plant Specific Point Desc: RCS WIDE RANGE PRESSURE AVERAGE  
Generic Cond Desc: Reactor Coolant System Pressure

Analog/Digital: A  
Engr Units/Dig States: PSIG  
Engr Units Conversion: N/A  
Minimum Instr Range: 0  
Maximum Instr Range: 3000  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SENS: P  
Number of Sensors: 3  
How Processed: Average  
Sensor Locations: RCS Hot Legs 1, 3, 4  
Alarm/Trip Set Points: Low 1865 PSIG RxTrip, High 2390 PSIG RxTr

NID Power Cutoff Level: N/A  
NID Power Cut-On Level: N/A  
Instrument Failure Mode: Low  
Temperature Compensation: N  
Level Reference Leg: N/A

Unique System Desc: RCS pressure determined by this point is the average of 3 signals, which measure wide range hot leg pressures. (2-PT-68-62, -66, and -69) RCS pressure indication is utilized by the operators to identify events for SI actuation and termination, starting and stopping RHR pumps, and controlling cooldown to prevent PTS. The alarm trip setpoints are actuated by pressurized pressure transmitters at the given setpoints.



ERDS Point Number: 33    PRZR LEVEL    2UL1005    Primary System Pressurizer Level

Date: 5/30/96  
Reactor Unit: SE2  
Data Feeder: 1  
NRC ERDS Parameter: PRZR LEVEL  
Point ID: 2UL1005  
Plant Specific Point Desc: PZR LEVEL AVERAGE  
Generic Cond Desc: Primary System Pressurizer Level

Analog/Digital: A  
Engr Units/Dig States: % LEVEL  
Engr Units Conversion: N/A  
Minimum Instr Range: 0  
Maximum Instr Range: 100  
Zero Point Reference: Notes  
Reference Point Notes: Top of HTR = 14%

PROC or SENS: P  
Number of Sensors: 3  
How Processed: Average  
Sensor Locations: TAPs from Pressurizer  
Alarm/Trip Set Points: High at 92% Rx Trip

NID Power Cutoff Level: N/A  
NID Power Cut-On Level: N/A  
Instrument Failure Mode: Low  
Temperature Compensation: N  
Level Reference Leg: WET

Unique System Desc: The pressurizer level is an averaged signal from 3 level transmitters (2-LT-68-320, -335, -339). Zero reference is bottom of cylindrical shell. Approximately 63 cu ft of water remains in the pressurizer below zero reference at 652 deg F and 2235 psia. Top of heater represents approximately 14% level. Heaters shutdown and letdown isolated at approximately 17% level.



ERDS Point Number: 34    RCS CHG/MU    2UF1016    Primary System Charging / Makeup

Date: 5/30/96  
Reactor Unit: SE2  
Data Feeder: 1  
NRC ERDS Parameter: RCS CHG/MU  
Point ID: 2UF1016  
Plant Specific Point Desc: NET CHG FLO  
Generic Cond Desc: Primary System Charging / Makeup

Analog/Digital: A  
Engr Units/Dig States: GPM  
Engr Units Conversion: N/A  
Minimum Instr Range: -200  
Maximum Instr Range: 176  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SENS: P  
Number of Sensors: 6  
How Processed: Subtraction  
Sensor Locations: CCP Pmp, RCP Seal/Leakoff, RCS Letdown  
Alarm/Trip Set Points: No Alarms

NID Power Cutoff Level: N/A  
NID Power Cut-On Level: N/A  
Instrument Failure Mode: Multiple due to number of sensors  
Temperature Compensation: N  
Level Reference Leg: N/A

Unique System Desc: The net charging flow is calculated by subtracting RCP seal return, and CVCS letdown flow from the discharge flow of the charging pump. The design charging flow is between 55 and 100 GPM during normal operation. Input from Point ID's 2F0128A, 2F0134A, 2F1018A, 2F1020A, 2F1022A, and 2F1024A.

ERDS Point Number: 35    HP SI FLOW    2UF1010    High Pressure Safety Inj. Flow

Date: 5/30/96  
Reactor Unit: SE2  
Data Feeder: 1  
NRC ERDS Parameter: HP SI FLOW  
Point ID: 2UF1010  
Plant Specific Point Desc: SI FLOW TOTAL  
Generic Cond Desc: High Pressure Safety Inj. Flow

Analog/Digital: A  
Engr Units/Dig States: GPM  
Engr Units Conversion: N/A  
Minimum Instr Range: 0  
Maximum Instr Range: 1600  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SENS: P  
Number of Sensors: 2  
How Processed: Sum  
Sensor Locations: Discharge of Safety Injection Pumps  
Alarm/Trip Set Points: No Alarms

NID Power Cutoff Level: N/A  
NID Power Cut-On Level: N/A  
Instrument Failure Mode: Low  
Temperature Compensation: N  
Level Reference Leg: N/A

Unique System Desc: The total flow is measured by adding the discharge flow rates from two Safety Injection Pumps. The total accident flow rates for cold leg injection or recirculation and hot leg recirculation can be monitored by this point. Safety Injection Pumps on miniflow will not show flow since miniflow path is upstream of flow element. The design flow rate is 425 GPM @ 2500 ft of head for each SI Pump. (Sum of 2-FT-63-20 and -15). Input from Point ID's 2F1059A and 2F1066A.

ERDS Point Number: 36    LP SI FLOW    2UF1011    Low Pressure Safety Inj. Flow

Date: 5/30/96  
Reactor Unit: SE2  
Data Feeder: 1  
NRC ERDS Parameter: LP SI FLOW  
Point ID: 2UF1011  
Plant Specific Point Desc: RHR COLD LEG TOTAL FLOW  
Generic Cond Desc: Low Pressure Safety Inj. Flow

Analog/Digital: A  
Engr Units/Di. Rates: GPM  
Engr Units Conversion: N/A  
Minimum Instr Range: 0  
Maximum Instr Range: 11000  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SENS: P  
Number of Sensors: 4  
How Processed: Average  
Sensor Locations: RHR Cold Legs 2, 3 and 1, 4 Piping  
Alarm/Trip Set Points: No Alarms

NID Power Cutoff Level: N/A  
NID Power Cut-On Level: N/A  
Instrument Failure Mode: Low  
Temperature Compensation: N  
Level Reference Leg: N/A

Unique System Desc: The RHR Cold Leg Flow Rate value is calculated by summing the average flow from cold legs 2 and 3 with the average flow from cold legs 1 and 4. The design flow rate for a RHR pump is 3000 GPM at 375 feet of head. Flow sensors include 2-FT-63-91A and -91B, 2-FT-63-92A and -92B.

ERDS Point Number: 37    CNTMT SMP WR    2UL1011    Containment Sump Wide Rng Lvl

Date: 5/30/96  
Reactor Unit: SE2  
Data Feeder: 1  
NRC ERDS Parameter: CNTMT SMP WR  
Point ID: 2UL1011  
Plant Specific Point Desc: CONTAINMENT SUMP LEV AVG  
Generic Cond Desc: Containment Sump Wide Rng Lvl  
  
Analog/Digital: A  
Engr Units/Dig States: % LEVEL  
Engr Units Conversion: N/A  
Minimum Instr Range: 0  
Maximum Instr Range: 100  
Zero Point Reference: CNTFLR  
Reference Point Notes: The containment floor is elevation 680

PROC or SENS: P  
Number of Sensors: 4  
How Processed: Average, Redundant Sensor Algorithm  
Sensor Locations: Containment Sump  
Alarm/Trip Set Points: 11% Containment Sump Swapover

NID Power Cutoff Level: N/A  
NID Power Cut-On Level: N/A  
Instrument Failure Mode: Low  
Temperature Compensation: N  
Level Reference Leg: N/A

Unique System Desc: The containment average sump level is calculated by a redundant sensor algorithm using four sump level transmitters. LT-63-176, -177, -178, and -179. The transfer from RWST to containment sump setpoint is 11%, which is approximately 2.5 feet above containment floor elevation. Gallons/% level varies with level in a nearly linear relationship. (78,000 gallons)

ERDS Point Number: 38    EFF GAS RAD    2R9102XA    Release Rt of Radioactive Gases

Date: 5/30/96  
Reactor Unit: SE2  
Data Feeder: 1  
NRC ERDS Parameter: EFF GAS RAD  
Point ID: 2R9102XA  
Plant Specific Point Desc: UNIT 1 SHIELD BLDG RELEASE RATE  
Generic Cond Desc: Release Rt of Radioactive Gases

Analog/Digital: A  
Engr Units/Dig States: uCi/sec  
Engr Units Conversion: N/A  
Minimum Instr Range: 1.0 E-2  
Maximum Instr Range: 1.0 E10  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SENS: S  
Number of Sensors: 1  
How Processed: Sampled Totalized times flow rate  
Sensor Locations: Auxiliary Bldg  
Alarm/Trip Set Points: 31,000 uCi/sec

NID Power Cutoff Level: N/A  
NID Power Cut-On Level: N/A  
Instrument Failure Mode: Low on Loss of Power  
Temperature Compensation : N  
Level Reference Leg: N/A  
Unique System Desc: Unit 1 Shield Bldg Exhaust. To obtain true release rate,  
Unit 2 monitor must also be checked.  
Input from 1-RM-90-400.

ERDS Point Number: 39    EFF GAS RAD    2R9102A    Release Rt. of Radioactive Gases

Date: 5/30/96  
Reactor Unit: SE2  
Data Feeder: 1  
NRC ERDS Parameter: EFF GAS RAD  
Point ID: 2R9102A  
Plant Specific Point Desc: SHIELD BUILDING VENT RADIATION  
Generic Cond Desc: Release Rt. of Radioactive Gases

Analog/Digital: A  
Engr Units/Dig States: uCi/sec  
Engr Units Conversion: N/A  
Minimum Instr Range: 1.0 E-2  
Maximum Instr Range: 1.0 E10  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SENS: S  
Number of Sensors: 1  
How Processed: Sampled Totalized times flow rate  
Sensor Locations: Auxiliary Bldg  
Alarm/Trip Set Points: 31,000 uCi/sec

NID Power Cutoff Level: N/A  
NID Power Cut-On Level: N/A  
Instrument Failure Mode: Low on Loss of Power  
Temperature Compensation: N  
Level Reference Leg: N/A  
Unique System Desc: Unit 2 Shield Bldg Exhaust. To obtain true release rate,  
Unit 1 monitor must also be checked.  
Input from 2-RM-90-400.

ERDS Point Number: 40    EFF LIQ RAD    0R1022A    Radioactivity of Released Liquid

Date: 5/30/96  
Reactor Unit: SE2  
Data Feeder: 1  
NRC ERDS Parameter: EFF LIQ RAD  
Point ID: 0R1022A  
Plant Specific Point Desc: WDS LIQUID EFFLUENT RADIATION  
Generic Cond Desc: Radioactivity of Released Liquid

Analog/Digital: A  
Engr Units/Dig States: CPM  
Engr Units Conversion: N/A  
Minimum Instr Range: 1.0 E1  
Maximum Instr Range: 1.0 E7  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SENS: S  
Number of Sensors: 1  
How Processed: Sum  
Sensor Locations: Auxiliary Bldg  
Alarm/Trip Set Points: Variable

NID Power Cutoff Level: N/A  
NID Power Cut-On Level: N/A  
Instrument Failure Mode: Low on Loss of Power  
Temperature Compensation: N  
Level Reference Leg: N/A  
Unique System Desc: Waste Disposal System Liquid Effluent  
This computer point is in counts per minute.  
Input from 0-RE-90-122.

ERDS Point Number: 41    COND A/E RAD    2UR1006    Cond Air Ejector Radioactivity

Date: 5/30/96  
Reactor Unit: SE2  
Data Feeder: 1  
NRC ERDS Parameter: COND A/E RAD  
Point ID: 2UR1006  
Plant Specific Point Desc: COND VAC EXH LOW RNG RELEASE RATE  
Generic Cond Desc: Cond Air Ejector Radioactivity

Analog/Digital: A  
Engr Units/Dig States: uCi/sec  
Engr Units Conversion: N/A  
Minimum Instr Range: 0.0 E0  
Maximum Instr Range: 1.0 E8  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SENS: P  
Number of Sensors: 2  
How Processed: Cond Flow \* Dose  
Sensor Locations: Turbine Bldg  
Alarm/Trip Set Points: Variable

NID Power Cutoff Level: N/A  
NID Power Cut-On Level: N/A  
Instrument Failure Mode: Low on Loss of Power  
Temperature Compensation: N  
Level Reference Leg: N/A

Unique System Desc: Condenser Air Ejector Noble Gas Monitor  
This is one of three computer points needed to cover full range. This point uses inputs from 2-FT-2-256 and 2-RE-90-119 to compute dose rates.



ERDS Point Number: 42      COND A/E RAD      2UR1007      Cond Air Ejector Radioactivity

Date: 5/30/96  
Reactor Unit: SE2  
Data Feeder: 1  
NRC ERDS Parameter: COND A/E RAD  
Point ID: 2UR1007  
Plant Specific Point Desc: COND VAC EXH MID RNG RELEASE RATE  
Generic Cond Desc: Cond Air Ejector Radioactivity

Analog/Digital: A  
Engr Units/Dig States: uCi/sec  
Engr Units Conversion: N/A  
Minimum Instr Range: 0.0 E0  
Maximum Instr Range: 1.0 E8  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SENS: P  
Number of Sensors: 2  
How Processed: Cond Flow \* Dose  
Sensor Locations: Turbine Bldg.  
Alarm/Trip Set Points: Variable

NID Power Cutoff Level: N/A  
NID Power Cut-On Level: N/A  
Instrument Failure Mode: Low on Loss of Power  
Temperature Compensation: N  
Level Reference Leg: N/A  
Unique System Desc: Condenser Air Ejector Noble Gas Monitor

This is one of three computer points needed to cover full range. This point uses inputs from 2-FT-2-256 & 2-RE-90-404A to compute dose rates.

ERDS Point Number: 43    COND A/E RAD    2UR1008    Cond Air Ejector Radioactivity

Date: 5/30/96  
Reactor Unit: SE2  
Data Feeder: 1  
NRC ERDS Parameter: COND A/E RAD  
Point ID: 2UR1008  
Plant Specific Point Desc: COND VAC EXH HI RNG RELEASE RATE  
Generic Cond Desc: Cond Air Ejector Radioactivity

Analog/Digital: A  
Engr Units/Dig States: uCi/sec  
Engr Units Conversion: N/A  
Minimum Instr Range: 0.0 E0  
Maximum Instr Range: 1.0 E8  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SENS: P  
Number of Sensors: 2  
How Processed: Cond Flow \* Dose  
Sensor Locations: Turbine Bldg  
Alarm/Trip Set Points: Variable

NID Power Cutoff Level: N/A  
NID Power Cut-On Level: N/A  
Instrument Failure Mode: Low on Loss of Power

Temperature Compensation : N  
Level Reference Leg: N/A

Unique System Desc: Condenser Air Ejector Noble Gas Monitor  
This is one of three computer points needed to cover full range. This point uses inputs from 2-FT-2-256 & 2-RE-90-404B to compute dose rates.

ERDS Point Number: 44    CNTMNT RAD    2UR6021    Containment Radiation Level

Date: 5/30/96  
Reactor Unit: SE2  
Data Feeder: 1  
NRC ERDS Parameter: CNTMNT RAD  
Point ID: 2UR6021  
Plant Specific Point Desc: UPPER CNTMT RADIATION  
Generic Cond Desc: Containment Radiation Level

Analog/Digital: A  
Engr Units/Dig States: R/HR  
Engr Units Conversion: N/A  
Minimum Instr Range: 1.0 E0  
Maximum Instr Range: 1.0 E8  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SENS: P  
Number of Sensors: 2  
How Processed: Average  
Sensor Locations: Upper Containment  
Alarm/Trip Set Points: 100 R/HR

NID Power Cutoff Level: N/A  
NID Power Cut-On Level: N/A  
Instrument Failure Mode: Low on Loss of Power  
Temperature Compensation: N  
Level Reference Leg: N/A  
Unique System Desc: Upper Containment High Range Area Monitors  
Inputs are 2-RE-90-271 & 2-RE-90-272.

ERDS Point Number: 45    CNTMNT RAD    2UR6022    Lower Containment Radiation Lvl

Date: 5/30/96  
Reactor Unit: SE2  
Data Feeder: 1  
NRC ERDS Parameter: CNTMNT RAD  
Point ID: 2UR6022  
Plant Specific Point Desc: LOWER CNTMT RADIATION  
Generic Cond Desc: Lower Containment Radiation Lvl

Analog/Digital: A  
Engr Units/Dig States: R/HR  
Engr Units Conversion: N/A  
Minimum Instr Range: 1.0 E0  
Maximum Instr Range: 1.0 E8  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SENS: P  
Number of Sensors: 2  
How Processed: Average  
Sensor Locations: Lower Containment  
Alarm/Trip Set Points: 100 R/HR

NID Power Cutoff Level: N/A  
NID Power Cut-On Level: N/A  
Instrument Failure Mode: Low on Loss of Power  
Temperature Compensation: N  
Level Reference Leg: N/A  
Unique System Desc: Lower Containment High Range Area Monitor  
Inputs are 2-RE-90-273 & 2-RE-90-274.

ERDS Point Number: 46    MAIN SL 1/A    2UR1001    Strm Gen 1 Steam Line Rad Level

Date: 5/30/96  
Reactor Unit: SE2  
Data Feeder: 1  
NRC ERDS Parameter: MAIN SL 1/A  
Point ID: 2UR1001  
Plant Specific Point Desc: SG #1 RELEASE RATE  
Generic Cond Desc: Strm Gen 1 Steam Line Rad Level

Analog/Digital: A  
Engr Units/Dig States: uCi/sec  
Engr Units Conversion: N/A  
Minimum Instr Range: 0.0 E0  
Maximum Instr Range: 1.0 E8  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SENS: P  
Number of Sensors: 2  
How Processed: Sampled Totalized  
Sensor Locations: Main Steam Line prior to ATM reliefs  
Alarm/Trip Set Points:  $9.5 * 10E-3$

NID Power Cutoff Level: N/A  
NID Power Cut-On Level: N/A  
Instrument Failure Mode: Low on Loss of Power

Temperature Compensation: N

Level Reference Leg: N/A

Unique System Desc: Value calculated as product of SG #1 release rate, radioactivity, specific volume, and a conversion constant. PORV position is monitored and if a PORV is 'NOT CLOSED', valve is assumed to contribute 890000 lb/hr flow to the atmosphere. 5 code safety valves for each S/G. Main steam line header pressure is monitored to determine condition of valves. Each open valve is assumed to contribute an additional 890000 lb/hr to the flow rate. If code safeties lift, 1 is assumed stuck open until pressure < 50 psig.  
(Rad Monitor 2-RM-90-421)

ERDS Point Number: 47    MAIN SL 2/B    2UR1002    Stm Gen 2 Steam Line Rad Level

Date: 5/30/96  
Reactor Unit: SE2  
Data Feeder: 1  
NRC ERDS Parameter: MAIN SL 2/B  
Point ID: 2UR1002  
Plant Specific Point Desc: SG #2 RELEASE RATE  
Generic Cond Desc: Stm Gen 2 Steam Line Rad Level

Analog/Digital: A  
Engr Units/Dig States: uCi/sec  
Engr Units Conversion: N/A  
Minimum Instr Range: 0.0 E0  
Maximum Instr Range: 1.0 E8  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SENS: P  
Number of Sensors: 2  
How Processed: Sampled Totalized  
Sensor Locations: Main Steam Line prior to ATM reliefs  
Alarm/Trip Set Points:  $8.5 \times 10^{-3}$

NID Power Cutoff Level: N/A  
NID Power Cut-On Level: N/A  
Instrument Failure Mode: Low on Loss of Power  
Temperature Compensation: N  
Level Reference Leg: N/A

Unique System Desc: Value calculated as product of SG #2 release rate, radioactivity, specific volume, and a conversion constant. PORV position is monitored and if a PORV is 'NOT CLOSED', valve is assumed to contribute 890000 lb/hr flow to the atmosphere. 5 code safety valves for each S/G. Main steam line header pressure is monitored to determine condition of valves. Each open valve is assumed to contribute an additional 890000 lb/hr to the flow rate. If code safeties lift, 1 is assumed stuck open until pressure < 50 psig.  
(Rad Monitor 2-RM-90-422)

ERDS Point Number: 48    MAIN SL 3/C    2UR1003    Stm Gen 3 Steam Line Rad Level

Date: 5/30/96  
Reactor Unit: SE2  
Data Feeder: 1  
NRC ERDS Parameter: MAIN SL 3/C  
Point ID: 2UR1003  
Plant Specific Point Desc: SG #3 RELEASE RATE  
Generic Cond Desc: Stm Gen 3 Steam Line Rad Level

Analog/Digital: A  
Engr Units/Dig States: uCi/sec  
Engr Units Conversion: N/A  
Minimum Instr Range: 0.0 E0  
Maximum Instr Range: 1.0 E8  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SENS: P  
Number of Sensors: 2  
How Processed: Sampled Totalized  
Sensor Locations: Main Steam Line prior to ATM reliefs  
Alarm/Trip Set Points:  $8.5 \times 10E-3$

NID Power Cutoff Level: N/A  
NID Power Cut-On Level: N/A  
Instrument Failure Mode: Low on Loss of Power  
Temperature Compensation: N  
Level Reference Leg: N/A  
Unique System Desc:

Value calculated as product of SG #3 release rate, radioactivity, specific volume, and a conversion constant. PORV position is monitored and if a PORV is 'NOT CLOSED', valve is assumed to contribute 890000 lb/hr flow to the atmosphere. 5 code safety valves for each S/G. Main steam line header pressure is monitored to determine condition of valves. Each open valve is assumed to contribute an additional 890000 lb/hr to the flow rate. If code safeties lift, 1 is assumed stuck open until pressure < 50 psig.  
(Rad Monitor 2-RM-90-423)



ERDS Point Number: 49    MAIN SL 4/D    2UR1004    Stm Gen 4 Steam Line Rad Level

Date: 5/30/96  
Reactor Unit: SE2  
Data Feeder: 1  
NRC ERDS Parameter: MAIN SL 4/D  
Point ID: 2UR1004  
Plant Specific Point Desc: SG #4 RELEASE RATE  
Generic Cond Desc: Stm Gen 4 Steam Line Rad Level

Analog/Digital: A  
Engr Units/Dig States: uCi/sec  
Engr Units Conversion: N/A  
Minimum Instr Range: 0.0 E0  
Maximum Instr Range: 1.0 E8  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SENS: P  
Number of Sensors: 2  
How Processed: Sampled Totalized  
Sensor Locations: Main Steam Line prior to ATM reliefs  
Alarm/Trip Set Points:  $8.5 \times 10E-3$

NID Power Cutoff Level: N/A  
NID Power Cut-On Level: N/A  
Instrument Failure Mode: Low on Loss of Power  
Temperature Compensation: N  
Level Reference Leg: N/A  
Unique System Desc:

Value calculated as product of SG #4 release rate, radioactivity, specific volume, and a conversion constant. PORV position is monitored and if a PORV is 'NOT CLOSED', valve is assumed to contribute 890000 lb/hr flow to the atmosphere. 5 code safety valves for each S/G. Main steam line header pressure is monitored to determine condition of valves. Each open valve is assumed to contribute an additional 890000 lb/hr to the flow rate. If code safeties lift, 1 is assumed stuck open until pressure < 50 psig. (Rad Monitor 2-RM-90-424)



ERDS Point Number: 50 SG BD RAD 1A 2R1020A Stm Gen Header Blowdown Rad Lev

Date: 5/30/96  
Reactor Unit: SE2  
Data Feeder: 1  
NRC ERDS Parameter: SG BD RAD 1A  
Point ID: 2R1020A  
Plant Specific Point Desc: SG BLOWDOWN RADIATION  
Generic Cond Desc: Stm Gen Header Blowdown Rad Lev

Analog/Digital: A  
Engr Units/Dig States: CPM  
Engr Units Conversion: N/A  
Minimum Instr Range: 1.0 E1  
Maximum Instr Range: 1.0 E7  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SENS: S  
Number of Sensors: 1  
How Processed: N/A  
Sensor Locations: Turbine Bldg  
Alarm/Trip Set Points: Variable

NID Power Cutoff Level: N/A  
NID Power Cut-On Level: N/A  
Instrument Failure Mode: Low on Loss of Power  
Temperature Compensation: N  
Level Reference Leg: N/A  
Unique System Desc: Steam Generator Blowdown Header Liquid Monitor.

This is one of two monitors, one of which is valved out.  
The monitor is for the header and not individual loops.  
Input from 2-RE-90-120.

ERDS Point Number: 51      SG BD RAD 2B      2R1021A      Stm Gen Header Blowdown Rad Lev

Date: 5/30/96  
Reactor Unit: SE2  
Data Feeder: 1  
NRC ERDS Parameter: SG BD RAD 2B  
Point ID: 2R1021A  
Plant Specific Point Desc: SG BLOWDOWN RADIATION  
Generic Cond Desc: Stm Gen Header Blowdown Rad Lev

Analog/Digital: A  
Engr Units/Dig States: CPM  
Engr Units Conversion: N/A  
Minimum Instr Range: 1.0 E1  
Maximum Instr Range: 1.0 E7  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SENS: S  
Number of Sensors: 1  
How Processed: N/A  
Sensor Locations: Turbine Bldg  
Alarm/Trip Set Points: Variable

NID Power Cutoff Level: N/A  
NID Power Cut-On Level: N/A  
Instrument Failure Mode: Low on Loss of Power  
Temperature Compensation: N  
Level Reference Leg: N/A

Unique System Desc: Steam Generator Blowdown Header Liquid Monitor.  
This is one of two monitors, one of which is valved out.  
The monitor is for the header and not individual loops.  
Input from 2-RE-90-121.

ERDS Point Number: 52    CTMNT PRESS    2UP6000    Containment Pressure

Date: 5/30/96  
Reactor Unit: SE2  
Data Feeder: 1  
NRC ERDS Parameter: CTMNT PRESS  
Point ID: 2UP6000  
Plant Specific Point Desc: CNTMT PRESSURE AVERAGE  
Generic Cond Desc: Containment Pressure

Analog/Digital: A  
Engr Units/Dig States: PSIG  
Engr Units Conversion: N/A  
Minimum Instr Range: -1  
Maximum Instr Range: 15  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SENS: P  
Number of Sensors: 2  
How Processed: Average  
Sensor Locations: Annulus  
Alarm/Trip Set Points: High 2.81 PSIG    High-High 12.0 PSIG

NID Power Cutoff Level: N/A  
NID Power Cut-On Level: N/A  
Instrument Failure Mode: Out of Range  
Temperature Compensation: N  
Level Reference Leg: N/A

Unique System Desc: Containment Pressure. This is actually a differential  
between containment and the annulus. Average of 2-PDT-30-44  
and -45.

ERDS Point Number: 53    CTMNT TEMP    2QV0020    Containment Temperature

Date: 5/30/96  
Reactor Unit: SE2  
Data Feeder: 1  
NRC ERDS Parameter: CTMNT TEMP  
Point ID: 2QV0020  
Plant Specific Point Desc: CALCULATED LOWER CTMT TEMP - LCTTEMP  
Generic Cond Desc: Containment Temperature

Analog/Digital: A  
Engr Units/Dig States: DEGF  
Engr Units Conversion: N/A  
Minimum Instr Range: 0  
Maximum Instr Range: 200  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SENS: P  
Number of Sensors: 19  
How Processed: Weighted Average  
Sensor Locations: Lower Containment  
Alarm/Trip Set Points: Low at 60 DEGF, High at 130 DEGF

NID Power Cutoff Level: N/A  
NID Power Cut-On Level: N/A  
Instrument Failure Mode: Fail Low  
Temperature Compensation: N  
Level Reference Leg: N/A  
Unique System Desc: Weighted Average of 19 Lower Containment Temp. Elements.

ERDS Point Number: 54    H2 CONC    2UY1005    Containment H2 Concentration

Date: 5/30/96  
Reactor Unit: SE2  
Data Feeder: 1  
NRC ERDS Parameter: H2 CONC  
Point ID: 2UY1005  
Plant Specific Point Desc: H2 CONC AVG  
Generic Cond Desc: Containment H2 Concentration

Analog/Digital: A  
Engr Units/Dig States: % H2V  
Engr Units Conversion: N/A  
Minimum Instr Range: 0  
Maximum Instr Range: 10  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SENS: P  
Number of Sensors: 2  
How Processed: Average  
Sensor Locations: Sample line from both uppr & lowr cntmnt  
Alarm/Trip Set Points: High at 10 %

NID Power Cutoff Level: N/A  
NID Power Cut-On Level: N/A  
Instrument Failure Mode: Downscale on loss of power  
Temperature Compensation : N  
Level Reference Leg: N/A  
Unique System Desc: Samples H2 gas concentration in containment. Average of 2-H2AN-43-200 and 2-H2AN-43-210. Analyzers are normally valved out.

ERDS Point Number: 55    RWST LEVEL    2UL1000    Refueling Water Storage Tank Lev

Date: 5/30/96  
Reactor Unit: SE2  
Data Feeder: 1  
NRC ERDS Parameter: RWST LEVEL  
Point ID: 2UL1000  
Plant Specific Point Desc: RWST LEV AVG  
Generic Cond Desc: Refueling Water Storage Tank Lev

Analog/Digital: A  
Engr Units/Dig States: % LEVEL  
Engr Units Conversion: N/A  
Minimum Instr Range: 0  
Maximum Instr Range: 100  
Zero Point Reference: 27.6"  
Reference Point Notes: 25,000 gal below zero reference

PROC or SENS: P  
Number of Sensors: 2  
How Processed: Average, Redundant Sensor Algorithm  
Sensor Locations: RWST taps 25,000 Gals in trnk at 0% Level  
Alarm/Trip Set Points: Low level 27.4%

NID Power Cutoff Level: N/A  
NID Power Cut-On Level: N/A  
Instrument Failure Mode: Low  
Temperature Compensation: N  
Level Reference Leg: N/A

Unique System Desc: The RWST average level is calculated by a redundant sensor algorithm from the 2 RWST level transmitters. The low level setpoint is 27.4% of span which is 106 inches above the lower tap of the RWST. The RWST tank capacity is 380,000 gallons. 0% = 25,000 gailons, 100% = 380,000 gallons. Input from 2-LT-63-50 and -51.

ERDS Point Number: 56    WIND SPEED    MET001    Wind Speed - Upper Level

Date: 5/30/96  
Reactor Unit: SE2  
Data Feeder: 1  
NRC ERDS Parameter: WIND SPEED  
Point ID: MET001  
Plant Specific Point Desc: 91M VECTOR WIND SPEED (15 MIN AVG)  
Generic Cond Desc: Wind Speed - Upper Level

Analog/Digital: A  
Engr Units/Dig States: m/sec  
Engr Units Conversion: N/A  
Minimum Instr Range: 0  
Maximum Instr Range: 44.6  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SENS: S  
Number of Sensors: 1  
How Processed: N/A  
Sensor Locations: At the 91 Meter Level of the Met Tower  
Alarm/Trip Set Points: No Alarms

NID Power Cutoff Level: N/A  
NID Power Cut-On Level: N/A  
Instrument Failure Mode: LOW  
Temperature Compensation: N  
Level Reference Leg: N/A  
Unique System Desc:



ERDS Point Number: 57      WIND SPEED      MET002      Wind Speed - Intermediate Level

Date: 5/30/96  
Reactor Unit: SE2  
Data Feeder: 1  
NRC ERDS Parameter: WIND SPEED  
Point ID: MET002  
Plant Specific Point Desc: 46M VECTOR WIND SPEED (15 MIN AVG)  
Generic Cond Desc: Wind Speed - Intermediate Level

Analog/Digital: A  
Engr Units/Dig States: m/sec  
Engr Units Conversion: N/A  
Minimum Instr Range: 0  
Maximum Instr Range: 44.6  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SENS: S  
Number of Sensors: 1  
How Processed: N/A  
Sensor Locations: At the 46 Meter Level of the Met Tower  
Alarm/Trip Set Points: No Alarms

NID Power Cutoff Level: N/A  
NID Power Cut-On Level: N/A  
Instrument Failure Mode: LOW  
Temperature Compensation : N  
Level Reference Leg: N/A  
Unique System Desc:



ERDS Point Number: 58    WIND SPEED    MET003    Wind Speed - Lower Level

Date: 5/30/96  
Reactor Unit: SE2  
Data Feeder: 1  
NRC ERDS Parameter: WIND SPEED  
Point ID: MET003  
Plant Specific Point Desc: 10M VECTOR WIND SPEED (15 MIN AVG)  
Generic Cond Desc: Wind Speed - Lower Level

Analog/Digital: A  
Engr Units/Dig States: m/sec  
Engr Units Conversion: N/A  
Minimum Instr Range: 0  
Maximum Instr Range: 44.6  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SENS: S  
Number of Sensors: 1  
How Processed: N/A  
Sensor Locations: At the 10 Meter Level of the Met Tower  
Alarm/Trip Set Points: No Alarms

NID Power Cutoff Level: N/A  
NID Power Cut-On Level: N/A  
Instrument Failure Mode: LOW  
Temperature Compensation: N  
Level Reference Leg: N/A  
Unique System Desc:

ERDS Point Number: 59      WIND DIR      MET004      Wind Direction - Upper Level

Date: 5/30/96  
Reactor Unit: SE2  
Data Feeder: 1  
NRC ERDS Parameter: WIND DIR  
Point ID: MET004  
Plant Specific Point Desc: 91M VECTOR WIND DIR (15 MIN AVG)  
Generic Cond Desc: Wind Direction - Upper Level

Analog/Digital: A  
Engr Units/Dig States: DEG  
Engr Units Conversion: N/A  
Minimum Instr Range: 0  
Maximum Instr Range: 360  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SENS: S  
Number of Sensors: 1  
How Processed: N/A  
Sensor Locations: At the 91 Meter Level of the Met Tower  
Alarm/Trip Set Points: No Alarms

NID Power Cutoff Level: N/A  
NID Power Cut-On Level: N/A  
Instrument Failure Mode: LOW  
Temperature Compensation: N  
Level Reference Leg: N/A  
Unique System Desc:

ERDS Point Number: 60    WIND DIR    MET005    Wind Direction - Intermed. Level

Date: 5/30/96  
Reactor Unit: SE2  
Data Feeder: 1  
NRC ERDS Parameter: WIND DIR  
Point ID: MET005  
Plant Specific Point Desc: 46M VECTOR WIND DIR (15 MIN AVG)  
Generic Cond Desc: Wind Direction - Intermed. Level

Analog/Digital: A  
Engr Units/Dig States: DEG  
Engr Units Conversion: N/A  
Minimum Instr Range: 0  
Maximum Instr Range: 360  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SENS: S  
Number of Sensors: 1  
How Processed: N/A  
Sensor Locations: At the 46 Meter Level of the Met Tower  
Alarm/Trip Set Points: No Alarms

NID Power Cutoff Level: N/A  
NID Power Cut-On Level: N/A  
Instrument Failure Mode: LOW  
Temperature Compensation: N  
Level Reference Leg: N/A  
Unique System Desc:

ERDS Point Number: 61      WIND DIR      MET006      Wind Direction - Lower Level

Date: 5/30/96  
Reactor Unit: SE2  
Data Feeder: 1  
NRC ERDS Parameter: WIND DIR  
Point ID: MET006  
Plant Specific Point Desc: 10M VECTOR WIND DIR (15 MIN AVG)  
Generic Cond Desc: Wind Direction - Lower Level

Analog/Digital: A  
Engr Units/Dig States: DEG  
Engr Units Conversion: N/A  
Minimum Instr Range: 0  
Maximum Instr Range: 360  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SENS: S  
Number of Sensors: 1  
How Processed: N/A  
Sensor Locations: At the 10 Meter Level of the Met Tower  
Alarm/Trip Set Points: No Alarms

NID Power Cutoff Level: N/A  
NID Power Cut-On Level: N/A  
Instrument Failure Mode: LOW  
Temperature Compensation: N  
Level Reference Leg: N/A  
Unique System Desc:

ERDS Point Number: 62      STAB CLASS      MET007      Air Stability - Upper

Date: 5/30/96  
 Reactor Unit: SE2  
 Data Feeder: 1  
 NRC ERDS Parameter: STAB CLASS  
 Point ID: MET007  
 Plant Specific Point Desc: Stability Class Upper  
 Generic Cond Desc: Air Stability - Upper

Analog/Digital: A  
 Engr Units/Dig States: STABA  
 Engr Units Conversion: See Below  
 Minimum Instr Range: See Below  
 Maximum Instr Range: See Below  
 Zero Point Reference: N/A  
 Reference Point Notes: N/A

PROC or SENS: P  
 Number of Sensors: 2  
 How Processed: See Below  
 Sensor Locations: Met Tower  
 Alarm/Trip Set Points: No Alarms

NID Power Cutoff Level: N/A  
 NID Power Cut-On Level: N/A  
 Instrument Failure Mode: LOW  
 Temperature Compensation: N  
 Level Reference Leg: N/A  
 Unique System Desc: Differential Temperature Upper-Lower (deg C)

Difference		Stability Class	Point Value
>	<=		
	-1.9	A	1
-1.9	-1.7	B	2
-1.7	-1.5	C	3
-1.5	-0.5	D	4
-0.5	1.5	E	5
1.5	4.0	F	6
4.0		G	7

ERDS Point Number: 63    STAB CLASS    MET008    Air Stability - Intermediate

Date: 5/30/96  
 Reactor Unit: SE2  
 Data Feeder: 1  
 NRC ERDS Parameter: STAB CLASS  
 Point ID: MET008  
 Plant Specific Point Desc: Stability Class intermediate  
 Generic Cond Desc: Air Stability - Intermediate

Analog/Digital: A  
 Engr Units/Dig States: STABA  
 Engr Units Conversion: See Below  
 Minimum Instr Range: See Below  
 Maximum Instr Range: See Below  
 Zero Point Reference: N/A  
 Reference Point Notes: N/A

PROC or SENS: P  
 Number of Sensors: 2  
 How Processed: See Below  
 Sensor Locations: Met Tower  
 Alarm/Trip Set Points: No Alarms

NID Power Cutoff Level: N/A  
 NID Power Cut-On Level: N/A  
 Instrument Failure Mode: LOW  
 Temperature Compensation: N  
 Level Reference Leg: N/A

Unique System Desc: Differential Temperature Upper-Intermediate (deg C)

Difference	Stability Class	Point Value
>	<=	
-1.9	A	1
-1.9 -1.7	B	2
-1.7 -1.5	C	3
-1.5 -0.5	D	4
-0.5 1.5	E	5
1.5 4.0	F	6
4.0	G	7

ERDS Point Number: 64    STAB CLASS    MET009    Air Stability - Lower

Date: 5/30/96  
 Reactor Unit: SE2  
 Data Feeder: 1  
 NRC ERDS Parameter: STAB CLASS  
 Point ID: MET009  
 Plant Specific Point Desc: Stability Class Lower  
 Generic Cond Desc: Air Stability - Lower

Analog/Digital: A  
 Engr Units/Dig States: STABA  
 Engr Units Conversion: See Below  
 Minimum Instr Range: See Below  
 Maximum Instr Range: See Below  
 Zero Point Reference: N/A  
 Reference Point Notes: N/A

PROC or SENS: P  
 Number of Sensors: 2  
 How Processed: See Below  
 Sensor Locations: Met Tower  
 Alarm/Trip Set Points: No Alarms

NID Power Cutoff Level: N/A  
 NID Power Cut-On Level: N/A  
 Instrument Failure Mode: LOW  
 Temperature Compensation: N  
 Level Reference Leg: N/A  
 Unique System Desc: Differential Temperature Intermediate-Lower (deg C)

Difference		Stability Class	Point Value
>	<=		
	-1.9	A	1
-1.9	-1.7	B	2
-1.7	-1.5	C	3
-1.5	-0.5	D	4
-0.5	1.5	E	5
1.5	4.0	F	6
4.0		G	7



ERDS Point Number: 65    SG LEVEL 1/A    2L0403A    Steam Gen 1 Wide Range Water Lev

Date: 5/30/96  
Reactor Unit: SE2  
Data Feeder: 1  
NRC ERDS Parameter: SG LEVEL 1/A  
Point ID: 2L0403A  
Plant Specific Point Desc: SG #1 WIDE RANGE LEVEL  
Generic Cond Desc: Steam Gen 1 Wide Range Water Lev

Analog/Digital: A  
Engr Units/Dig States: % LEVEL  
Engr Units Conversion: 1% = 5.7"  
Minimum Instr Range: 0.0  
Maximum Instr Range: 100.0  
Zero Point Reference: LOWTAP  
Reference Point Notes: See Below

PROC or SENS: S  
Number of Sensors: 1  
How Processed: N/A  
Sensor Locations: See Below  
Alarm/Trip Set Points: Low at 0%, High at 100%

NID Power Cutoff Level: N/A  
NID Power Cut-On Level: N/A  
Instrument Failure Mode: Sensor Out Low  
Temperature Compensation: N

Level Reference Leg: WET

Unique System Desc: LT is calibrated for design operating conditions. 0% corresponds to lower tap on SG located just above tube plate. 100% corresponds to the upper tap which is 170" above the top of "U" tubes. Top of "U" tubes is approximately 70% level.  
Input from 2-LT-3-43.



ERDS Point Number: 66    SG LEVEL 2/B    2L0423A    Steam Gen 2 Wide Range Water Lev

Date: 5/30/96  
Reactor Unit: SE2  
Data Feeder: 1  
NRC ERDS Parameter: SG LEVEL 2/B  
Point ID: 2L0423A  
Plant Specific Point Desc: SG #2 WIDE RANGE LEVEL  
Generic Cond Desc: Steam Gen 2 Wide Range Water Lev

Analog/Digital: A  
Engr Units/Dig States: % LEVEL  
Engr Units Conversion: 1% = 5.7"  
Minimum Instr Range: 0.0  
Maximum Instr Range: 100.0  
Zero Point Reference: LOWTAP  
Reference Point Notes: See Below

PROC or SENS: S  
Number of Sensors: 1  
How Processed: N/A  
Sensor Locations: See Below  
Alarm/Trip Set Points: Low at 0%, High at 100%

NID Power Cutoff Level: N/A  
NID Power Cut-On Level: N/A  
Instrument Failure Mode: Sensor Out Low  
Temperature Compensation: N  
Level Reference Leg: WET  
Unique System Desc: LT is calibrated for design operating conditions. 0% corresponds to lower tap on SG located just above tube plate. 100% corresponds to the upper tap which is 170" above the top of "U" tubes: Top of "U" tubes is approximately 70% level.  
Input from 2-LT-3-56.

ERDS Point Number: 67    SG LEVEL 3/C    2L0443A    Steam Gen 3 Wide Range Water Lev

Date: 5/30/96  
Reactor Unit: SE2  
Data Feeder: 1  
NRC ERDS Parameter: SG LEVEL 3/C  
Point ID: 2L0443A  
Plant Specific Point Desc: SG #3 WIDE RANGE LEVEL  
Generic Cond Desc: Steam Gen 3 Wide Range Water Lev

Analog/Digital: A  
Engr Units/Dig States: % LEVEL  
Engr Units Conversion: 1% = 5.7"  
Minimum Instr Range: 0.0  
Maximum Instr Range: 100.0  
Zero Point Reference: LOWTAP  
Reference Point Notes: See Below

PROC or SENS: S  
Number of Sensors: 1  
How Processed: N/A  
Sensor Locations: See Below  
Alarm/Trip Set Points: Low at 0%, High at 100%

NID Power Cutoff Level: N/A  
NID Power Cut-On Level: N/A  
Instrument Failure Mode: Sensor Out Low  
Temperature Compensation: N

Level Reference Leg: WET

Unique System Desc: LT is calibrated for design operating conditions. 0% corresponds to lower tap on SG located just above tube plate. 100% corresponds to the upper tap which is 170" above the top of "U" tubes. Top of "U" tubes is approximately 70% level.  
Input from 2-LT-3-98.

ERDS Point Number: 68    SG LEVEL 4/D    2L0463A    Steam Gen 4 Wide Range Water Lev

Date: 5/30/96  
Reactor Unit: SE2  
Data Feeder: 1  
NRC ERDS Parameter: SG LEVEL 4/D  
Point ID: 2L0463A  
Plant Specific Point Desc: SG #4 WIDE RANGE LEVEL  
Generic Cond Desc: Steam Gen 4 Wide Range Water Lev

Analog/Digital: A  
Engr Units/Dig States: % LEVEL  
Engr Units Conversion: 1% = 5.7"  
Minimum Instr Range: 0.0  
Maximum Instr Range: 100.0  
Zero Point Reference: LOWTAP  
Reference Point Notes: See Below

PROC or SENS: S  
Number of Sensors: 1  
How Processed: N/A  
Sensor Locations: See Below  
Alarm/Trip Set Points: Low at 0%, High at 100%

NID Power Cutoff Level: N/A  
NID Power Cut-On Level: N/A  
Instrument Failure Mode: Sensor Out Low  
Temperature Compensation: N

Level Reference Leg: WET

Unique System Desc: LT is calibrated for design operating conditions. 0% corresponds to lower tap on SG located just above tube plate. 100% corresponds to the upper tap which is 170" above the top of "U" tubes. Top of "U" tubes is approximately 70% level.  
Input from 2-LT-3-111.

ERDS Point Number: 69 NL

2PA003

Total RCS Flow

Date: 5/30/96

Reactor Unit: SE2

Data Feeder: 1

NRC ERDS Parameter: NL

Point ID: 2PA003

Plant Specific Point Desc: TOTAL REACTOR COOLANT FLOW

Generic Cond Desc: Total RCS Flow

Analog/Digital: A

Engr Units/Dig States: % FLOW

Engr Units Conversion: N/A

Minimum Instr Range: 0.0

Maximum Instr Range: 110.0

Zero Point Reference: N/A

Reference Point Notes: See Below

PROC or SENS: P

Number of Sensors: 4

How Processed: Average

Sensor Locations: RCS Flow loops 1-4

Alarm/Trip Set Points: No Alarms

NID Power Cutoff Level: N/A

NID Power Cut-On Level: N/A

Instrument Failure Mode: Out of Range

Temperature Compensation: N

Level Reference Leg: N/A

Unique System Desc: This point is generated from an Average of 2-FT-68-6A, -29A, -48A, -71A. Input from Point ID's 2F0400A, 2F0420A, 2F0440A, and 2F0460A. Design Flow = 138 MLB/HR per Loop.