



Tennessee Valley Authority, 1101 Market Street, Chattanooga, Tennessee 37402

December 4, 1992

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

Gentlemen:

In the Matter of  
Tennessee Valley Authority

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Docket No. 50-327  
50-328

EMERGENCY RESPONSE DATA SYSTEM (ERDS) - DATA POINT LIBRARY

Enclosed is TVA's updated Data Point Library for Sequoyah Nuclear Plant Units 1 and 2. This update supplies the additional information requested by the NRC ERDS Project Manager.

If you have any questions, please telephone S. W. Spencer at (615) 751-4778.

Sincerely,

Mark J. Burzynski  
Manager  
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Enclosure  
cc: See page 2

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SEQUOYAH UNIT 1 - ERDS DATA POINT LIBRARY

	SIMULATION	INDICATES REAL OR SIMULATED DATA
1. NI POWER RNG	UN2000	POWER RNG AVG
2. NI INTER RNG	UN1015	INTER RNG FLUX (LOG)
3. NI SOURC RNG	UN1014	Source Range Flux (Log)
4. REAC VES LEV	UL6000	RVLIS LOWER RANGE AVERAGE
5. TEMP CORE EX	UT1003	CORE EXIT TEMP MAX
6. SUB MARGIN	UT1005	MIN SUBCOOL
7. SG LEVEL 1/A	UL1001	SG 1 NR LEVEL AVG
8. SG LEVEL 2/B	UL1002	SG 2 NR LEVEL AVG
9. SG LEVEL 3/C	UL1003	SG 3 NR LEVEL AVG
10. SG LEVEL 4/D	UL1004	SG 4 NR LEVEL AVG
11. SG PRESS 1/A	UP1002	SG 1 MS PRESSURE AVG
12. SG PRESS 2/B	UP1003	SG 2 MS PRESSURE AVG
13. SG PRESS 3/C	UP1004	SG 3 MS PRESSURE AVG
14. SG PRESS 4/D	UP1005	SG 4 MS PRESSURE AVG
15. MN FD FL 1/A	UF1000	SG 1 FW FLOW AVG
16. MN FD FL 2/B	UF1001	SG 2 FW FLOW AVG
17. MN FD FL 3/C	UF1002	SG 3 FW FLOW AVG
18. MN FD FL 4/D	UF1003	SG 4 FW FLOW AVG
19. AX FW FL 1/A	1-FM3-163B	STM GEN 1 AFW INLET FLOW
20. AX FW FL 2/B	1-FM3-155B	STM GEN 2 AFW INLET FLOW
21. AX FW FL 3/C	1-FM3-147B	STM GEN 3 AFW INLET FLOW
22. AX FW FL 4/D	1-FM3-170B	STM GEN 4 AFW INLET FLOW
23. HL TEMP 1/A	1-TM68-1B	LP 1 HL WID RNG TEMP
24. HL TEMP 2/B	1-TM68-24B	LP 2 HL WID RNG TEMP
25. HL TEMP 3/C	1-TM68-43B	LP 3 HL WID RNG TEMP
26. HL TEMP 4/D	1-TM68-65B	LP 4 HL WID RNG TEMP
27. CL TEMP 1/A	1-TE68-18	LP 1 CL WID RNG TEMP
28. CL TEMP 2/B	1-TE68-41	LP 2 CL WID RNG TEMP
29. CL TEMP 3/C	1-TE68-60	LP 3 CL WID RNG TEMP
30. CL TEMP 4/D	1-TE68-83	LP 4 CL WID RNG TEMP
31. RCS PRESSURE	OP1000	RCS WIDE RNG PRESS AVG
32. PRZR LEVEL	UL1005	PRZR LEV AVG
33. RCS CHG/MU	UF1016	NET CHG FLO
34. HP SI FLOW	UF1010	SI FLOW TOTAL
35. LP SI FLOW	UF1011	RHR COLD LEG TOTAL FLOW
36. CNTMT SUMP WR	UL1011	CNTMT SUMP LEV AVG
37. EFF GAS RAD	1-RM90-400	Unit 1 Shield Bldg Release Rate
38. EFF GAS RAD	2-RM90-400	Unit 2 Shield Bldg Release Rate
39. EFF LIQ RAD	Q-RE90-122	WDS Liquid Effluent
40. COND A/E RAD	UR1006	Low Range COND VAC PUMP AIR EXH RAD MON
41. COND A/E RAD	UR1007	Mid Rng COND VAC PUMP AIR EXH RAD MON
42. COND A/E RAD	UR1008	High Rng COND VAC PUMP AIR EXH RAD MON
43. CNTMT RAD	UR6021	UPPER CONTAINMENT RADIATION
44. CNTMT RAD	UR6022	LOWER CONTAINMENT RADIATION
45. MAIN SL 1/A	UR1001	MN STEAM LINE 1 RAD LEV
46. MAIN SL 2/B	UR1002	MN STEAM LINE 2 RAD LEV
47. MAIN SL 3/C	UR1003	MN STEAM LINE 3 RAD LEV
48. MAIN SL 4/D	UR1004	MN STEAM LINE 4 RAD LEV
49. SG BD RAD 1A	1-RE90-120	Steam Generator Blowdown Liquid Monitor
50. SG BD RAD 2B	1-RE90-121	Steam Generator Blowdown Liquid Monitor
51. CTMNT PRESS	UP6000	CNTMT PRESSURE AVERAGE
52. CTMNT TEMP	UT1004	CONTAINMENT TEMP MAX DEV
53. H2 CONC	UY1005	H2 CONC AVG
54. RWST LEVEL	UL1000	RWST LEVEL
55. WIND SPEED	MET001	91M VECTOR WIND SPEED (15 MIN AVG)
56. WIND SPEED	MET002	46M VECTOR WIND SPEED (15 MIN AVG)
57. WIND SPEED	MET003	10M VECTOR WIND SPEED (15 MIN AVG)
58. WIND DIR	MET004	91M VECTOR WIND DIR (15 MIN AVG)
59. WIND DIR	MET005	46M VECTOR WIND DIR (15 MIN AVG)
60. WIND DIR	MET006	10M VECTOR WIND DIR (15 MIN AVG)
61. STAB CLASS	MET007	Stability Class Upper
62. STAB CLASS	MET008	Stability Class Intermediate
63. STAB CLASS	MET009	Stability Class Lower

65.	SG LEVEL 1/A	1-LT3-43	SG 1 WIDE RNG LEVEL
66.	SG LEVEL 2/B	1-LT3-56	SG 2 WIDE RNG LEVEL
67.	SG LEVEL 3/C	1-LT3-98	SG 3 WIDE RNG LEVEL
68.	SG LEVEL 4/D	1-LT3-111	SG 4 WIDE RNG LEVEL



ERDS point number 1.

SIMULATION

REAL/SIMULATED DATA

Date: 06/09/92

Reactor Unit: SE1

Data feeder: 1

NRC ERDS Parameter:

Point ID: SIMULATION

Plant Spec 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      UN2000      Reactor Power

Date: 12/02/91  
Reactor Unit: SE1  
Data feeder: 1  
NRC ERDS Parameter: NI POWER RNG  
Point ID: UN2000  
Plant Spec Point Desc: POWER RNG AVG  
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%      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: From TSC Upper & Lower detection inputs for  
1-NE92-41,42,43,44.

ERDS point number 3.      NI INTER RNG      UN1015      Reactor Power - Intermediate Rng

Date: 12/02/91  
Reactor Unit: SE1  
Data feeder: 1  
NRC ERDS parameter: NI INTER RNG  
Point ID: UN1015  
Plant Spec Point Desc: INTER RNG FLUX (LOG)  
Generic/Cond Desc: Reactor Power - Intermediate Rng

Analog/Digital: A  
Engr Units/Dig States: LOGPC  
Engr Units Conversion:  $OUTPUT(V) = [LOG(\%Power)] + 8$   
Minimum Instr Range: -8  
Maximum Instr Range: 2.301  
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)

ERDS point number 4. NI SOURC RNG UN1014 Reactor Power - Source Range

Date: 12/02/91  
Reactor Unit: SE1  
Data feeder: 1  
NRC ERDS Parameter: NI SOURC RNG  
Point ID: UN1014  
Plant Spec Point Desc: Source Range Flux (Log)  
Generic/Cond Desc: Reactor Power - Source Range

Analog/Digital: A  
Engr Units/Dig States: CPS  
Engr Units Conversion:  $OUTPUT(V) = [Log(CPS)] * 1.667$   
Minimum Instr Range: 10E0  
Maximum Instr Range: 10E6  
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

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)

ERDS point number 5. REAC VES LEV UL6000 Reactor Vessel Water Level

Date: 12/02/91  
Reactor Unit: SE1  
Data feeder: 1  
NRC ERDS Parameter: REAC VES LEV  
Point ID: UL6000  
Plant Spec 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 Rv 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 1-LM-68-368E and -371E. Top of core =61.7%.



ERDS point number 6. TEMP CORE EX UT1003 Highest Core Exit Temperature

Date: 12/02/91  
Reactor Unit: SE1  
Data feeder: 1  
NRC ERDS Parameter: TEMP CORE EX  
Point ID: UT1003  
Plant Spec 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  
Maximum Instr Range: 700  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SENS: P  
Number of Sensors: 59  
How Processed: HIGHEST  
Sensor Locations: Throughout core  
Alarm/Trip Set Points: High at 700 DEGF Low at 0 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 elements with one TC inoperable. The numeric is the higher of 1-XM-94-103-69 and 1-XM-94-103-75.

ERDS point number 7.      SUB MARGIN      UT1005      Saturation Temp. - Highest CET

Date: 12/02/91  
Reactor Unit: SE1  
Data feeder: 1  
NRC ERDS Parameter: SUB MARGIN  
Point ID: UT1005  
Plant Spec 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: 0  
Maximum Instr Range: 700  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SENS: P  
Number of Sensors: 59  
How Processed: Highest  
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  
TC with one TC inoperable.

ERDS point number 8. SG LEVEL 1/A UL1001 Steam Generator 1 Water Level

Date: 12/02/91  
Reactor Unit: SE1  
Data feeder: 1  
NRC ERDS Parameter: SG LEVEL 1/A  
Point ID: UL1001  
Plant Spec Point Desc: SG 1 NR LEVEL AVG  
Generic/Cond Desc: Steam Generator 1 Water Level

Analog/Digital: A  
Engr Units/Dig States: %  
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: 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 Tag: WET

Unique System Desc: Steam Generator #1 Water Level. Average of 1-LT-3-39 and -42  
0-100% span on SG narrow range level transmitters correspond to 75-100% span on the 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.

ERDS point number 9. SG LEVEL 2/B UL1002 Steam Generator 2 Water Level

Date: 12/02/91  
Reactor Unit: SE1  
Data feeder: 1  
NRC ERDS Parameter: SG LEVEL 2/B  
Point ID: UL1002  
Plant Spec Point Desc: SG 2 NR LEVEL AVG  
Generic/Cond Desc: Steam Generator 2 Water Level

Analog/Digital: A  
Engr Units/Dig States: %  
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: 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 1-LT-3-52 and -55  
0-100% span on SG narrow range level transmitters corres-  
pond to 75-100% span on the 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.

ERDS point number 10.

SG LEVEL 3/C

UL1003

Steam Generator 3 Water Level

Date: 12/02/91  
Reactor Unit: SE1  
Data feeder: 1  
NRC ERDS Parameter: SG LEVEL 3/C  
Point ID: UL1003  
Plant Spec Point Desc: SG 3 NR LEVEL AVG  
Generic/Cond Desc: Steam Generator 3 Water Level

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

PROC or SENS: P  
Number of Sensors: 2  
How Processed: AVERAGE  
Sensor Locations: 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 #3 Water Level. Average of 1-LT-3-94 and -97  
0-100% span on LG narrow range level transmitters correspond to 75-100% span on the 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.



ERDS point number 11.

SG LEVEL 4/D

UL1004

Steam Generator 4 Water Level

Date: 12/02/91  
Reactor Unit: SE1  
Data feeder: 1  
NRC ERDS Parameter: SG LEVEL 4/D  
Point ID: UL1004  
Plant Spec Point Desc: SG 4 NR LEVEL AVG  
Generic/Cond Desc: Steam Generator 4 Water Level

Analog/Digital: A  
Engr Units/Dig States: %  
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: 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

Uniq. & System Desc: Steam Generator #4 Water Level. Average of 1-LT-3-107 and -110. 0-100% span on SG narrow range level transmitters corresponds to 75-100% span on the 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.

ERDS point number 12.

SG PRESS 1/A

UP1002

Steam Generator 1 Pressure

Date: 12/02/91  
Reactor Unit: SE1  
Data feeder: 1  
NRC ERDS Parameter: SG PRESS 1/A  
Point ID: UP1002  
Plant Spec 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 600 PSIG, High at 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 1-PT-1-2A and 1-PT-1-2B.

ERDS point number 13.

SG PRESS 2/B

UP1003

Steam Generator 2 Pressure

Date: 12/02/91  
Reactor Unit: SE1  
Data feeder: 1  
NRC ERDS Parameter: SG PRESS 2/B  
Point ID: UP1003  
Plant Spec 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 600 PSIG, High at 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 1-PT-1-9A and 1-PT-1-9B.

ERDS point number 14.      SG PRESS 3/C      UP1004      Steam Generator 3 Pressure

Date: 12/02/91  
Reactor Unit: SE1  
Data feeder: 1  
NRC ERDS Parameter: SG PRESS 3/C  
Point ID: UP1004  
Plant Spec 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 Location: Remote Location in East Valve Room  
Alarm/Trip Set Points: Low at 600 PSIG, High at 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 1-PT-1-20A and 1-PT-1-20B.

ERDS point number 15.      SG PRESS 4/D      UP1005      Steam Generator 4 Pressure

Date: 12/02/91  
Reactor Unit: SE1  
Data feeder: 1  
NRC ERDS Parameter: SG PRESS 4/D  
Point ID: UP1005  
Plant Spec 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 600 PSIG, High at 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 1-PT-1-27A and 1-PT-1-27B.



ERDS point number 16.

MN FD FL 1/A

UF1000

Stm Gen 1 Main Feedwater Flow

Date: 12/02/91  
Reactor Unit: SE1  
Data file: 1  
NRC ERDS Parameter: MN FD FL 1/A  
Point ID: UF1000  
Plant Spec Point Desc: SG 1 FW FLOW AVG  
Generic/Cond Desc: Stm Gen 1 Main Feedwater Flow  
  
Analog/Digital: A  
Engr Units/Dig Scale: KBH  
Engr Units Conversion: N/A  
Minimum Instr Range: 0  
Maximum Instr Range: 4500  
Zero Point Reference: N/A  
Reference Point Notes: N/A  
  
PROC or SENS: P  
Number of Sensors: 2  
How Processed: AVERAGE  
Sensor Locations: Stm Gen FW Line 1, Aux. Bldg  
Alarm/Trip Set Points: High at 4500 KBH Low at 0 KBH  
  
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 1-Ft-3-35A and 1-Ft-3-35b.

ERDS point number 17.      MN FD FL 2/B      UF1001      Stm Gen 2 Main Feedwater Flow

Date: 12/02/91  
Reactor Unit: SE1  
Data feeder: 1  
NRC ERDS Parameter: MN FD FL 2/B  
Point ID: UF1001  
Plant Spec Point Desc: SG 2 FW FLOW AVG  
Generic/Cond Desc: Stm Gen 2 Main Feedwater Flow

Analog/Digital: A  
Engr Units/Dig States: KBH  
Engr Units Conversion: N/A  
Minimum Instr Range: 0  
Maximum Instr Range: 4500  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SENS: P  
Number of Sensors: 2  
How Processed: AVERAGE  
Sensor Locations: Stm Gen FW Line 2, Aux. Bldg  
Alarm/Trip Set Points: High at 4500 KBH      Low at 0 KBH

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 1-FT-3-46A and 1-FT-3-48B.

ERDS point number 18. MN FD FL 3/C UF1002 Stm Gen 3 Main Feedwater Flow

Date: 12/02/91  
Reach/Unit: SE1  
Data feeder: 1  
NRC ERDS Parameter: MN FD FL 3/C  
Point ID: UF1002  
Plant Spec Point Desc: SG 3 FW FLOW AVG  
Generic/Cond Desc: Stm Gen 3 Main Feedwater Flow

Analog/Digital: A  
Engr Units/Dig States: KBH  
Engr Units Conversion: N/A  
Minimum Instr Range: 0  
Maximum Instr Range: 4500  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SENS: P  
Number of Sensors: 2  
How Processed: AVERAGE  
Sensor Locations: Stm Gen FW Line 3, Aux. Bldg  
Alarm/Trip Set Points: High at 4500 KBH Low at 0 KBH

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 1-FT-3-90A and 1-FT-3-90B.

ERDS point number 19.

MN FD FL 4/D

UF1003

Stm Gen 4 Main Feedwater Flow

Date: 12/02/91  
Reactor Unit: SE1  
Data feeder: 1  
NRC ERDS Parameter: MN FD FL 4/D  
Point ID: UF1003  
Plant Spec Point Desc: SG 4 FW FLOW AVG  
Generic/Cond Desc: Stm Gen 4 Main Feedwater Flow

Analog/Digital: A  
Engr Units/Dig States: KBH  
Engr Units Conversion: N/A  
Minimum Instr Range: 0  
Maximum Instr Range: 4500  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SENS: P  
Number of Sensors: 2  
How Processed: AVERAGE  
Sensor Locations: Stm Gen FW Line 4, Aux. Bldg  
Alarm/Trip Set Points: High at 4500 KBH Low at 0 KBH

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: YET

Unique System Desc: Steam Generator 4 Main Feedwater Flow. Average of  
1-FT-3-103A and 1-FT-3-103B.

ERDS point number 20.      AX FW FL 1/A      1-FM3-163B      Stm Gen 1 Auxiliary FW Flow

Date: 05/20/92  
Reactor Unit: SE1  
Data feeder: 1  
NRC ERDS Parameter: AX FW FL 1/A  
Point ID: 1-FM3-163B  
Plant Spec Point Desc: STM GEN 1 AFW INLET FLOW  
General/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  
Minimum Instr Range: 0  
Maximum Instr Range: 440  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SENS: S  
Number of Sensors: 1  
How Processed: N/A  
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.



ERDS point number 21.      AX FW FL 2/B      1-FM3-155B      Stm Gen 2 Auxiliary FW Flow

Date: 05/20/92  
Reactor Unit: SE1  
Data feeder: 1  
NRC ERDS Parameter: AX FW FL 2/B  
Point ID: 1-FM3-155B  
Plant Spec Point Desc: STM GEN 2 INLET 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  
Minimum Instr Range: 0  
Maximum Instr Range: 440  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SENS: S  
Number of Sensors: 1  
How Processed: N/A  
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.

ERDS point number 22.      AX FW FL 3/C      1-FM3-147B      Stm Gen 3 Auxiliary FW Flow

Date: 05/20/92  
Reactor Unit: SE1  
Data feeder: 1  
NRC ERDS Parameter: AX FW FL 3/C  
Point ID: 1-FM3-147B  
Plant Spec Point Desc: STM GEN 3 AFW INLET FLOW  
Generic/Cond Desc: Stm Gen 3 Auxiliary FW Flow

Analogue/Digital: A  
Engr Units/Dig States: GPM  
Engr Units Conversion: 1-5 VDC=0-440 GPM  
Minimum Instr Range: 0  
Maximum Instr Range: 440  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SENS: S  
Number of Sensors: 1  
How Processed: N/A  
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.

ERDS point number 23.      AX FW FL 4/D      1-FM3-170B      Stm Gen 4 Auxiliary FW Flow

Date: 05/20/92  
Reactor Unit: SE1  
Data feeder: 1  
NRC ERDS Parameter: AX FW FL 4/D  
Point ID: 1-FM3-170B  
Plant Spec Point Desc: STM GEN 4 AFW INLET 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  
Minimum Instr Range: 0  
Maximum Instr Range: 440  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SENS: S  
Number of Sensors: 1  
How Processed: N/A  
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.

ERDS point number 24.      HL TEMP 1/A      1-TM68-1B      Stm Gen 1 Inlet Temperature

Date: 05/20/92  
Reactor Unit: SE1  
Data feeder: 1  
NRC ERDS Parameter: HL TEMP 1/A  
Point ID: 1-TM68-1B  
Plant Spec Point Desc: LP 1 HL WID RNG 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-off 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.

ERDS point number 25.      HL TEMP 2/B      1-TM68-24B      Stm Gen 2 Inlet Temperature

Date: 05/20/92  
Reactor Unit: SE1  
Data feeder: 1  
NRC ERDS Parameter: HL TEMP 2/B  
Point ID: 1-TM68-24B  
Plant Spec Point Desc: LP 2 HL WID RNG 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.

ERDS point number 26.      HL TEMP 3/C      1-TM68-43B      Stm Gen 3 Inlet Temperature

Date: 05/20/92  
Reactor Unit: SE1  
Data feeder: 1  
NRC ERDS Parameter: HL TEMP 3/C  
Point ID: 1-TM68-43B  
Plant Spec Point Desc: LP 3 HL WID RNG 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.



ERDS point number 27.      HL TEMP 4/D      1-TM68-65B      Stm Gen 4 Inlet Temperature

Date: 05/20/92  
Reactor Unit: SE1  
Data feeder: 1  
NRC ERDS Parameter: HL TEMP 4/D  
Point ID: 1-TM68-65B  
Plant Spec Point Desc: LP 4 HL WID RNG 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 temp. indication is also used to control RCS pressure and temperature within required limits.

ERDS point number 28.      CL TEMP 1/A      1-TE68-18      Stm Gen 1 Outlet Temperature

Date: 05/20/92  
Reactor Unit: SE1  
Data feeder: 1  
NRC ERDS Parameter: CL TEMP 1/A  
Point ID: 1-TE68-18  
Plant Spec Point Desc: LP 1 CL WID RNG 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.

ERDS point number 29.      CL TEMP 2/B      1-TE68-41      Stm Gen 2 Outlet Temperature

Date: 05/20/92  
Reactor Unit: SE1  
Data feeder: 1  
NRC ERDS Parameter: CL TEMP 2/B  
Point ID: 1-TE68-41  
Plant Spec Point Desc: LP 2 CL WID RNG 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.

ERDS point number 30.      CL TEMP 3/C      1-TE68-60      Stm Gen 3 Outlet Temperature

Date: 05/20/92  
Reactor Unit: SE1  
Data feeder: 1  
NRC ERDS Parameter: CL TEMP 3/C  
Point ID: 1-TE68-60  
Plant Spec Point Desc: LP 3 CL WID RNG 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.

ERDS point number 31.      CL TEMP 4/D      1-TE68-83      Stm Gen 4 Outlet Temperature

Date: 05/20/92  
Reactor Unit: SE1  
Data feeder: 1  
NRC ERDS Parameter: CL TEMP 4/D  
Point ID: 1-TE68-83  
Plant Spec Point Desc: LP 4 CL WID RNG 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.

ERDS point number 32.      RCS PRESSURE      JP1000      Reactor Coolant System Pressure

Date: 05/21/92  
Reactor Unit: SE1  
Data feeder: 1  
NRC ERDS Parameter: RCS PRESSURE  
Point ID: JP1000  
Plant Spec Point Desc: RCS WIDE RNG PRESS AVG  
Generic/Cond Desc: Reactor Coolant System Pressure

Analog/Digital: A  
Engr Units/Dig States: PSIG  
Engr Units Conversion: 1-5 VDC=0-3000 PSIG  
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. (1-PT-68-62, -6 and -68) 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      UL1005      Primary System Pressurizer Level

Date: 05/21/92  
Reactor Unit: SE1  
Data feeder: 1  
NRC ERDS Parameter: PRZR LEVEL  
Point ID: UL1005  
Plant Spec Point Desc: PRZR LEV AVG  
Generic/Cond Desc: Primary System Pressurizer Level

Analog/Digital: A  
Engr Units/Dig States: %  
Engr Units Conversion: 61.6 gals/% at 552 Deg F and 2235 psia  
Minimum Instr Range: 0  
Maximum Instr Range: 100  
Zero Point Reference: Notes  
Reference Point Notes: Top of Heater = 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. (1-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 occur isolated at approximately 17% level.

ERDS point number 34.

RCS CHG/MU

UF1016

Primary System Charging / Makeup

Date: 05/21/92  
Reactor Unit: SE1  
Data feeder: 1  
NRC ERDS Parameter: RCS CHG/MU  
Point ID: UF1016  
Plant Spec 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: COP 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.

ERDS point number 35.      HP SI FLOW      UF1010      High Pressure Safety Inj. Flow

Date: 05/21/92  
Reactor Unit: SE1  
Data feeder: 1  
NRC ERDS Parameter: HP SI FLOW  
Point ID: UF1010  
Plant Spec 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 1-FT-63-20 and -151)

ERDS point number 37.

CNTMT SMP WR

UL1011

Containment Sump Wide Rng Lvl

Date: 05/20/92  
Reactor Unit: SE1  
Data feeder: 1  
NRC ERDS Parameter: CNTMT SMP WR  
Point ID: UL1011  
Plant Spec Point Desc: CNTMT SUMP LEV AVG  
Generic/Cond Desc: Containment Sump Wide Rng Lvl

Analog/Digital: A  
Engr Units/Dig States: 1  
Engr Units Conversion: 11=2.4 inches of water  
Minimum I-tr Range: 0  
Maximum I-tr 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. Gallons/% level varies with level in a nearly linear relationship. The transfer from RWST to containment sump setpoint is 11%, which is approximately 2.5 feet above containment floor elevation (78,000 gallons)

ERDS point number 38.      EFF GAS RAD      1-RM90-400      Release Rt of Radioactive Gases

Date: 12/02/91  
Reactor Unit: SE1  
Data feeder: 1  
NRC ERDS Paramete : EFF GAS RAD  
Point ID: 1-RM90-400  
Plant Spec 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  
Maximum Instr Range: 10E10 uCi/sec  
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.

ERDS point number 39.      EFF GAS RAD      2-RM90-400      Release Rt. of Radioactive Gases

Date: 12/02/91  
Reactor Unit: SE1  
Data feeder: 1  
NRC ERDS Parameter: EFF GAS RAD  
Point ID: 2-RM90-400  
Plant Spec Point Desc: Unit 2 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  
Maximum Instr Range: 10E10 uCi/sec  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SENS: P  
Number of Sensors: 3  
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.



ERDS point number 40.      EFF LIQ RAD      0-RE90-122      Radioactivity of Released Liquid

Date: 12/02/91  
Reactor Unit: SE1  
Data feeder: 1  
NRC ERDS Parameter: EFF LIQ RAD  
Point ID: 0-RE90-122  
Plant Spec Point Desc: WDS Liquid Effluent  
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  
Maximum Instr Range: 10E7 CPM  
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.

ERDS point number 41.

COND A/E RAD

UR1006

Cond Air Ejector Radioactivity

Date: 12/02/91  
Reactor Unit: SE1  
Data feeder: 1  
NRC ERDS Parameter: COND A/E RAD  
Point ID: UR1006  
Plant Spec Point Desc: Low Range 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  
Maximum Instr Range: .17E+39  
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: Condense Air Ejector Noble Gas Monitor  
This is one of three computer points needed to cover full range. This point uses inputs from 1-F<sup>m</sup>2-256 and 1-RE90-119 to compute dose rates.

ERDS point number 42.

COND A/E RAD

UR1007

Cond Air Ejector Radioactivity

Date: 12/02/91  
Reactor Unit: SE1  
Data feeder: 1  
NRC ERDS Parameter: COND A/E RAD  
Point ID: UR1007  
Plant Spec Point Desc: Mid 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  
Maximum Instr Range: .17E+39  
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  
ID 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 1-FT2-256 & 1-RE90-99 to compute dose rates.

ERDS point number 43.      COND A/E RAD      UR1008      Cond Air Ejector Radioactivity

Date: 12/02/91  
Reactor Unit: SE1  
Data feeder: 1  
NRC ERDS Parameter: COND A/E RAD  
Point ID: UR1008  
Plant Spec 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:  $-.17E+39$   
Maximum Instr Range:  $.17E+39$   
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 1-FT2-256 & 1-RE90-404B to compute dose rates.

ERDS point number 44.      CNTMNT RAD      UR6021      Containment Radiation Level

Date: 12/02/91  
Reactor Unit: SE1  
Data feeder: 1  
NRC ERDS Parameter: CNTMNT RAD  
Point ID: UR6021  
Plant Spec Point Desc: UPPER CONTAINMENT RADIATION  
Generic/Cond Desc: Containment Radiation Level

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

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

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 1-RE90-271 & 1-RE90-272.

ERDS point number 45.      CNTMNT RAD      UR6022      Lower Containment Radiation Lvl

Date: 12/02/91  
Reactor Unit: SE1  
Data feeder: 1  
NRC ERDS Parameter: CNTMNT RAD  
Point ID: UR6022  
Plant Spec Point Desc: LOWER CONTAINMENT RADIATION  
Generic/Cond Desc: Lower Containment Radiation Lvl

Analog/Digital: A  
Engr Units/Dig States: R/hour  
Engr Units Conversion: N/A  
Minimum Instr Range: 10E0 R/hour  
Maximum Instr Range: 10E8 R/hour  
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/hour

STD 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 Lag: N/A

Unique System Desc: Lower Containment High Range Area Monitor  
Inputs are 1-RE90-273 and 1-RE90-274.



ERDS point number 46.

MAIN SL 1/A

UR1001

Stm Gen 1 Steam Line Rad Level

Date: 12/02/91  
Reactor Unit: SE1  
Data feeder: 1  
NRC ERDS Parameter: MAIN SL 1/A  
Point ID: UR1001  
Plant Spec Point Desc: MN STEAM LINE 1 RAD LEV  
Generic/Cond Desc: Stm Gen 1 Steam Line Rad Level

Analog/Digital: A  
Engr Units/Dig States: uCi/sec  
Engr Units Conversion: N/A  
Minimum Instr Range:  $-1.17E+39$   
Maximum Instr Range:  $1.17E+39$   
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 #1 Radioactivity Monitor

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 1-RM-90-421)

ERDS point number 47.

MAIN SL 2/B

UR1002

Stm Gen 2 Steam Line Rad Level

Date: 12/02/91  
Reactor Unit: SE1  
Data feeder: 1  
NRC ERDS Parameter: MAIN SL 2/B  
Point ID: UR1002  
Plant Spec Point Desc: MN STEAM LINE 2 RAD LEV  
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:  $-1.17E+39$   
Maximum Instr Range:  $.17E+39$   
Zero Point Reference: N/A  
Reference Unit 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: 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. 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 1-RM-90-422)

ERDS point number 48.

MAIN SL 3/C

UR1003

3tm Gen 3 Steam Line Rad Level

Date: 12/02/91  
Reactor Unit: SE1  
Data feeder: 1  
NRC ERDS Parameter: MAIN SL 3/C  
Point ID: UR1003  
Plant Spec Point Desc: MN STEAM LINE 3 RAD LEV  
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:  $- .17E+39$   
Maximum Instr Range:  $.17E+39$   
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. 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 1-RM-90-423

ERDS point number 49.

MAIN SL 4/D

UR1004

Stm Gen 4 Steam Line Rad Level

Date: 12/02/91  
Reactor Unit: SE1  
Data feeder: 1  
NRC ERDS Parameter: MAIN SL 4/D  
Point ID: UR1004  
Plant Spec Point Desc: MN STEAM LINE 4 RAD LEV  
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:  $-1.17E+39$   
Maximum Instr Range:  $1.17E+39$   
Zero Point Reference: N/A  
Reference Point Notes: N/A

PFOC or SENS:  
Number of Sensors:  
How Processed: Sampled Totalized  
Sensor Locat: in Steam Line prior to ATM reliefs  
Alarm/Trip Set:  $5 * 10E-3$

NID power cut: A  
NID power cut: N/A  
Instrument Failure: 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. 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 1-RM-90-424

ERDS point number 50.      SG 2D RAD 1A      1-RE90-120      Stm Gen Header Blowdown Rad Lev1

Date: 12/02/91  
Reactor Unit: SE1  
Data feeder: 1  
NRC ERDS Parameter: SG BD RAD 1A  
Point ID: 1-RE90-120  
Plant Spec Point Desc: Steam Generator Blowdown Liquid Monitor  
Generic/Cond Desc: Stm Gen Header Blowdown Rad Lev1

Analog/Digital: A  
Engr Units/Dig States: CPM  
Engr Units Conversion: N/A  
Minimum Instr Range: 10E0 CPM  
Maximum Instr Range: 10E7 CPM  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SENS: S  
Number of Sensors: 1  
How Processed: Sum  
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.

ERDS point number 51.      SG BD 1. 2B      1-RE90-121      Stm Gen Header Blowdown Rad Lev

Date: 12/02/91  
Reactor Unit: SE1  
Data feeder: 1  
NRC ERDS Parameter: SG BD RAD 2B  
Point ID: 1-RE90-121  
Plant Spec Point Desc: Steam Generator Blowdown Liquid Monitor  
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  
Maximum Instr Range: 10E7 CPM  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SENS: S  
Number of Sensors: 1  
How Processed: Sum  
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.



ERDS point number 52.

CTMNT PRESS

UP6000

Containment Pressure

Date: 12/02/91  
Reactor Unit: SE1  
Data feeder: 1  
NRC ERDS Parameter: CTMNT PRESS  
Point ID: UP6000  
Plant Spec 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 - 2.01 PSIG High-High 12.0

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 1-PDT-30-44 and -45.



ERDS point number 53.

CTMNT TEMP

UT1004

Containment Temperature

Date: 12/02/91  
Reactor Unit: SE1  
Data feeder: 1  
NRC ERDS Parameter: CTMNT TEMP  
Point ID: UT1004  
Plant Spec Point Desc: CONTAINMENT TEMP MAX DEV  
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: 4  
How Processed: Maximum Value  
Sensor Locations: TE-212A, TE212B, TE212C & TE212D  
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: 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 1-TE-30-212A, -212B, -212C, or -212D.

ERDS point number 54.

H2 CONC

UY1005

Containment H2 Concentration

Date: 12/02/91  
Reactor Unit: SE1  
Data feeder: 1  
NRC ERDS Parameter: H2 CONC  
Point ID: UY1005  
Plant Spec Point Desc: H2 CONC AVG  
Generic/Cond Desc: Containment H2 Concentration

Analog/Digital: A  
Engr Units/Dig States: %  
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 1-H2AN43-200 and 1-H2AN43-210.

ERDS point number 55.

RWST LEVEL

UL1000

Refueling Water Storage Tank Lev

Date: 05/20/92  
Reactor Unit: SE1  
Data feeder: 1  
NRC ERDS Parameter: RWST LEVEL  
Point ID: UL1000  
Plant Spec Point Desc: RWST LEVEL  
Generic/Cond Desc: Refueling Water Storage Tank Lev

Analog/Digital: A  
Engr Units/Dig States: %  
Engr Units Conversion: 1% is 3500 Gals  
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 tnk below butt  
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. LT-63-50 and -51.

ERDS point number 56.      WIND SPEED      MET001      Wind Speed - Upper Level

Date: 12/02/91  
Reactor Unit: SE1  
Data feeder: 1  
NRC ERDS Parameter: WIND SPEED  
Point ID: MET001  
Plant Spec Point Desc: 91M VECTOR WIND SPEED (15 MIN AVT)  
Generic/Cond Desc: Wind Speed - Upper Level  
  
Analog/Digital: A  
Engr Units/Dig States: m/sec  
Engr Units Conversion:  
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:  
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:  
Level Reference Leg: N/A  
  
Unique System Desc:

ERDS point number 57.

WIND SPEED

MET002

Wind Speed - Intermediate Level

Date: 12/02/91  
Reactor Unit: SE1  
Data feeder: 1  
NRC ERDS Parameter: WIND SPEED  
Point ID: MET002  
Plant Spec 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:  
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:  
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:  
Level Reference Leg: N/A  
  
Unique System Desc:

ERDS point number 58.

WIND SPEED

MET003

Wind Speed - Lower Level

Date: 12/02/91  
Reactor Unit: SE1  
Data feeder: 1  
NRC ERDS Parameter: WIND SPEED  
Point ID: MET003  
Plant Spec 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:  
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:  
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:  
Level Reference Leg: N/A  
  
Unique System Desc:



ERDS point number 59.

WIND DIR

MET004

Wind Direction - Upper Level

Date: 12/02/91  
Reactor Unit: SE1  
Data feeder: 1  
NRC ERDS Parameter: WIND DIR  
Point ID: MET004  
Plant Spec 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:  
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:  
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:  
Level Reference Leg: N/A  
  
Unique System Desc:



ERDS point number 60.

WIND DIR

MET005

Wind Direction - Intermed. Level

Date: 12/02/91  
Reactor Unit: SE1  
Data feeder: 1  
NRC ERDS Parameter: WIND DIR  
Point ID: MET005  
Plant Spec 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:  
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:  
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:  
Level Reference Leg: N/A

Unique System Desc:

ERDS point number 61.

WIND DIR

MET006

Wind Direction - Lower Level

Date: 12/02/91  
Reactor Unit: SE1  
Data feeder: 1  
NRC ERDS Parameter: WIND DIR  
Point ID: MET006  
Plant Spec 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:  
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:  
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:  
Level Reference Leg: N/A

Unique System Desc:

ERDS point number 62.      STAB CLASS      MET007      Air Stability Upper

Date: 12/02/91  
 Reactor Unit: SE1  
 Data feeder: 1  
 NRC ERDS Parameter: STAB CLASS  
 Point ID: MET007  
 Plant Spec Point Desc: Stability Class Upper  
 Generic/Cond Desc: Air Stability Upper

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

PROC or SENS: P  
 Number of Sensors: 2  
 How Processed:  
 Sensor Locations:  
 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:  
 Level Reference Leg: N/A

Unique System Desc:		Differential Temperature Upper-Lower (deg C)	
	Difference	Stability Class	Point Value
	>	<=	
		-1.9	A
	-1.9	-1.7	B
	-1.7	-1.5	C
	-1.5	-0.5	D
	-0.5	1.5	E
	1.5	4.0	F
	4.0		G

ERDS point number 63.      STAB CLASS      MET008      Air Stability

Date: 12/02/91  
 Reactor Unit: SE1  
 Data feeder: 1  
 NRC ERDS Parameter: STAB CLASS  
 Point ID: MET008  
 Plant Spec Point Desc: Stability Class Intermediate  
 Generic/Cond Desc: Air Stability

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

PROC or SENS: P  
 Number of Sensors: 2  
 How Processed:  
 Sensor Locations:  
 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:  
 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

Date: 12/02/91  
 Reactor Unit: SE1  
 Data feeder: 1  
 NRC ERDS Parameter: STAB CLASS  
 Point ID: MET009  
 Plant Spec Point Desc: Stability Class Lower  
 Generic/Cond Desc: Air Stability

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

PROC or SENS: F  
 Number of Sensors: 2  
 How Processed:  
 Sensor Locations:  
 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:  
 Level Reference Leg: N/A

Unique System Desc:		Differential Temperature Intermediate-Lower (deg C)	Stability Class	Point Value
>	<=			
-1.9	-1.9		A	1
-1.7	-1.7		B	2
-1.5	-1.5		C	3
-0.5	-0.5		D	4
1.5	1.5		E	5
4.0	4.0		F	6
			G	7

ERDS point number 65.

SG LEVEL 1/A

1-LT3-43

Steam Gen 1 Wide Range Water Lev

Date: 11/05/92  
Reactor Unit: SE1  
Data feeder: 1  
NRC ERDS Parameter: SG LEVEL 1/A  
Point ID: 1-LT3-43  
Plant Spec Point Desc: SG 1 WIDE RNG LEVEL  
Generic/Cond Desc: Steam Gen 1 Wide Range Water Lev

Analog/Digital: A  
Engr Units/Dig States: 8  
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  
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 the "U" tubes is approximately 70% level.



ERDS point number 66.      SG LEVEL 2/B      1-LT3-56      Steam Gen 2 Wide Range Water Lev

Date: 11/05/92  
Reactor Unit: SE1  
Data feeder: 1  
NRC ERDS Parameter: SG LEVEL 2/B  
Point ID: 1-LT3-56  
Plant Spec Point Desc: SG 2 WIDE RNG LEVEL  
Generic/Cond Desc: Steam Gen 2 Wide Range Water Lev

Analog/Digital: A  
Engr Units/Dig States: %  
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  
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 the "U" tubes is approximately 70% level.



ERDS point number 67.

SG LEVEL 3/C

1-LT3-98

Steam Gen 3 Wide Range Water Lev

Date: 11/05/92  
Reactor Unit: SE1  
Data feeder: 1  
NRC ERDS Parameter: SG LEVEL 3/C  
Point ID: 1-LT3-98  
Plant Spec Point Desc: SG 3 WIDE RNG LEVEL  
Generic/Cond Desc: Steam Gen 3 Wide Range Water Lev

Analog/Digital: A  
Engr Units/Dig States: %  
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  
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 Low Out  
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 the "U" tubes is approximately 70% level.

ERDS point number 68. SG LEVEL 4/D 1-LT3-111 Steam Gen 4 Wide Range Water Lev

Date: 11/05/92  
Reactor Unit: SE1  
Data feeder: 1  
NRC ERDS Parameter: SG LEVEL 4/D  
Point ID: 1-LT3-111  
Plant Spec Point Desc: SG 4 WIDE RNG LEVEL  
Generic/Cond Desc: Steam Gen 4 Wide Range Water Lev

Analog/Digital: A  
Engr Units/Dig States: %  
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  
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 the "U" tubes is approximately 70% level.

SEQUOYAH UNIT 2 - ERDS DATA POINT LIBRARY

	SIMULATION	INDICATES REAL OR SIMULATED DATA
1.		
2.	NI POWER RNG UN2000	POWER RNG AVG
3.	NI INTER RNG UN1015	INTER RNG FLUX (LOG)
4.	NI SOURC RNG UN1014	Source Range Flux (Log)
5.	REAC VES LEV UL6000	RVLIS LOWER RANGE AVERAGE
6.	TEMP CORE EX UT1003	CCRE EXIT TEMP MAX
7.	SUB MARGIN UT1005	MIN SUBCOOL
8.	SG LEVEL 1/A UL1001	SG 1 NR LEVEL AVG
9.	SG LEVEL 2/B UL1002	SG 2 NR LEVEL AVG
10.	SG LEVEL 3/C UL1003	SG 3 NR LEVEL AVG
11.	SG LEVEL 4/D UL1004	SG 4 NR LEVEL AVG
12.	SG PRESS 1/A UP1002	SG 1 MS PRESSURE AVG
13.	SG PRESS 2/B UP1003	SG 2 MS PRESSURE AVG
14.	SG PRESS 3/C UP1004	SG 3 MS PRESSURE AVG
15.	SG PRESS 4/D UP1005	SG 4 MS PRESSURE AVG
16.	MN FD FL 1/A UF1000	SG 1 FW FLOW AVG
17.	MN FD FL 2/B UF1001	SG 2 FW FLOW AVG
18.	MN FD FL 3/C UF1002	SG 3 FW FLOW AVG
19.	MN FD FL 4/D UF1003	SG 4 FW FLOW AVG
20.	AX FW FL 1/A 2-FM3-163B	STM GEN 1 AFW INLET FLOW
21.	AX FW FL 2/B 2-FM3-155B	STM GEN 2 AFW INLET FLOW
22.	AX FW FL 3/C 2-FM3-147B	STM GEN 3 AFW INLET FLOW
23.	AX FW FL 4/D 2-FM3-170B	STM GEN 4 AFW INLET FLOW
24.	HL TEMP 1/A 2-TM68-1B	LP 1 HL WID RNG TEMP
25.	HL TEMP 2/B 2-TM68-24B	LP 2 HL WID RNG TEMP
26.	HL TEMP 3/C 2-TM68-43B	LP 3 HL WID RNG TEMP
27.	HL TEMP 4/D 2-TM68-65B	LP 4 HL WID RNG TEMP
28.	CL TEMP 1/A 2-TE68-18	LP 1 CL WID RNG TEMP
29.	CL TEMP 2/B 2-TE68-41	LP 2 CL WID RNG TEMP
30.	CL TEMP 3/C 2-TE68-60	LP 3 CL WID RNG TEMP
31.	CL TEMP 4/D 2-TE68-83	LP 4 CL WID RNG TEMP
32.	RCS PRESSURE UP1000	RCS WIDE RNG PRESS AVG
33.	PRZR LEVEL UL1005	PRZR LEV AVG
34.	RCS CHG/MU UF1016	NET CHG FLO
35.	HP SI FLOW UF1010	SI FLOW TOTAL
36.	LP SI FLOW UF1011	RHR COLD LEG TOTAL FLOW
37.	CNTMT SMP WR UL1011	CNTMT SUMP LEV AVG
38.	EFF GAS RAD 1-RM90-400	Unit 1 Shield Bldg Release Rate
39.	EFF GAS RAD 2-RM90-400	Unit 2 Shield Bldg Release Rate
40.	EFF LIQ RAD 0-RE90-122	WDS Liquid Effluent
41.	COND A/E RAD UR1006	Low Range COND VAC PUMP AIR EXH RAD MON
42.	COND A/E RAD UR1007	Mid Rng COND VAC PUMP AIR EXH RAD MON
43.	COND A/E RAD UR1008	High Rng COND VAC PUMP AIR EXH RAD MON
44.	CNTMNT RAD UR6021	UPPER CONTAINMENT RADIATION
45.	CNTMNT RAD UR6022	LOWER CONTAINMENT RADIATION
46.	MAIN SL 1/A UR1001	MN STEAM LINE 1 RAD LEV
47.	MAIN SL 2/B UR1002	MN STEAM LINE 2 RAD LEV
48.	MAIN SL 3/C UR1003	MN STEAM LINE 3 RAD LEV
49.	MAIN SL 4/D UR1004	MN STEAM LINE 4 RAD LEV
50.	SG BD RAD 1A 2-RE90-120	Steam Generator Blowdown Liquid Monitor
51.	SG BD RAD 2B 2-RE90-121	Steam Generator Blowdown Liquid Monitor
52.	CTMNT PRESS UP6000	CNTMT PRESSURE AVERAGE
53.	CTMNT TEMP UT1004	CONTAINMENT TEMP MAX DEV
54.	H2 CONC UY1005	H2 CONC AVG
55.	RWST LEVEL UL1000	RWST LEVEL
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	2-LT3-43	SG 1 WIDE RNG LEVEL
66.	SG LEVEL 2/B	2-LT3-56	SG 2 WIDE RNG LEVEL
67.	SG LEVEL 3/C	2-LT3-98	SG 3 WIDE RNG LEVEL
68.	SG LEVEL 4/D	2-LT3-111	SG 4 WIDE RNG LEVEL

ERDS point number 1.

SIMULATION

REAL/SIMULATED DATA

Date: 06/09/92  
Reactor Unit: SE2  
Data feeder: 1  
NRC ERDS Parameter:  
Point ID: SIMULATION  
Plant Spec 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      UN2000      Reactor Power

Date: 12/02/91  
Reactor Unit: SE2  
Data feeder: 1  
NRC ERDS Parameter: NI POWER RNG  
Point ID: UN2000  
Plant Spec Point Desc: POWER RNG AVG  
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%      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: From TSC Upper & Lower detection inputs for  
2-NE92-41,42,43,44.



ERDS point number 3.      NI INTER RNG      UN1015      Reactor Power - Intermediate Rng

Date: 12/02/91  
Reactor Unit: SE2  
Data feeder: 1  
NRC ERDS Parameter: NI INTER RNG  
Point ID: UN1015  
Plant Spec Point Desc: INTER RNG FLUX (LOG)  
Generic/Cond Desc: Reactor Power - Intermediate Rng

Analog/Digital: A  
Engr Units/Dig States: LOGPC  
Engr Units Conversion:  $OUTPUT(V) = [LOG(*Power)] + 6$   
Minimum Instr Range: -8  
Maximum Instr Range: 2.301  
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)



ERDS point number 4.      NI SOURC RNG      UN1014      Reactor Power - Source Range

Date: 12/02/91  
Reactor Unit: 3E2  
Data feeder: 1  
NRC ERDS Parameter: NI SOURC RNG  
Point ID: UN1014  
Plant Spec Point Desc: Source Range Flux (Log)  
Generic/Cond Desc: Reactor Power - Source Range

Analog/Digital: A  
Engr Units/Dig States: CPS  
Engr Units Conversion:  $OUTPUT(V)=[Log(CPS)]*1.667$   
Minimum Instr Range: 10E0  
Maximum Instr Range: 10E6  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SELS: P  
Number of Sensors: 4  
How Processed: Avg.  
Sensor Locations: AZ 0 deg. & 180 deg. Excore  
Alarm/Trip Set Points: Reactor Trip - 10E5 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)

ERDS point number 5.

REAC VES LEV

UL6000

Reactor Vessel Water Level

Date: 12/02/91  
Reactor Unit: SE2  
Data feeder: 1  
NRC ERDS Parameter: REAC VES LEV  
Point ID: UL6000  
Plant Spec 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%

Pt C 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      UT1003      Highest Core Exit Temperature

Date: 12/02/91  
Reactor Unit: SE2  
Data feeder: 1  
NRC ERDS Parameter: TEMP CORE EX  
Point ID: UT1003  
Plant Spec 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  
Maximum Instr Range: 700  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SENS: P  
Number of Sensors: 59  
How Processed: HIGHEST  
Sensor Locations: Throughout core  
Alarm/Trip Set Points: High at 700 DEGF      Low at 0 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 elements with one TC inoperable. The numeric is the high-  
er of 2-XM-94-103-69 and 2-XM-94-103-75.

ERDS point number 7.

SUB MARGIN

UT1005

Saturation Temp. - Highest CET

Date: 12/02/91  
Reactor Unit: SE2  
Data feeder: 1  
NRC ERDS Parameter: SUB MARGIN  
Point ID: UT1005  
Plant Spec 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: 0  
Maximum Instr Range: 700  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SENS: P  
Number of Sensors: 59  
How Processed: Highest  
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  
TC with one TC inoperable.

ERDS point number 8. SG LEVEL 1/A UL1001 Steam Generator 1 Water Level

Date: 12/02/91  
Reactor Unit: SE2  
Data feeder: 1  
NRC ERDS Parameter: SG LEVEL 1/A  
Point ID: UL1001  
Plant Spec Point Desc: SG 1 NR LEVEL AVG  
Generic/Cond Desc: Steam Generator 1 Water Level

Analog/Digital: A  
Engr Units/Dig States: %  
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: 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 #1 Water Level. Average of 1-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.

ERDS point number 9. SG LEVEL 2/B UL1002 Steam Generator 2 Water Level

Date: 12/02/91  
Reactor Unit: SE2  
Data feeder: 1  
NRC ERDS Parameter: SG LEVEL 2/B  
Point ID: UL1002  
Plant Spec Point Desc: SG 2 NF LEVEL AVG  
Generic/Cond Desc: Steam Generator 2 Water Level

Analog/Digital: A  
Engr Units/Dig States: %  
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: 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.

ERDS point number 10.

SG LEVEL 3/C

UL1003

Steam Generator 3 Water Level

Date: 12/02/91  
Reactor Unit: SE2  
Data feeder: 1  
NRC EKDS Parameter: SG LEVEL 3/C  
Point ID: UL1003  
Plant Spec Point Desc: SG 3 NR LEVEL AVG  
Generic/Cond Desc: Steam Generator 3 Water Level

Analog/Digital: A  
Engr Units/Dig States: %  
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: AVER. JE  
Sensor Locations: Remote locat outside of Polar Crane Wall  
Alarm/Trip Set Points: Low at 25 %, High at 70 %

Low 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. 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.



ERDS point number 11.

SG LEVEL 4/D

UL1004

Steam Generator 4 Water Level

Date: 12/02/91  
Reactor Unit: SE2  
Data feeder: 1  
NRC ERDS Parameter: SG LEVEL 4/D  
Point ID: UL1004  
Plant Spec Point Desc: SG 4 NR LEVEL AVG  
Generic/Cond Desc: Steam Generator 4 Water Level

Analog/Digital: A  
Engr Units/Dig States: 1  
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: 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.

ERDS point number 12.      SG PRESS 1/A      UP1002      Steam Generator 1 Pressure

Date: 12/02/91  
Reactor Unit: SE2  
Data feeder: 1  
NRC ERDS Parameter: SG PRESS 1/A  
Point ID: UP1002  
Plant Spec 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 600 PSIG, High at 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      UP1003      Steam Generator 2 Pressure

Date: 12/02/91  
Reactor Unit: SE2  
Data feeder: 1  
NRC ERDS Parameter: SG PRESS 2/B  
Point ID: UP1003  
Plant Spec 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 600 PSIG, High at 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

UP1004

Steam Generator 3 Pressure

Date: 12/02/91  
Reactor Unit: SE2  
Data feeder: 1  
NRC ERDS Parameter: SG PRESS 3/C  
Point ID: UP1004  
Plant Spec 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 600 PSIG, High at 1200 PSIG

NID power cutoff level: N/A  
NID power cut-cn 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      UP1005      Steam Generator 4 Pressure

Date: 12/02/91  
Reactor Unit: SE2  
Data feeder: 1  
NRC ERDS Parameter: SG PRESS 4/D  
Point ID: UP1005  
Plant Spec 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 600 PSIG, High at 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

Stm Gen 1 Main Feedwater Flow

Date: 12/02/91  
Reactor Unit: SE2  
Data feeder: 1  
NRC ERDS Parameter: MN FD FL 1/A  
Point ID: UF1000  
Plant Spec Point Desc: SG 1 FW FLOW AVG  
Generic/Cond Desc: Stm Gen 1 Main Feedwater Flow

Analog/Digital: A  
Engr Units/Dig States: KBH  
Engr Units Conversion: N/A  
Minimum Instr Range: 0  
Maximum Instr Range: 4500  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SENS: P  
Number of Sensors: 2  
How Processed: AVERAGE  
Sensor Locations: Stm Gen FW Line 1, Aux. Bldg  
Alarm/Trip Set Points: High at 4500 KBH Low at 0 KBH

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.



ERDS point number 17.      MN FD FL 2/B      UF1001      Stm Gen 2 Main Feedwater Flow

Date: 12/02/91  
Reactor Unit: SE2  
Data feeder: 1  
NRC ERDS Parameter: MN FD FL 2/B  
Point ID: UF1001  
Plant Spec Point Desc: SG 2 FW FLOW AVG  
Generic/Cond Desc: Stm Gen 2 Main Feedwater Flow

Analog/Digital: A  
Engr Units/Dig States: KBH  
Engr Units Conversion: N/A  
Minimum Instr Range: 0  
Maximum Instr Range: 4500  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SENS: P  
Number of Sensors: 2  
How Processed: AVERAGE  
Sensor Locations: Stm Gen FW Line 2, Aux. Bldg  
Alarm/Trip Set Points: High at 4500 KBH      Low at 0 KBH

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.

ERDS point number 18.

MN FD FL 3/C

UF1002

Stm Gen 3 Main Feedwater Flow

Date: 12/02/91  
Reactor Unit: SE2  
Data feeder: 1  
NRC ERDS Parameter: MN FD FL 3/C  
Point ID: UF1002  
Plant Spec Point Desc: SG 3 FW FLOW AVG  
Generic/Cond Desc: Stm Gen 3 Main Feedwater Flow

Analog/Digital: A  
Engr Units/Dig States: KBH  
Engr Units Conversion: N/A  
Minimum Instr Range: 0  
Maximum Instr Range: 4500  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SENS: P  
Number of Sensors: 2  
How Processed: AVERAGE  
Sensor Locations: Stm Gen FW Line 3, Aux. Bldg  
Alarm/Trip Set Points: High at 4500 KBH Low at 0 KBH

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.

ERDS point number 19.

MN FD FL 4/D

UF1003

Stm Gen 4 Main Feedwater Flow

Date: 12/02/91  
Reactor Unit: SE2  
Data feeder: 1  
NRC ERDS Parameter: MN FD FL 4/D  
Point ID: UF1003  
Plant Spec Point Desc: SG 4 FW FLOW AVG  
Generic/Cond Desc: Stm Gen 4 Main Feedwater Flow

Analog/Digital: A  
Engr Units/Dig States: FBH  
Engr Units Conversion: N/A  
Minimum Instr Range: 0  
Maximum Instr Range: 4500  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SENS: P  
Number of Sensors: 2  
How Processed: AVERAGE  
Sensor Locations: Stm Gen FW Line 4, Aux. Bldg  
Alarm/Trip Set Points: High at 4500 KBH Low at 0 KBH

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.

ERDS point number 20.      AX FW FL 1/A      2-FM3-163B      Stm Gen 1 Auxiliary FW Flow

Date: 05/20/92  
Reactor Unit: SE2  
Data feeder: 1  
NRC ERDS Parameter: AX FW FL 1/A  
Point ID: 2-FM3-163B  
Plant Spec Point Desc: STM GEN 1 AFW INLET FLOW  
Generic/Cond Desc: Stm Gen 1 Auxiliary FW Flow

Analog/Digital: A  
Engr Units/Dig States: GEN  
Engr Units Conversion: 1-5 VDC=0-440 GPM  
Minimum Instr Range: 0  
Maximum Instr Range: 440  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SENS: S  
Number of Sensors: 1  
How Processed: N/A  
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.

ERDS point number 21.      AX FW FL 2/B      2-FM3-155B      Stm Gen 2 Auxiliary FW Flow

Date: 05/20/92  
Reactor Unit: SE2  
Data feeder: 1  
NRC ERDS Parameter: AX FW FL 2/B  
Point ID: 2-FM3-155B  
Plant Spec Point Desc: STM GEN 2 AFW INLET 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  
Minimum Instr Range: 0  
Maximum Instr Range: 440  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SENS: S  
Number of Sensors: 1  
How Processed: N/A  
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.

ERDS point number 22.      AX FW FL 3/C      2-FM3-147B      Stm Gen 3 Auxiliary FW Flow

Date: 05/20/92  
Reactor Unit: SE2  
Data feeder: 1  
NRC ERDS Parameter: AX FW FL 3/C  
Point ID: 2-FM3-147B  
Plant Spec Point Desc: STM GEN 3 AFW INLET 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  
Minimum Instr Range: 0  
Maximum Instr Range: 440  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SENS: S  
Number of Sensors: 1  
How Processed: N/A  
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.



ERDS point number 23.      AX FW FL 4/D      2-FM3-170B      Stm Gen 4 Auxiliary FW Flow

Date: 05/20/92  
Reactor Unit: SE2  
Data feeder: 1  
NRC ERDS Parameter: AX FW FL 4/D  
Point ID: 2-FM3-170B  
Plant Spec Point Desc: STM GEN 4 AFW INLET 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  
Minimum Instr Range: 0  
Maximum Instr Range: 440  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SENS: S  
Number of Sensors: 1  
How Processed: N/A  
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.

ERDS point number 24.      HL TEMP 1/A      2-TM68-1B      Stm Gen 1 Inlet Temperature

Date: 05/20/92  
Reactor Unit: SE2  
Data feeder: 1  
NRC ERDS Parameter: HL TEMP 1/A  
Point ID: 2-TM68-1B  
Plant Spec Point Desc: LP 1 HL WID RNG 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.

ERDS point number 25.      HL TEMP 2/B      2-TM68-24B      Stm Gen 2 Inlet Temperature

Date: 05/20/92  
Reactor Unit: SE2  
Data feeder: 1  
NRC ERDS Parameter: HL TEMP 2/B  
Point ID: 2-TM68-24B  
Plant Spec Point Desc: LP 2 HL WID RNG 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.

ERDS point number 26.      HL TEMP 3/C      2-TM68-43B      Stm Gen 3 Inlet Temperature

Date: 05/20/92  
Reactor Unit: SE2  
Data feeder: 1  
NRC ERDS Parameter: HL TEMP 3/C  
Point ID: 2-TM68-43B  
Plant Spec Point Desc: LP 3 HL WID RNG TEMP  
Generic/Cond Desc: Stm Gen 3 Inlet Temperature

Analog/Digital: A  
Engr Units/Dig States: DEGF  
Engr Units Co' ersion: 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.

ERDS point number 27.      HL TEMP 4/D      2-TM68-65B      Stm Gen 4 Inlet Temperature

Date: 05/20/92  
Reactor Unit: SE2  
Data feeder: 1  
NRC ERDS Parameter: HL TEMP 4/D  
Point ID: 2-TM68-65B  
Plant Spec Point Desc: LP 4 HL WID RNG 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 firing  
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.

ERDS point number 28. CL TEMP 1/A 2-TE68-18 Stm Gen 1 Outlet Temperature

Date: 05/20/92  
Reactor Unit: SE2  
Data feeder: 1  
NRC ERDS Parameter: CL TEMP 1/A  
Point ID: 2-TE68-18  
Plant Spec Point Desc: LP 1 CL WIL RNG 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.



ERDS point number 29.      CL TEMP 2/B      2-TE68-41      Stm Gen 2 Outlet Temperature

Date: 05/20/92  
Reactor Unit: SE2  
Data feeder: 1  
NRC ERDS Parameter: CL TEMP 2/B  
Point ID: 2-TE68-41  
Plant Spec Point Desc: LP 2 CL WID RNG 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.

ERDS point number 30.      CL TEMP 3/C      2-TE68-60      Stm Gen 3 Outlet Temperature

Date: 05/20/92  
Reactor Unit: SE2  
Data feeder: 1  
NRC ERDS Parameter: CL TEMP 3/C  
Point ID: 2-TE68-60  
Plant Spec Point Desc: LP 3 CL WID RNG 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.

ERDS point number 31.      CL TEMP 4/D      2-TE68-83      Stm Gen 4 Outlet Temperature

Date: 05/20/92  
Reactor Unit: SE2  
Data feeder: 1  
NRC ERDS Parameter: CL TEMP 4/D  
Point ID: 2-TE68-83  
Plant Spec Point Desc: LP 4 CL WID RNG 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.

ERDS point number 32.      RCS PRESSURE      UP1000      Reactor Coolant System Pressure

Date: 05/21/92  
Reactor Unit: SE2  
Data feeder: 1  
NRC ERDS Parameter: RCS PRESSURE  
Point ID: UP1000  
Plant Spec Point Desc: RCS WIDE RNG PRESS AVG  
Generic/Cond Desc: Reactor Coolant System Pressure

Analog/Digital: A  
Engr Units/Dig States: PSIG  
Engr Units Conversion: 1-5 VDC=0-3000 PSIG  
Minimum Instr Range: 0  
Maximum Instr Range: 3000  
Zero Point Reference: N/A  
Reference Unit 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 -68) 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.

EPDS point number 33.

PRZR LEVEL

UL1005

Primary System Pressurizer Level

Date: 05/21/92  
Reactor Unit: SE2  
Data feeder: 1  
NRC ERDS Parameter: PRZR LEVEL  
Point ID: UL1005  
Plant Spec Point Desc: PRZR LEV AVG  
Generic/Cond Desc: Primary System Pressurizer Level

Analog/Digital: A  
Engr Units/Diag States: %  
Engr Units Conversion: 61.6 gals/% at 652 deg F and 2235 psia  
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      UF1016      Primary System Charging / Makeup

Date: 05/21/92  
Reactor Unit: SE2  
Data feeder: 1  
NRC ERDS Parameter: RCS CHG/MU  
Point ID: UF1016  
Plant Spec 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 Preference: N/A  
Reference Point Notes: N/A

PRCC or SENS: P  
Number of Sensors: 6  
How Processed: Subtraction  
Sensor Locations: COP Pmp, RCP Seal/Leak-off, 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: 11  
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.

ERDS point number 35.

HP SI FLOW

UF1010

High Pressure Safety Inj. Flow

Date: 05/21/92  
Reactor Unit: SE2  
Data feeder: 1  
NRC ERDS Parameter: HP SI FLOW  
Point ID: UF1010  
Plant Spec 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 Inscr Range: 0  
Maximum Inscr 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)



ERDS point number 36.

LP SI FLOW

UF1011

Low Pressure Safety Inj. Flow

Date: 05/21/92  
Reactor Unit: SE2  
Data feeder: 1  
NRC ERDS Parameter: LP SI FLOW  
Point ID: UF1011  
Plant Spec 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      UL1011      Containment Sump Wide Rng Lvl

Date: 05/20/92  
Reactor Unit: SE2  
Data feeder: 1  
NRC ERDS Parameter: CNTMT SMP WR  
Point ID: UL1011  
Plant Spec Point Desc: CNTMT SUMP LEV AVG  
Generic/Cond Desc: Containment Sump Wide Rng Lvl

Analog/Digital: A  
Engr Units/Dig States: %  
Engr Units Conversion: 1%=2.4 inches of water  
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      1-RM90-400      Release Rt of Radioactive Gases

Date: 12/02/91  
Reactor Unit: SE2  
Data feeder: 1  
NRC ERDS Parameter: EFF GAS RAD  
Point ID: 1-RM90-400  
Plant Spec 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  
Maximum Instr Range: 10E10 uCi/sec  
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.

ERDS point number 39.      EFF GAS RAD      2-RM90-400      Release Rt. of Radioactive Gases

Date: 12/02/91  
Reactor Unit: SE2  
Data feeder: 1  
NRC ERDS Parameter: EFF GAS RAD  
Point ID: 2-RM90-400  
Plant Spec Point Desc: Unit 2 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  
Maximum Instr Range: 10E10 uCi/sec  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SENS: P  
Number of Sensors: 3  
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.



ERDS point number 40.      EFF LIQ RAD      0-RE90-122      Radioactivity of Released Liquid

Date: 12/02/91  
Reactor Unit: SE2  
Data feeder: 1  
NRC ERDS Parameter: EFF LIQ RAD  
Point ID: 0-RE90-122  
Plant Spec Point Desc: WDS Liquid Effluent  
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  
Maximum Instr Range: 10E7 CPM  
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.

ERDS point number 41.

COND A/E RAD

UR1006

Cond Air Ejector Radioactivity

Date: 12/02/91  
Reactor Unit: SE2  
Data feeder: 1  
NRC ERDS Parameter: COND A/E RAD  
Point ID: UR1006  
Plant Spec Point Desc: Low Range 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  
Maximum Instr Range: .17E+39  
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-RE90-119 to compute dose rates.

ERDS point number 42.

COND A/E RAD

UR1007

Cond Air Ejector Radioactivity

Date: 12/02/91  
Reactor Unit: SE2  
Data feeder: 1  
NRC ERDS Parameter: COND A/E RAD  
Point ID: UR1007  
Plant Spec Point Desc: Mid 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  
Maximum Instr Range: .17E+39  
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-RE90-99 to compute dose rates.



ERDS point number 43.

COND A/E RAD

UR1008

Cond Air Ejector Radioactivity

Date: 12/02/91  
Reactor Unit: SE2  
Data feeder: 1  
NRC ERDS Parameter: COND A/E RAD  
Point ID: UR1008  
Plant Spec 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  
Maximum Instr Range: .17E+39  
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

UR6021

Containment Radiation Level

Date: 12/02/91  
Reactor Unit: SE2  
Data feeder: 1  
NRC ERDS Parameter: CNTMNT RAD  
Point ID: UR6021  
Plant Spec Point Desc: UPPER CONTAINMENT RADIATION  
Generic/Cond Desc: Containment Radiation Level  
  
Analog/Digital: A  
Engr Units/Dig States: R/hour  
Engr Units Conversion: N/A  
Minimum Instr Range: 10E0 R/hour  
Maximum Instr Range: 10E8 R/hour  
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/hour  
  
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      UR6022      Lower Containment Radiation Lvl

Date: 12/02/91  
Reactor Unit: SE2  
Data feeder: 1  
NRC ERDS Parameter: CNTMNT RAD  
Point ID: UR6022  
Plant Spec Point Desc: LOWER CONTAINMENT RADIATION  
Generic/Cond Desc: Lower Containment Radiation Lvl

Analog/Digital: A  
Engr Units/Dig States: R/hour  
Engr Units Conversion: N/A  
Minimum Instr Range: 10E0 R/hour  
Maximum Instr Range: 10E8 R/hour  
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/hour

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-RE90-273 and 2-RE90-274.

ERDS point number 46.

MAIN SL 1/A

UR1001

Stm Gen 1 Steam Line Rad Level

Date: 12/02/91  
Reactor Unit: SE2  
Data feeder: 1  
NRC ERDS Parameter: MAIN SL 1/A  
Point ID: UR1001  
Plant Spec Point Desc: MN STEAM LINE 1 RAD LEV  
Generic/Cond Desc: Stm Gen 1 Steam Line Rad Level

Analog/Digital: A  
Engr Units/Dig States: uCi/sec  
Engr Units Conversion: N/A  
Minimum Instr Range:  $-1.17E+39$   
Maximum Instr Range:  $.17E+39$   
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 #1 Radioactivity Monitor  
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

UR1002

Stm Gen 2 Steam Line Rad Level

Date: 12/02/91  
Reactor Unit: SE2  
Data feeder: 1  
NRC ERDS Parameter: MAIN SL 2/B  
Point ID: UR1002  
Plant Spec Point Desc: MN STEAM LINE 2 RAD LEV  
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:  $-1.17E+39$   
Maximum Instr Range:  $.17E+39$   
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: 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. 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

UR1003

Stm Gen 3 Steam Line Rad Level

Date: 12/02/91  
Reactor Unit: SE2  
Data feeder: 1  
NRC ERDS Parameter: MAIN SL 3/C  
Point ID: UR1003  
Plant Spec Point Desc: MN STEAM LINE 3 RAD LEV  
Generic/Cond Desc: Stm Gen 3 Steam Line Rad Level

Analog/Digital: A  
Engr Units/Dig States: uCI/sec  
Engr Units Conversion: N/A  
Min Instr Range:  $-1.17E+39$   
Maximum Instr Range:  $1.17E+39$   
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. 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

UR1004

Stm Gen 4 Steam Line Rad Level

Date: 12/02/91  
Reactor Unit: SE2  
Data feeder: 1  
NRC ERDS Parameter: MAIN SL 4/D  
Point ID: UR1004  
Plant Spec Point Desc: MN STEAM LINE 4 RAD LEV  
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:  $-1.17E+39$   
Maximum Instr Range:  $1.17E+39$   
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. 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 2-RE90-120 Stm Gen Header Blowdown Rad Lev1

Date: 12/02/91  
Reactor Unit: SE2  
Data feeder: 1  
NRC ERDS Parameter: SG BD RAD 1A  
Point ID: 2-RE90-120  
Plant Spec Point Desc: Steam Generator Blowdown Liquid Monitor  
Generic/Cond Desc: Stm Gen Header Blowdown Rad Lev1

Analog/Digital: A  
Engr Units/Dig States: CPM  
Engr Units Conversion: N/A  
Minimum Instr Range: 10E0 CPM  
Maximum Instr Range: 10E7 CPM  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SENS: S  
Number of Sensors: 1  
How Processed: Sum  
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.

ERDS point number 51.      SG BD RAD 2B      2-RE90-121      Stm Gen Heade. Blowdown Rad Lev1

Date: 12/02/91  
Reactor Unit: SE2  
Data feeder: 1  
NRC ERDS Parameter: SG BD RAD 2B  
Point ID: 2-RE90-121  
Plant Spec Point Desc: Steam Generator Blowdown Liquid Monitor  
Generic/Cond Desc: Stm Gen Header Blowdown Rad Lev1

Analog/Digital: A  
Engr Units/Dig States: CPM  
Engr Units Conversion: N/A  
Minimum Instr Range: 10E0 CPM  
Maximum Instr Range: 10E7 CPM  
Zero Point Reference: N/A  
Reference Point Notes: N/A

PROC or SENS: S  
Number of Sensors: 1  
How Processed: Sum  
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.

ERDS point number 52.      CTMNT PRESS      UP6000      Containment Pressure

Date: 12/02/91  
Reactor Unit: SE2  
Data feeder: 1  
NRC ERDS Parameter: CTMNT PRESS  
Point ID: UP6000  
Plant Spec 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 - 2.31 PSIG      High-High 12.0

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      UT1004      Containment Temperature

Date: 12/02/91  
Reactor Unit: SE2  
Data feeder: 1  
NRC ERDS Parameter: CTMNT TEMP  
Point ID: UT1004  
Plant Spec Point Desc: CONTAINMENT TEMP MAX DEV  
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: 4  
How Processed: Maximum Value  
Sensor Locations: TE-212A, TE212B, TE212C & TE212D  
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: 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.

ERDS point number 54.      H2 CONC      UY1005      Containment H2 Concentration

Date: 12/02/91  
Reactor Unit: SE2  
Data feeder: 1  
NRC ERDS Parameter: H2 CONC  
Point ID: UY1005  
Plant Spec Point Desc: H2 CONC AVG  
Generic/Cond Desc: Containment H2 Concentration

Analog/Digital: A  
Engr Units/Dig States: %  
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 & lower 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.

ERDS point number 55.      RWST LEVEL      UL1000      Refueling Water Storage Tank Lev

Date: 05/20/92  
Reactor Unit: SE2  
Data feeder: 1  
NRC ERDS Parameter: RWST LEVEL  
Point ID: UL1000  
Plant Spec Point Desc: RWST LEVEL  
Generic/Cond Desc: Refueling Water Storage Tank Lev

Analog/Digital: A  
Engr Units/Dig States: %  
Engr Units Conversion: 1% is 3500 Gals  
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 tnk below built  
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. LT-63-50 and -51.



ERDS point number 56.      WIND SPEED      MET001      Wind Speed - Upper Level

Date: 12/02/91  
Reactor Unit: SE2  
Data feeder: 1  
NRC ERDS Parameter: WIND SPEED  
Point ID: MET001  
Plant Spec 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:  
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:  
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:  
Level Reference Leg: N/A  
  
Unique System Desc:



ERDS point number 57.      WIND SPEED      MET002      Wind Speed - Intermediate Level

Date: 12/02/91  
Reactor Unit: SE2  
Data feeder: 1  
NRC ERDS Parameter: WIND SPEED  
Point ID: MET002  
Plant Spec 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:  
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:  
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:  
Level Reference Leg: N/A  
  
Unique System Desc:

ERDS point number 58.      WIND SPEED      MET003      Wind Speed - Lower Level

Date: 12/01/91  
Reactor Unit: SE2  
Data feeder: 1  
NRC ERDS Parameter: WIND SPEED  
Point ID: MET003  
Plant Spec 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:  
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:  
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:  
Level Reference Leg: N/A

Unique System Desc:

ERDS point number 59.      WIND DIR      MET004      Wind Direction - Upper Level

Date: 12/02/91  
Reactor Unit: SE2  
Data feeder: 1  
NRC ERDS Parameter: WIND DIR  
Point ID: MET004  
Plant Spec 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:  
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:  
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:  
Level Reference Leg: N/A

Unique System Desc:

ERDS point number 60.      WIND DIR      MET005      Wind Direction - Intermed. Level

Date: 12/02/91  
Reactor Unit: SE2  
Data feeder: 1  
NRC ERDS Parameter: WIND DIR  
Point ID: MET005  
Plant Spec 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:  
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:  
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:  
Level Reference Leg: N/A

Unique System Desc:

ERDS point    nber 61.    WIND DIR    MET006    Wind Direction - Lower Level

Date: 12/02/91  
Reactor Unit: SE2  
Data feeder: 1  
NRC ERDS Parameter: WIND DIR  
Point ID: MET006  
Plant Spec 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 Unit Conversion:  
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:  
Sensor Locations: At the 10 Meter Level of the Met Tower  
Alarm/    Set Points: No Alarms  
  
NID power cutoff level: N/A  
NID power cut-on level: N/A  
Instrument Failure Mode: LOW  
Temperature Compensation:  
Level Reference Leg: N/A  
  
Unique System Desc:

ERDS point number 62.      STAB CLASS      MET007      Air Stability Upper

Date: 12/02/91  
 Reactor Unit: SE2  
 Data feeder: 1  
 NRC ERDS Parameter: STAB CLASS  
 Point ID: MET007  
 Plant Spec Point Desc: Stability Class Upper  
 Generic/Cond Desc: Air Stability Upper

Analog/Digital:  
 Engr Units/Dig States: STABA  
 Engr Units Conversion:  
 Minimum In: r Range:  
 Maximum In: r Range:  
 Zero Point Reference: N/A  
 Reference Point Notes: N/A

PROC or SENS: F  
 Number of Sensors: 2  
 How Processed:  
 Sensor Locations:  
 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:  
 Level Reference Leg: N/A

Unique System Desc:		Differential Temperature Upper-Lower (deg C)	
	Difference	Stability, ass	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

Date: 12/02/91  
Reactor Unit: SE2  
Data feeder: 1  
NRC ERDS Parameter: STAB CLASS  
Poll. ID: MET008  
Plant Spec Point Desc: Stability Class Intermediate  
Generic/Cond Desc: Air Stability

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

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

NID power cutoff level: N/A  
V power cut-on level: N/A  
Instrument Failure Mode: LOW  
Temperature Compensation:  
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

Date: 12/02/91  
 Reactor Unit: SE2  
 Data feeder: 1  
 NRC ERDS Parameter: STAB CLASS  
 Point ID: MET009  
 Plant Spec Point Desc: Stability Class Lower  
 Generic/Cond Desc: Air Stability

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

PROC or SENS: P  
 Number of Sensors: 2  
 How Processed:  
 Sensor Locations:  
 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:  
 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      Steam Gen 1 Wide Range Water Lev

Date: 11/05/92  
Reactor Unit: SE2  
Data feeder: 1  
NRC ERDS Parameter: SG LEVEL 1/A  
Point ID: 2-LT3-43  
Plant Spec Point Desc: SG 1 WIDE RNG LEVEL  
Generic/Cond Desc: Steam Gen 1 Wide Range Water Lev

Analog/Digital: A  
Engr Units/Dig States: %  
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  
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: L1 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.

ERDS point number 66.      SG LEVEL 2/B      2-LT3-56      Steam Gen 2 Wide Range Water Lev

Date: 11/05/92  
Reactor Unit: SE2  
Data feeder: 1  
NRC ERDS Parameter: SG LEVEL 2/B  
Point ID: 2-LT3-56  
Plant Spec Point Desc: SG 2 WIDE RNG LEVEL  
Generic/Cond Desc: Steam Gen 2 Wide Range Water Lev

Analog/Digital: A  
Engr Units/Dig States: %  
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  
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:

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.

ERDS point number 67. SG LEVEL 3/C 2-LT3-98 Steam Gen 3 Wide Range Water Lev

Date: 11/05/92  
Reactor Unit: SE2  
Data feeder: 1  
NRC ERDS Parameter: SG LEVEL 3/C  
Point ID: 2-LT3-98  
Plant Spec Point Desc: SG 3 WIDE RNG LEVEL  
Generic/Cond Desc: Steam Gen 3 Wide Range Water Lev

Analog/Digital: A  
Engr Units/Dig States: %  
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  
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.

ERDS point number 18.      SG LEVEL 4/D      2-LT3-111      Steam Gen 4 Wide Range Water Lev

Date: 11/05/92  
Reactor Unit: SE2  
Data feeder: 1  
NRC ERDS Parameter: SG LEVEL 4/D  
Point ID: 2-LT3-111  
Plant Spec Point Desc: SG 4 WIDE RNG LEVEL  
Generic/Cond Desc: Steam Gen 4 Wide Range Water Lev

Analog/Digital: A  
Engr Units/Dig States: 8  
Engr Units Conversion: 1% = 5.7"  
Minimum Instr Range: 0.0  
Maximum Instr Range: 100.0  
Zero Point Reference: LCWLAP  
Reference Point Notes: See Below

PROC or SENS: S  
Number of Sensors: 1  
How Processed: Scanned  
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 Log: 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.