

NOV 07 2005

L-PI-05-098 10 CFR 50, Appendix E

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

Prairie Island Nuclear Generating Plant Units 1 and 2 Dockets 50-282 and 50-306 License Nos. DPR-42 and DPR-60

Notification of Changes to the Plant Process Computer System that will Impact the Emergency Response Data System (ERDS) and Safety Parameter Display System (SPDS)

Nuclear Management Company, LLC (NMC) is in the process of replacing the Plant Process Computer System (PPCS)/Emergency Response Computer System (ERCS) at the Prairie Island Nuclear Generating Plant (PINGP) Units 1 and 2. The current PPCS is being replaced under modification 03CO01, resulting in the computer system being taken out of service to allow cutover to the new PPCS. The implementation vendor supporting the site on this modification is Scientech. In accordance with 10 CFR 50, Appendix E.VI.3.b, this letter provides notification that PINGP Units 1 and 2, ERDS and SPDS will be out of service per the following schedule:

<u>Unit</u>	Out of Service	Return to Service
PINGP Unit 1	12/5/05	12/19/05
PINGP Unit 2	1/9/06	1/23/06

It is understood that submission of the ERDS Data Point Library (DPL) changes, per 10CFR50, Appendix E.VI.3.a, is not required at this time. However, because several data point identifiers are being revised and the ERDS licensee site installation test procedure requires the site's DPL to be entered into ERDS as a prerequisite to the post installation testing, NMC is including with this submittal the ERDS DPL changes for PINGP Unit 1 (Enclosure 1) and Unit 2 (Enclosure 2).

In addition to the revision of several data points identified in Enclosures 1 and 2, one data point has been added (SERVERID) to provide the feeder identification as suggested by Scientech. Other changes to the DPL include additional clarification of the process and notes fields.

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When ERDS and SPDS become inoperable, we will be submitting an 8-hour nonemergency report in accordance with the requirements of 10 CFR 50.72(b)(3)(xiii). Appropriate compensatory actions will be taken during the out of service time. There is no corresponding requirement contained in 10 CFR 50.73 so a follow-up licensee event report is not required. PINGP staff has informed the NRC Resident Inspectors of the plans and schedule for PPCS replacement.

Summary of Commitments

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

n/pL)

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

Enclosures (2)

cc: Administrator, Region III, USNRC NRR Project Manager, USNRC Resident Inspector, USNRC, Prairie Island Tom Kardaras, USNRC, Office of Nuclear Security and Incident Response

ENCLOSURE 1

Prairie Island Nuclear Generating Plant Unit 1 Emergency Response Data System Data Point Library

i

Prairie Island Nuclear plant - Unit 1 - ERDS DPL

PROCESS	
DESCRIPTIONS	DEFINITIONS
AVG	The average of 2 values with rejection of bad quality inputs.
CV-AVG	The average of 3 or more values with Chauvenet rejection of out of range or bad inputs.
MAVG15	The 15 minute moving average over time of a single value.
SUM	The sum of 2 or more inputs
DIFF	The Difference of 2 inputs
QV	Quality validation of a single value. (i.e. Range checking applied).
STAB_FUNC	Atmospheric Stability function of (60 Meter - 10 meter temperature)

ABBREVIATIONS

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WR	WIDE RANGE SENSORS	NIS / NI	NUCLEAR INSTRUMENTATION SYSTEM
NR	NARROW RANGE SENSORS	PRZR	PRESSURIZER
FR	FULL RANGE SENSORS	RAD	RADIATION
BWST / RWST	REFUELING WATER STORAGE TANK	RCS	REACTOR COOLANT SYSTEM
CNTMT	CONTAINMENT	RNG	RANGE
COND	CONDENSER	SAS	SAFETY ASSESSMENT SYSTEM (SPDS)
DIR	DIRECTION	SG	STEAM GENERATOR
HP / LP	HIGH / LOW PRESSURE	SI	SAFETY INJECTION
MU	REACTOR MAKEUP	STM	STEAM
N/A	NOT APPLICABLE	T/C or TC	THERMOCOUPLE
P/S	"Process or Sensor" column heading		na ministrational de la companya de La companya de la comp

Other Notes

1) The "Generic Description" field is the same as the ERCS point description for all points in this document.

2) The "Analog / Digital" field is omitted because all points in this document are Analogs.

3) There are no trip setpoints, but we have provided high and low alarm limits if any.

4) The "NOTES" field and "PROCESS / COMPUTATION" fields have been changed and expanded for most of the DPL

5) The following points have been deleted and replaced by new points in yellow: (OLD=1Y4109A, NEW=1U4109A);

(OLD=1Y4110A, NEW=1U4110A); (OLD=1U2907A, NEW=1U4135A); (OLD=1U2908A, NEW=1U4136A)

6) The following point is a new point (not replacing a deleted point): SERVERID

7) Feeder ID for unit 1 is "PI1"

POINT ID	DATE	NRC ERDS PARAMETER	ERCS POINT DESCRIPTION	ENG UNITS	P/S	# OF SENSORS	PROCESS / COMPUTATION	SENSOR LOCATION	LOW ENG LIMIT	HIGH ENG LIMIT	FAIL	LOW ALARM LIMIT	HIGH ALARM LIMIT	CONVERSIO N	ZERO REF.	DP/TEMP COMPENSA TION	
1U5048A	07/02/91	NI POWER RNG	SAS NIS Avg Pwr Rng Pwr Level	%	P	4	CV-AVG(N41 N42 N43 N44)	Excore	0	120	LOW	NONE	NONE	N/A	N/A	N/A	ERC
1U5082A	10/16/91	NI INTERMED RNG	NIS Avg Intermediate Rng Log Q	AMP	P	2	AVG(N0035A N0036A)	Excore	0	0.001	LOW	NONE	NONE	N/A	N/A	N/A	35B
1U5081A	10/16/91	NI SOURC RNG	NIS Avg Source Rng Log Q	CPS	P	2	AVG(N0031A N0032A)	Excore		1000000	LOW	NONE	NONE	N/A	N/A	N/A	valu
					-			Content		400	E all		100	1.1.1-1-10/			Not
1U5011A	07/02/91	REACTOR VESSEL LEV	SAS Avg Reactor Vessel Level	%	P	2/4 note	AVG(2 SENSORS) Note 1	Cntmt	0	120	Fail	U NUA	120	4.4 Inch/%	Note 2	Note 3	56.7
1U5510A	10/16/91	CORE EXIT TEMP.	SAS 1st hottest incore 1C	Degr	P	39	MAX(39 INCORE 1C3)	Incore	32	2300	Fall	IN/A	IN/A	N/A	N/A	N/A	Hott
1U5077A	07/02/91	SUBCOOLING MARGIN	SAS RCS Subcooling Margin	DegF	Р	40	DIFF(U5003A - U5009A) Note 1	Incore	-200	1000	Fail	NONE	NONE	N/A	N/A	N/A	Core
1U5152A	07/17/91	CORE FLOW	RCS Avg flow	%	Р	6	AVG(U5150A U5151A) Note 1		0	115	Fail	NONE	NONE	N/A	N/A	N/A	(U51
1U5032A	07/02/91	SG LEVEL 1	SAS Avg Stm Gen 1 H2O Level	%	Р	3	CV-AVG(L0400A L0401A L0402A)	Note 1	0	100	Fail	20	67	180gal/% @STP	Note 2	None	Note
						_		Note 1		100	Fail	20	67	180gal/%	Note 2	Name	Note
1U5034A	07/05/91	SG LEVEL 2	SAS Avg Stm Gen 2 H2O Level	% PSIC	P	3	CV-AVG(L0420A L0421A L0422A)	NOLE I	0	1400	Fail	500	1075	N/A	NULE 2	None N/A	abov
105036A	07/05/91	SG PRESS 1	SAS Avg Stm Gen 2 Pressure	PSIG	P	3	CV-AVG(P0420A P0421A P0422A)		0	1400	Fail	500	1075	N/A	N/A	N/A	sens
11150404	07/05/91	MAIN FEED FLOW 1	SAS Avg Stm Gen 1 Feed Flow	Lb/Hr	P	2	AVG(F0403A F0404A)		0	4470000	Fail	NONE	NONE	N/A	N/A	None	flow
1U5042A	07/05/91	MAIN FEED FLOW 2	SAS Avg Stm Gen 2 Feed Flow	Lb/Hr	P	2	AVG(F0423A F0424A)		0	4470000	Fail	NONE	NONE	N/A	N/A	None	flow
1U5044A	07/05/91	AUX FEED FLOW 1	SAS Avg Stm Gen 1 Aux Fd Fl	GPM	S	1	QV(F2861A)		0	200	Fail	NONE	NONE	N/A	N/A	None	
1U5045A	07/05/91	AUX FEED FLOW 2	SAS Avg Stm Gen 2 Aux Fd Fl	GPM	S	1	QV(F2871A)		0	200	Fail	NONE	NONE	N/A	N/A	None	
1U5049A	07/05/91	RCS HOT LEG TEMP 1	SAS RCS Hot leg 1 Temp	DegF	S	1	QV(T0419A)		50	700	Fail	NONE	NONE	N/A	N/A	N/A	
1U5051A	07/05/91	RCS HOT LEG TEMP 2	SAS RCS Hot leg 2 Temp	DegF	S	1	QV(T0439A)		50	700	Fail	NONE	NONE	N/A	N/A	N/A	
1U5053A	07/05/91	RCS COLD LEG TEMP 1	SAS RCS Cold leg 1 Temp	DegF	s	1	QV(T0406A)		50	700	Fail	520 Note 1	555	N/A	N/A	N/A	syste
	07/05/04	DOS COLDI EC TEMP 2	SAS BCS Cold log 2 Tomp	DogE	4	1	0/(104264)		50	700	Fail	520 Note 1	555	N/A	N/A	N/A	Note
105055A	07/05/91	RUS COLD LEG TEMP 2	SAS NOS Coldney 2 Temp	Degi					00	100	1 GM		2295 Note				Note
	07/00/04		SAS Aug DOS areasure	DEIC		ALANOTE	CV AVG(AND OD 2 WD) Note 1		0	3000	Fail	1000	2385 Note	NI/A	NI/A	NIA	WR
105001A	07/06/91	RCSPRESSURE	SAS Avg RCS pressure	PSIG	P	4/2NUTE	CV-AVG(4 NR OR 2 WR) Note 1	-	0	3000	Fall	1900	2	IN/A	527 gal	IN/A	and
11150074	07/06/01		SAS AVO PRZR H20 IVI (NR)	%	P	3	CV-AVG(L0480A L0481A L0482A)	and the second second	0	100	Fail	14.8	90	64.6 gal/%	Note 1	None	Note
1E0128A	07/06/91	RCS CHARGE/MU FLOW	Charge Pmp Disch Hdr flow	Gpm	S	1	Field instrument	Note 1	0	100	LOW	NONE	NONE	N/A	N/A	N/A	Note
1U5154A	10/09/91	HP SI FLOW	Total Safety Injection flow	Gpm	P	2	SUM(F0922A F0923A) Note 1		0	1500	Fail	NONE	NONE	N/A	N/A	N/A	Note
1U0651A	10/09/91	LP SI FLOW	Total RHR flow	Gpm	P	2	SUM(F0626A F0928A) Note 1		-1	9000	Fail	1250	2500	N/A	N/A	N/A	Note
1U5153A	07/17/91	CNTMT SUMP NR	Cntmt Sump B avg level NR	%	P	2	AVG(L5550A L5555A)		0	100	Fail	NONE	NONE	Note 1	Zero	N/A	Note
1U5017A	07/06/91	CNTMT SUMP WR	SAS Avg Cntmt Sump Lvl	Ft.	Р	2	AVG(L5556A L5557A)		0	12	Fail	0	0.5	40741 gal/ft	0.0 ft	N/A	Note
				MCI/HR													Note
1U5061AL	10/10/91	EFFLUENT GAS RAD	Stack Effl Rad Low Rng	Note 1	Р	2	R0022A*.00526 / F5429A Note 2		0	1.0E6	Fail	NONE	NONE	N/A	N/A	N/A	Ran
				MCI/HR													Note
1U5061AH	10/10/91	EFFLUENT GAS RAD	Stack Effl Rad High Rng	Note 1	P	2	R0050A*52.7 / F5429A Note 2		0	1.0E9	Fail	NONE	NONE	N/A	N/A	N/A	Ran
1R0021A	10/10/91	I EFFLUENT LIQ RAD	Circ Wtr Disch RAD	CPM	S	1	Field instrument		10	1.0E6	Fail	NONE	1000	N/A	N/A	N/A	
1U5024A	07/06/9*	COND A/E RAD	SAS Air Ejector Rad	CPM	S	1	QV(R0015A) Note 1		10	1.0E6	Fail	10	5000	N/A	N/A	N/A	Note
1U5022A	07/06/9*	1 CNTMT RAD	SAS Cntmt rad - Hi Rng	R/Hr	Р	2	AVG(R0048A R0049A)		1	1.0E8	Fail	1	20000	N/A	N/A	N/A	
1R0009A	07/06/9*	RCS LTDN RAD	RCS Letdown Line Rad	MR/Hr	S	1	Field instrument		0.1	10000	Fail	NONE	1000	N/A	N/A	N/A	-
1U5143A	07/06/91	1 MAIN SL 1	SAS Main Steamline A Rad	MR/Hr	S	1	QV(R0051A)			1.0E5	Fail	NONE	NONE	N/A	N/A	N/A	
105144A	07/06/9	MAIN SL 2	SAS Main Steamline B Rad	CPM	6	1	QV(R0052A)		10	1.0E5	Fail	10	10000	N/A N/A	N/A N/A	N/A	
105026A	07/06/9	I CNTMT PRESS	SAS Avg Cntmt Press	PSIG	P	2	AVG(P1010A P1011A)	Cntmt	-5	200	Fail	-5	4	N/A	N/A	. N/A	WR
1030134	0110013	CITIMITITECC															Note
1U5013A	07/06/9	1 CNTMT TEMP	SAS Avg Cntmt Temp	DegF	P	3	CV-AVG(T1000A T1001A T1002A)	Cntmt Note 1	0	400	Fail	NONE	Note 2	N/A	N/A	N/A	5 mi
1U5021A	07/06/9	1 CNTMT H2 CONC	SAS Avg Cntmt H2 conc	%	P	2	AVG(Y0454A Y0455A)	Cntmt	0	10	Fail	NONE	NONE	N/A	N/A	N/A	
1U5068A	07/06/9	1 BWST LEVEL	SAS Avg RWST level	%	P	2	AVG(L0920A L0921A)	RWST	0	100	Fail	NONE	NONE	2922 Gal/%	1898 Gal	N/A	RW
1U4105A	10/16/9	1 WIND SPEED	10M Wind Spd A 15 MIN AVG	MPH	P	1	MAVG15(Y4105A)	10 METER A	0	100	Fail	NONE	NONE	N/A	N/A	N/A	Mete
1U4106A	10/16/9	1 WIND SPEED	10M Wind Spd B 15 MIN AVG	MPH	P	1	MAVG15(Y4100A)	10 METER B	0	360	Fail	NONE	NONE	N/A N/A	N/A	N/A	Mote
104109A	09/26/0	5 WIND DIR	10M Wind Dir B 15 MIN AVG	Deg	P	1	MAVG15(Y4110AA)	10 METER B	0	360	Fail	NONE	NONE	N/A	N/A	N/A	Met
TUATIOA	03/20/0			Deg				TO METERY D		000	. un	TOTE	HOME		. art	1.4/1.5	Note
1U4135A	09/26/0	5 STABILITY CLASS	50M A Delta-T Stability Class	N/A	Р	2	STAB_FUNC(U4107A)	10 & 60 M	1	7	Fail	NONE	NONE	N/A	N/A	N/A	appl
1U4136A	09/26/0	5 STABILITY CLASS	50M B Delta-T Stability Class	N/A	Р	2	STAB_FUNC(U4108A)	10 & 60 M	1	7	Fail	NONE	NONE	N/A	N/A	N/A	appl
SERVERI	09/26/0	5 FEEDER IDENTIFICATION	SERVER ID	N/A	s	1	CONSTANT VALUE		1	20	N/A	NONE	NONE	N/A	N/A	N/A	A=3

Prairie Island Nuclear plant - Unit 1 - ERDS DPL

Notes S points N0049A, N0050A, N0051A, N0052A correspond to N41 N42 N43 N44 & 36B neutron flux detectors. e quality reads "BAD" (due to hi limit exceeded) at higher power levels.

e 1: If RCP is off use FR full range sensors; else WR wide range; Note 2: Top of fuel = %. Bottom of fuel = 24%; Note 3: Compensation in RVLIS; Alarm values are calculated. est of 39 incore thermocouples.

1: U5003A=RCS saturation temp based on the 1967 ASME steam tables; U5009A=Avg Exit Temp

2 1: LOOP A (U5150A) = AVG(F0400A,F0401A,F0402A); LOOP B

151A)=AVG(F0420A,F0421A,F0422A)

e 1: Sensor is 433" above tube sheet. NR sensors span of 144"; Note 2: Zero ref 23" ve tube bundle; 420" = top of tube bundle; Level ref leg filled with condenser pot. e 1: Sensor is 433" above tube sheet. NR sensors span of 144"; Note 2: Zero ref 23" ve tube bundle; 420" = top of tube bundle; Level ref leg filled with condenser pot. sor id's 468, 469, 482

or id's 478, 479, 483

xmtrs 466, 467 xmtrs 467, 477

: 1: Alarm setpoints are at full power. In other modes; setpoints are calculated based on em pressure.

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1: If quality of NR sensors (P0480A,P0481A,P0482A,P0483A) is bad, then use the 2 sensors (P0507A,P0508A); Note 2: At other than full power mode SAS calculates Hi Lo alarm limits.

1: Zero % level is 18'9" above top of fuel; Level sensor id's 426, 427, 428

1: Sensor located 20 feet above discharge pump.

1: F0922A=Flow to cold leg; F0923A=Flow to rx vessel.

1: F0626A=RHR loop flow; F0928A=RHR flow to rx vessel

1: 14.7 gal/% UP TO 84% & 1903gal/% > 84%; Sump area = 42 sq ft. Depth=47". 1: Containment area = 5446 sq ft. Accuracy is +/- 17.2% due to complexities.

1: Units=Milli-curries/hr xenon 133 equivalent. Note 2: F5429A=stack flow. R0022A=Lo ge vent gas rad

1: Units=Milli-curries/hr xenon 133 equivalent. Note 2: F5429A=stack flow. R0050A=Hi ge vent gas rad

1: R0015A=CDSR air ejector gas radioactivity.

sensor id's 717, 718

1: Sensor elevations:697 738 755; Note 2: High alarm is 10 DegF greater than rolling in avg of containment temp.

ST=Refueling Water Storage Tank eorological tower A 10 meter 15 minute moving average of 30sec readings.

eorological tower B 10 meter 15 minute moving average of 30sec readings.

orological tower A 10 meter 15 minute moving average of 30sec readings

aorological tower B 10 meter 15 minute moving average of 30sec readings. a 1: DELTA-T based stability. Output 1-7 corresponds to class A-G. No Engineering units Note 2: U4107A=MAVG15(T2907A)

1: DELTA-T based stability. Output 1-7 corresponds to class A-G. No Engineering units Note 2: U4108A=MAVG15(T2908A)

to identify which computer is transmitting data. ERCS1-A=1; ERCS1-B=2; ERCS2-ERCS2-B=4; SIMULATOR-A=17; SIMULATOR-B=19

ENCLOSURE 2

Prairie Island Nuclear Generating Plant Unit 2 Emergency Response Data System Data Point Library

Prairie Island Nuclear plant - Unit 2 - ERDS DPL

PROCESS	
DESCRIPTIONS	DEFINITIONS
AVG	The average of 2 values with rejection of bad quality inputs.
CV-AVG	The average of 3 or more values with Chauvenet rejection of out of range or bad inputs
MAVG15	The 15 minute moving average over time of a single value.
SUM	The sum of 2 or more inputs
DIFF	The Difference of 2 inputs
QV	Quality validation of a single value. (i.e. Range checking applied).
STAB_FUNC	Atmospheric Stability function of (60 Meter - 10 meter temperature)

ABBREVIATIONS

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NR	NARROW RANGE SENSORS	PRZR	PRESSURIZER
FR	FULL RANGE SENSORS	RAD	RADIATION
BWST / RWST	REFUELING WATER STORAGE TANK	RCS	REACTOR COOLANT SYSTEM
CNTMT	CONTAINMENT	RNG	RANGE
COND	CONDENSER	SAS	SAFETY ASSESSMENT SYSTEM (SPDS)
DIR	DIRECTION	SG	STEAM GENERATOR
HP / LP	HIGH / LOW PRESSURE	SI	SAFETY INJECTION
MU	REACTOR MAKEUP	STM	STEAM
N/A	NOT APPLICABLE	T/C or TC	THERMOCOUPLE
P/S	"Process or Sensor" column heading		

Other Notes

1) The "Generic Description" field is the same as the ERCS point description for all points in this document.

2) The "Analog / Digital" field is omitted because all points in this document are Analogs.

3) There are no trip setpoints, but we have provided high and low alarm limits if any.

4) The "NOTES" field and "PROCESS / COMPUTATION" fields have been changed and expanded for most of the DPL

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(OLD=2Y4110A, NEW=2U4110A); (OLD=2U2907A, NEW=2U4135A); (OLD=2U2908A, NEW=2U4136A)

6) The following point is a new point (not replacing a deleted point): SERVERID

7) Feeder ID for unit 2 is "PI2"

POINT ID	DATE	NRC ERDS PARAMETER	ERCS POINT DESCRIPTION	ENG	P/S	# OF SENSORS	PROCESS / COMPUTATION	SENSOR	LOW ENG	HIGH	FAIL		HIGH ALARM		ZERO	DP/TEMP COMPENSA	
1U5048A	07/02/91	NI POWER RNG	SAS NIS Avg Pwr Rng Pwr Level	%	P	4	CV-AVG(N41 N42 N43 N44)	Excore	0	120	LOW	NONE	NONE	N/A	N/A	N/A	ER
1U5082A	10/16/91	NI INTERMED RNG	NIS Avg Intermediate Rng Log Q	AMP	Ρ	2	AVG(N0035A N0036A)	Excore	0	0.001	LOW	NONE	NONE	N/A	N/A	N/A	35F
1U5081A	10/16/91	NI SOURC RNG	NIS Avg Source Rng Log Q	CPS	Ρ	2	AVG(N0031A N0032A)	Excore	1	1000000	LOW	NONE	NONE	N/A	N/A	N/A	Valu
41150444	07/00/04																No
105011A	0//02/91	REACTOR VESSEL LEV	SAS Avg Reactor Vessel Level	%	P	2/4 note	AVG(2 SENSORS) Note 1	Cntmt	0	120	Fail	0	120	4.4 inch/%	Note 2	Note 3	56.7
1033104	10/10/91	CORE EAT TEMP.	SAS Ist houest incore TC	Degr	F	39	MAA(39 INCORE ICS)	Incore	32	2300	Fail	N/A	N/A	N/A	N/A	N/A	Hot
1U5077A	07/02/91	SUBCOOLING MARGIN	SAS RCS Subcooling Margin	DegF	Р	40	DIFF(U5003A - U5009A) Note 1	Incore	-200	1000	Fail	NONE	NONE	N/A	N/A	N/A	Cor
1U5152A	07/17/91	CORE FLOW	RCS Avg flow	%	Р	6	AVG(U5150A U5151A) Note 1		0	115	Fail	NONE	NONE	N/A	N/A	N/A	Not (U5
1U5032A	07/02/91	SG LEVEL 1	SAS Avg Stm Gen 1 H2O Level	%	Р	3	CV-AVG(L0400A L0401A L0402A)	Note 1	0	100	Fail	20	67	180gal/% @STP	Note 2	None	Not
11150244	07/05/01	SCIEVEL 2	SAS Aug Stm Can 21/201 and									P		180gal/%			Not
1115036A	07/05/91	SG PRESS 1	SAS Avg Stm Gen 2 H2O Level	% PSIC		3	CV-AVG(L0420A L0421A L0422A)	Note 1	0	100	Fail	20	67	@STP	Note 2	None	abo
1U5038A	07/05/91	SG PRESS 2	SAS Avg Stm Gen 2 Pressure	PSIG	P	3	CV-AVG(P0400A P0401A P0402A)		0	1400	Fail	500	10/5	N/A	N/A	N/A	sen
1U5040A	07/05/91	MAIN FEED FLOW 1	SAS Avg Stm Gen 1 Feed Flow	Lb/Hr	P	2	AVG(E0403A E0404A)		0	4470000	Fail	NONE	NONE	N/A	N/A	N/A	sen
1U5042A	07/05/91	MAIN FEED FLOW 2	SAS Avg Stm Gen 2 Feed Flow	Lb/Hr	P	2	AVG(F0423A F0424A)		0	4470000	Fail	NONE	NONE	N/A	N/A	None	TIOW
1U5044A	07/05/91	AUX FEED FLOW 1	SAS Avg Stm Gen 1 Aux Fd Fl	GPM	S	1	QV(F2861A)		0	200	Fail	NONE	NONE	N/A	N/A	None	TIOW
1U5045A	07/05/91	AUX FEED FLOW 2	SAS Avg Stm Gen 2 Aux Fd Fl	GPM	S	1	QV(F2871A)		0	200	Fail	NONE	NONE	N/A	N/A	None	-
1U5049A	07/05/91	RCS HOT LEG TEMP 1	SAS RCS Hot leg 1 Temp	DegF	S	1	QV(T0419A)		50	700	Fail	NONE	NONE	N/A	N/A	N/A	-
1U5051A	07/05/91	RCS HOT LEG TEMP 2	SAS RCS Hot leg 2 Temp	DegF	S	1	QV(T0439A)		50	700	Fail	NONE	NONE	N/A	N/A	N/A	-
1U5053A	07/05/91	RCS COLD LEG TEMP 1	SAS RCS Cold leg 1 Temp	DegF	S	1	QV(T0406A)		50	700	Fail	520 Note 1	555	N/A	N/A	N/A	Not
11 150554	07/05/01	PCS COLD LEG TEMP 2	SAS PCS Cold log 2 Tomp	DogE			0)/(T0426A)		50	700							Note
1030334	01103/91	RCS COLD LEG TEMP 2	SAS RCS Cold leg 2 Temp	Degr	5		QV(10426A)		50	700	Fail	520 Note 1	555	N/A	N/A	N/A	Syst Note
1U5001A	07/06/91	RCS PRESSURE	SAS Avg RCS pressure	PSIG	Р	4/2 NOTE	CV-AVG(4 NR OR 2 WR) Note 1		0	3000	Fail	1900	2385 Note 2	N/A	N/A	N/A	WR and
1U5007A	07/06/91	PRZR LEVEL	SAS AVO PRZR H20 IVI (NR)	%	P	3	CV-AVG(10480A 10481A 10482A)		0	100	Foil	14.0	00	CA C aplin	527 gal	1	
1F0128A	07/06/91	RCS CHARGE/MU FLOW	Charge Pmp Disch Hdr flow	Gom	S	1	Field instrument	Note 1	0	100	Fall	14.6	90 NONE	64.6 gal/%	Note 1	None	Note
1U5154A	10/09/91	HP SI FLOW	Total Safety Injection flow	Gpm	P	2	SUM(E0922A E0923A) Note 1	11010 1	0	1500	Fail	NONE	NONE	N/A N/A		N/A	Note
1U0651A	10/09/91	LP SI FLOW	Total RHR flow	Gpm	P	2	SUM(F0626A F0928A) Note 1		-1	9000	Fail	1250	2500	N/A	N/A	N/A N/A	Not
1U5153A	07/17/91	CNTMT SUMP NR	Cntmt Sump B avg level NR	%	P	2	AVG(L5550A L5555A)		0	100	Fail	NONE	NONE	Note 1	Zero	N/A	Note
1U5017A	07/06/91	CNTMT SUMP WR	SAS Avg Cntmt Sump Lvl	Ft.	Ρ	2	AVG(L5556A L5557A)		0	12	Fail	0	0.5	40741 gal/ft	0.0 ft	N/A	Note
1U5061AL	10/10/91	EFFLUENT GAS RAD	Stack Effl Rad Low Rng	MCI/HR Note 1	Р	2	R0022A*.00526 / F5429A Note 2		0	1.0E6	Fail	NONE	NONE	N/A	N/A	N/A	Note Ran
1U5061AH	10/10/91	EFFLUENT GAS BAD	Stack Effl Rad High Rng	MCI/HR	D	2	P00504*52 7 / 554204 Note 2			1.050	E-II	NONE	NONE				Note
1R0021A	10/10/91	EFFLUENT LIQ RAD	Circ Wtr Disch RAD	CPM	S	1	Field instrument	-	10	1.059	Fail	NONE	1000	N/A	N/A	N/A	Ran
1U5024A	07/06/91	COND A/E RAD	SAS Air Ejector Rad	CPM	s	1	QV(R0015A) Note 1		10	1.000	Fail	10	5000	N/A N/A	N/A	N/A	Not
1U5022A	07/06/91	CNTMT RAD	SAS Cntmt rad - Hi Rng	R/Hr	P	2	AVG(R0048A R0049A)		1	1.0E8	Fail	1	20000	N/A	N/A	N/A	NOte
1R0009A	07/06/91	RCS LTDN RAD	RCS Letdown Line Rad	MR/Hr	S	1	Field instrument		0.1	10000	Fail	NONE	1000	N/A	N/A	N/A	
1U5143A	07/06/91	MAIN SL 1	SAS Main Steamline A Rad	MR/Hr	S	1	QV(R0051A)		1	1.0E5	Fail	NONE	NONE	N/A	N/A	N/A	-
1U5144A	07/06/91	MAIN SL 2	SAS Main Steamline B Rad	MR/Hr	S	1	QV(R0052A)		1	1.0E5	Fail	NONE	NONE	N/A	N/A	N/A	
1U5026A	07/06/91	SG BD RAD 1A	SAS Stm Gen Blowdown Rad	CPM	S	1	QV(R0019A)		10	1.0E6	Fail	10	10000	N/A	N/A	N/A	
1U5015A	07/06/91	CNTMT PRESS	SAS Avg Cntmt Press	PSIG	Ρ	2	AVG(P1010A P1011A)	Cntmt	-5	200	Fail	-5	4	N/A	N/A	. N/A	WR
11150404	07/00/0	CNITNET TENIS	646 A 0									The States					Note
105013A	07/06/91		SAS Avg Cntmt Temp	DegF	P	3	CV-AVG(T1000A T1001A T1002A)	Cntmt Note 1	0	400	Fail	NONE	Note 2	N/A	N/A	N/A	5 mi
105021A	07/06/91	CNTMT H2 CONC	SAS Avg Chtmt H2 conc	%	P	2	AVG(Y0454A Y0455A)	Cntmt	0	10	Fail	NONE	NONE	N/A	N/A	N/A	
11141054	10/16/01	WIND SPEED	10M Wind Sod & 15 MIN AV/C	%	P	2	AVG(LU92UA LU92TA)	RWST	0	100	Fail	NONE	NONE	2922 Gal/%	1898 Gal	N/A	RW
1U4106A	10/16/91	WIND SPEED	10M Wind Spd A 15 MIN AVG	MPH	- B	1	MAVG15(X4106A)	10 METER A	0	100	Fail	NONE	NONE	N/A	N/A	N/A	Mete
1U4109A	09/26/05	WIND DIR	10M Wind Dir A 15 MIN AVG	Deg	D	1	MAVG15(Y4109AA)	10 METER B	0	260	Fall	NONE	NONE	N/A	N/A	N/A	Met
1U4110A	09/26/05	WIND DIR	10M Wind Dir B 15 MIN AVG	Deg	P	1	MAVG15(Y4110AA)	10 METER R	0	360	Fail	NONE	NONE	N/A	N/A	N/A	Met
1U4135A	09/26/05	STABILITY CLASS	50M A Delta-T Stability Class	N/A	D	2	STAB FUNC(1/4107A)	10 8 60 14			r an	NONE	NONE	NIA	N/A	N/A	Note
11141264	00/20/05										Fall	NONE	NONE	N/A	N/A	N/A	Note
104130A	09/20/05	STABILITY CLASS	SUM & Delta-1 Stability Class	N/A	P	2	STAB_FUNC(U4108A)	10 & 60 M	1	7	Fail	NONE	NONE	N/A	N/A	N/A	appl
SERVERID	09/26/05	FEEDER IDENTIFICATION	SERVER ID	N/A	S	1	CONSTANT VALUE		1	20	N/A	NONE	NONE	N/A	N/A	N/A	A=3

Prairie Island Nuclear plant - Unit 1 - ERDS DPL

Notes
CS points N0049A, N0050A, N0051A, N0052A correspond to N41 N42 N43 N44
3 & 36B neutron flux detectors.
ue quality reads "BAD" (due to hi limit exceeded) at higher power levels.
te 1: If RCP is off use FR full range sensors; else WR wide range; Note 2: Top of fuel =
test of 39 incore thermocountes
e 1: U5003A=RCS saturation temp based on the 1967 ASME steam tables; U5009A=Av e Exit Temp
e 1: LOOP A (U5150A) = AVG(F0400A,F0401A,F0402A); LOOP B 151A)=AVG(F0420A,F0421A,F0422A)
e 1: Sensor is 433" above tube sheet. NR sensors span of 144"; Note 2: Zero ref 23" we tube bundle; 420" = top of tube bundle; Level ref leg filled with condenser pot.
e 1: Sensor is 433" above tube sheet. NR sensors span of 144"; Note 2: Zero ref 23" ve tube bundle; 420" = top of tube bundle; Level ref leg filled with condenser pot.
sor id's 468, 469, 482
sor id's 478, 479, 483
v xmtrs 466, 467 v xmtrs 467, 477
e 1: Alarm setpoints are at full power. In other modes; setpoints are calculated based on tem pressure.
e 1: Alarm setopints are at full nower. In other modes: sotopints are calculated based on

te 1: Alarm setpoints are at full power. In other modes; setpoints are calculated based o

stem pressure. Ite 1: If quality of NR sensors (P0480A,P0481A,P0482A,P0483A) is bad, then use the 2 sensors (P0507A,P0508A); Note 2: At other than full power mode SAS calculates Hi Lo alarm limits.

te 1: Zero % level is 18'9" above top of fuel; Level sensor id's 426, 427, 428

te 1: Sensor located 20 feet above discharge pump. te 1: F0922A=Flow to cold leg; F0923A=Flow to rx vessel.

e 1: F0626A=RHR loop flow; F0928A=RHR flow to rx vessel

e 1: 14.7 gal/% UP TO 84% & 1903gal/% > 84%; Sump area = 42 sq ft. Depth=47". te 1: Containment area = 5446 sq ft. Accuracy is +/- 17.2% due to complexities.

te 1: Units=Milli-curries/hr xenon 133 equivalent. Note 2: F5429A=stack flow. R0022A=Lo nge vent gas rad

te 1: Units=Milli-curries/hr xenon 133 equivalent. Note 2: F5429A=stack flow. R0050A=Hi nge vent gas rad

e 1: R0015A=CDSR air ejector gas radioactivity.

t sensor id's 717, 718 e 1: Sensor elevations:697 738 755; Note 2: High alarm is 10 DegF greater than rolling nin avg of containment temp.

ST=Refueling Water Storage Tank

eorological tower A 10 meter 15 minute moving average of 30sec readings.

eorological tower B 10 meter 15 minute moving average of 30sec readings.

eorological tower A 10 meter 15 minute moving average of 30sec readings.

eorological tower B 10 meter 15 minute moving average of 30sec readings

e 1: DELTA-T based stability. Output 1-7 corresponds to class A-G. No Engineering units ly. Note 2: U4107A=MAVG15(T2907A)

1: DELTA-T based stability. Output 1-7 corresponds to class A-G. No Engineering units Note 2: U4108A=MAVG15(T2908A)

d to identify which computer is transmitting data. ERCS1-A=1; ERCS1-B=2; ERCS2-ERCS2-B=4; SIMULATOR-A=17; SIMULATOR-B=19