



Tennessee Valley Authority, Post Office Box 2000, Decatur, Alabama 35609-2000

November 30, 2016

10 CFR 50.4
10 CFR 50, Appendix E

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

Browns Ferry Nuclear Plant, Units 1, 2, and 3
Renewed Facility Operating License Nos. DPR-33, DPR-52, and DPR-68
NRC Docket Nos. 50-259, 50-260, and 50-296

Subject: **Emergency Response Data System Changes**

The purpose of this letter is to provide changes to the Emergency Response Data System (ERDS), as required by Title 10 of the Code of Federal Regulations (10 CFR) 50, Appendix E, Section VI.3, "Maintaining Emergency Response Data System" for Browns Ferry Nuclear Plant (BFN), Units 1, 2, and 3.

The Tennessee Valley Authority performed a review of the ERDS Data Point Library to identify discrepancies between the ERDS Data Point Library and the applicable technical instructions. Several ERDS points were changed in the Data Point Library but were not changed in the applicable technical instructions. Additionally, these changes were not submitted to the NRC in accordance with 10 CFR 50, Appendix E, Section VI.3.a, which requires a notification within 30 days after any software or hardware changes to any transmitted data points identified in the Data Point Library are made. The changes to the ERDS Data Point Library include instrument range parameters, alarm/trip set points Modes of operation, how data is processed, unique system description Modes of operation and parameters, plant specific point description titles, and engineering units. This deficiency has been entered into the Corrective Action Program.

The changes to the ERDS Data Point Library are summarized in the Enclosure.

There are no new regulatory commitments in this letter. Please direct questions concerning this issue to Jamie L. Paul at (256) 729-2636.

Respectfully,

A handwritten signature in black ink, appearing to read "S. M. Bono", is written over a circular stamp. The signature is fluid and cursive.

S. M. Bono
Site Vice President

U.S. Nuclear Regulatory Commission
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Enclosure: Emergency Response Data System Data Point Library Change

cc (w/Enclosure):

NRC Regional Administrator – Region II
NRC Senior Resident Inspector – Browns Ferry Nuclear Plant

ENCLOSURE

**Browns Ferry Nuclear Plant
Units 1, 2, and 3**

Emergency Response Data System Data Point Library Change

(See Enclosed)

BFN Unit 1	Emergency Response Data System (ERDS) Data Point Library	1-TI-411 Rev. 0003 Page 11 of 45
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**Appendix A
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ERDS Point Number 4 REAC VES LEV SPDS0007 Reactor Vessel Water Level

Date: 12/20/2006
Reactor Unit: BF1
Data Feeder: 1
NRC ERDS Parameter: REAC VES LEV
Point ID: SPDS0007
Plant Spec Point Desc: RX WATER LEVEL - COMPOSED
GenericCond Desc: Reactor Vessel Water Level

Analog/Digital A
Engr Units/Dig States: INCHES
Engr Units N/A
Minimum Instr Range: -268
Maximum Instr Range: ~~400~~ ← 500
Zero Point Reference: MSSKRT
Reference Point Notes: 528" above vessel zero

PROC or SENS: P
Number of Sensors: 11
How Processed: Weighted Average w/Fault Detect (PSVA)
Sensor Locations: N/A
Alarm/Trip Set Points: All modes: HIHI=51, HI=39, LO=27, LOLO=2

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

500


Combines one 0 - ~~+400~~ (floodup), four -10 - + 70 (Normal), four -155 - + 60 (Emerg) and two -268 - +32 (post accident) into one wide range indication; therefore, for off normal conditions this point could be difficult to interpret. Instruments are calibrated for normal operating conditions, except for the floodup instrument which is calibrated for atmospheric conditions, and the post accident instruments which are calibrated assuming 212 degrees Fahrenheit water in all lines. Top of fuel is at - 162".

Unique System Desc.:

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ERDS Point Number 5 MAIN FD FLOW CALC040 Feedwater Flow into the Reactor

Date: 12/20/2006
Reactor Unit: BF1
Data Feeder: 1
NRC ERDS Parameter: MAIN FD FLOW
Point ID: CALC040
Plant Spec Point Desc: RFW FLOW TO REACTOR
GenericCond Desc: Feedwater Flow into the Reactor

Analog/Digital: A
Engr Units/Dig States: MLB/HR
Engr Units N/A
Minimum Instr Range: 0
Maximum Instr Range: 20
Zero Point Reference: N/A
Reference Point Notes: N/A

PROC or SENS: P
Number of Sensors: 2
How Processed: Sum of RFW LINE A and RFW LINE B
Sensor Locations: N/A

Alarm/Trip Set Points: ~~Run: HIHI=14.8, HI=14.7 (EPU values HIHI=17.1, HI=17.0)~~

All modes: HIHI=17.1, HI=17.0

NID Power Cutoff Level: N/A
NID Power Cut-On: N/A
Instrument Failure Mode: N/A
Temperature Compensation: N
Level Reference Leg: N/A
Unique System Desc.: Sum of feedflow instruments (3-78A & 3-78B),
uncompensated

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~~ERDS Point Number 19~~ ~~MN STEAM RAD~~ ~~90-138~~ ~~Rad Level Main Steam Line B~~

~~Date:~~ ~~12/20/2006~~

~~Reactor Unit:~~ ~~BF1~~

~~Data Feeder:~~ ~~1~~

~~NRC ERDS Parameter:~~ ~~MN STEAM RAD~~

~~Point ID:~~ ~~90-138~~

~~Plant Spec Point Desc:~~ ~~MAIN STM LINE B RAD LEVEL~~

~~GenericCond Desc:~~ ~~Rad Level Main Steam Line B~~

~~Analog/Digital~~ ~~A~~

~~Engr Units/Dig States:~~ ~~MR/HR~~

~~Engr Units~~ ~~N/A~~

~~Minimum Instr Range:~~ ~~1.0~~

~~Maximum Instr Range:~~ ~~1000000~~

~~Zero Point Reference:~~ ~~N/A~~

~~Reference Point Notes:~~ ~~N/A~~

~~PROC or SENS:~~ ~~S~~

~~Number of Sensors:~~ ~~1~~

~~How Processed:~~ ~~SALG~~

~~Sensor Locations:~~ ~~Main Steam Tunnel~~

~~Alarm/Trip Set Points:~~ ~~All modes: HIHI=1500, HI=750~~

~~NID Power Cutoff Level:~~ ~~N/A~~

~~NID Power Cut On~~ ~~N/A~~

~~Instrument Failure Mode:~~ ~~LOW~~

~~Temperature Compensation:~~ ~~N~~

~~Level Reference Leg:~~ ~~N/A~~

~~Unique System Desc.:~~

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ERDS Point Number	20	MN STEAM RAD	90-139	Rad Level	Main Steam Line D
Date:		12/20/2006			
Reactor Unit:		BF1			
Data Feeder:		1			
NRC ERDS Parameter:		MN STEAM RAD			
Point ID:		90-139			
Plant Spec Point Desc:		MAIN STM LINE D RAD LEVEL			
GenericCond Desc:		Rad Level - Main Steam Line D			
Analog/Digital		A			
Engr Units/Dig States:		MR/HR			
Engr Units		N/A			
Minimum Instr Range:		1.0			
Maximum Instr Range:		1000000			
Zero Point Reference:		N/A			
Reference Point Notes:		N/A			
PROC or SENS:		S			
Number of Sensors:		1			
How Processed:		SALG			
Sensor Locations:		Main Steam Tunnel			
Alarm/Trip Set Points:		All modes: HHHI=1500, HI=750			
NID Power Cutoff Level:		N/A			
NID Power Cut On		N/A			
Instrument Failure Mode:		LOW			
Temperature Compensation:		N			
Level Reference Leg:		N/A			
Unique System Desc.:					

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ERDS Point Number	21	DW PRESS	SPDS0009	Drywell Pressure
Date:	12/20/2006			
Reactor Unit:	BF1			
Data Feeder:	1			
NRC ERDS Parameter:	DW PRESS			
Point ID:	SPDS0009			
Plant Spec Point Desc:	DRYWELL PRESSURE - COMPOSED			
GenericCond Desc:	Drywell Pressure			
Analog/Digital	A			
Engr Units/Dig States:	PSIG			
Engr Units	N/A			
Minimum Instr Range:	-15			
Maximum Instr Range:	300			
Zero Point Reference:	N/A			
Reference Point Notes:	N/A			
PROC or SENS:	P			
Number of Sensors:	6			
How Processed:	Weighted Average w/Fault Detect (PSVA)			
Sensor Locations:	N/A			
Alarm/Trip Set Points:	See Below			
NID Power Cutoff Level:	N/A			
NID Power Cut-On	N/A			
Instrument Failure Mode:	N/A			
Temperature Compensation:	N			
Level Reference Leg:	N/A			
Unique System Desc.:	Alarm:	Run:	HIHI=2.45, HI=1.96, LO=1.15, LOLO=1.1	
		Startup:	HIHI=2.45, HI=1.96, LO=1.15, LOLO=1.1	
		Shutdown:	HIHI=2.45, HI=1.96, LO=1.15, LOLO=1.1	
		Refuel:	HIHI=2.45, HI=1.96	

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ERDS Point Number 25 H2 CONC 76-39 Drywell or Torus Hydrogen Level

Date: 12/20/2006

Reactor Unit: BF1

Data Feeder: 1

NRC ERDS Parameter: H2 CONC

Point ID: 76-39

Plant Spec Point Desc: DRYWELL H2 CONCENTRATION

Generic Cond Desc: Drywell or Torus Hydrogen Level

Analog/Digital A

Engr Units/Dig States: %

Engr Units 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: 1

How Processed: ~~Weighted Average w/Fault Detect (PSVA)~~

Sensor Locations: N/A

Alarm/Trip Set Points: All modes: HIHI=2.4 HI=2.0 LOLO=0.10

NID Power Cutoff Level: N/A

NID Power Cut-On N/A

Instrument Failure Mode: N/A

Temperature Compensation: N

Level Reference Leg: N/A

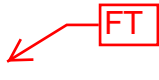

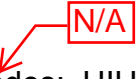

Unique System Desc.: Sensor input can be switched between the Torus and Drywell, therefore this point may be difficult to interpret.

Hydrogen

Polynomial

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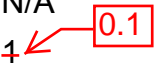
ERDS Point Number	27	CST LEVEL	2-169	Condensate Storage Tank #1 (UNIT 1) Level
Date:	12/20/2006			
Reactor Unit:	BF1			
Data Feeder:	1			
NRC ERDS Parameter:	CST LEVEL			
Point ID:	2-169			
Plant Spec Point Desc:	CST #1 (UNIT 1) LEVEL			
GenericCond Desc:	Condensate Storage Tank Level			
Analog/Digital	A			
Engr Units/Dig States:	FEET 			
Engr Units	28 feet = 375,000 GALLONS			
Minimum Instr Range:	0 			
Maximum Instr Range:	32			
Zero Point Reference:	Below			
Reference Point Notes:	2 feet above bottom of tank			
PROC or SENS:	S			
Number of Sensors:	1			
How Processed:	Polynomial			
Sensor Locations:	N/A 			
Alarm/Trip Set Points:	All modes: HIHI=29 HI=27 LO=12 LOLO=10			
NID Power Cutoff Level:	N/A			
NID Power Cut-On	N/A			
Instrument Failure Mode:	LOW			
Temperature Compensation:	N			
Level Reference Leg:	N/A			
Unique System Desc.:	Zero level reference point is 2 feet above bottom of tank. 			

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ERDS Point Number: 3 NI SOURC RNG SPDS0041 Reactor Power - Source Range

Date: 12/18/2000
Reactor Unit: BF2
Data Feeder: 1
NRC ERDS Parameter: NI SOURC RNG
Point ID: SPDS0041
Plant Spec Point Desc: RX POWER SRM - AVG
GenericCond Desc: Reactor Power - Source Range

Analog/Digital: A
Engr Units/Dig States: CPS
Engr Units: N/A
Minimum Instr Range: 4 
Maximum Instr Range: 1000000
Zero Point Reference: N/A
Reference Point Notes: N/A

PROC or SENS: P
Number of Sensors: 4
How Processed: Average of healthy inputs (HAVE)
Sensor Locations: N/A
Alarm/Trip Set Points: See Below

NID Power Cutoff Level: N/A
NID Power Cut-On: N/A
Instrument Failure Mode: N/A
Temperature Compensation: N
Level Reference Leg: N/A
Unique System Desc: Alarm: Startup/Shutdown/Refuel: HIHI=500000,
HI=100000, LO=5, LOLO=3

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ERDS Point Number: 4 REAC VES LEV SPDS0007 Reactor Vessel Water Level

Date: 12/18/2000
Reactor Unit: BF2
Data Feeder: 1
NRC ERDS Parameter: REAC VES LEV
Point ID: SPDS0007
Plant Spec Point Desc: RX WATER LEVEL - COMPOSED
GenericCond Desc: Reactor Vessel Water Level

Analog/Digital: A
Engr Units/Dig States: INCHES
Engr Units: N/A
Minimum Instr Range: -268
Maximum Instr Range: ~~400~~ ← 500
Zero Point Reference: MSSKRT
Reference Point Notes: 528" above vessel zero

PROC or SENS: P
Number of Sensors: 11
How Processed: Weighted Average w/Fault Detect (PSVA)
Sensor Locations: N/A
Alarm/Trip Set Points: All modes: HIHI=51, HI=39, LO=27, LOLO=2

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

Combines one 0 - ~~+400~~ (floodup), four -10 - +70 (Normal), four -155 - +60 (Emerg) and two -268 - +32 (post accident) into one wide range indication; therefore, for off normal conditions this point could be difficult to interpret. Instruments are calibrated for normal operating conditions, except for the floodup instrument which is calibrated for atmospheric conditions, and the post accident instruments which are calibrated assuming 212 degrees Faranheit water in all lines. Top of fuel is at -162".

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ERDS Point Number: 6 RCIC FLOW 71-36 Core Isolation Cooling Flow

Date: 12/18/2000
Reactor Unit: BF2
Data Feeder: 1
NRC ERDS Parameter: RCIC FLOW
Point ID: 71-36
Plant Spec Point Desc: RCIC PUMP DISCHARGE FLOW
GenericCond Desc: Core Isolation Cooling Flow

Analog/Digital: A
Engr Units/Dig States: GPM
Engr Units: N/A
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: ~~Polynomial~~ SQRT
Sensor Locations: Downstream of Min Flow Line
Alarm/Trip Set Points: All modes: HIHI=625

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

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ERDS Point Number: 13 CND A/E RAD SPDS0047 Condensor Air Ejector Rad Level

Date: 12/18/2000

Reactor Unit: BF2

Data Feeder: 1

NRC ERDS Parameter: CND A/E RAD

Point ID: SPDS0047

Plant Spec Point Desc: OFFGAS POST ~~TREATMENT AVG~~

GenericCond Desc: Condensor Air Ejector Rad Level

Analog/Digital: A

Engr Units/Dig States: CPS

Engr Units N/A

Minimum Instr Range: 4

Maximum Instr Range: 1000000

Zero Point Reference: N/A

Reference Point Notes: N/A

PROC or SENS P

Number of Sensors: 2

How Processed: Healthy Average (HAVE)

Sensor Locations: N/A

Alarm/Trip Set Points: See Below

NID Power Cutoff Level: N/A

NID Power Cut-On: N/A

Instrument Failure Mode: N/A

Temperature Compensation: N

Level Reference Leg: N/A

Unique System Desc: Alarm: Run/Startup: HIHI=290000, HI=58000, LOLO=10
Shutdown/Refuel: LOLO=10

TREATMENT-AVG

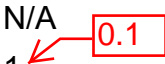
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ERDS Point Number: 15 DW RAD 90-272A Drywell Radiation - 135 Deg

Date: 12/18/2000
Reactor Unit: BF2
Data Feeder: 1
NRC ERDS Parameter: DW RAD
Point ID: 90-272A
Plant Spec Point Desc: DW RAD-RX 555, 135 DEG AZIMUTH
GenericCond Desc: Drywell Radiation - 135 Deg

Analog/Digital: A
Engr Units/Dig States: R/HR
Engr Units N/A
Minimum Instr Range: 4 
Maximum Instr Range: 10000000
Zero Point Reference: N/A
Reference Point Notes: N/A

PROC or SENS S
Number of Sensors: 1
How Processed: SALG
Sensor Locations: At Level 555, 135 Degree Azimuth
Alarm/Trip Set Points: All modes: HIHI=1440, HI=1000

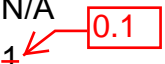
NID Power Cutoff Level: N/A
NID Power Cut-On: N/A
Instrument Failure Mode: LOW
Temperature Compensation: N
Level Reference Leg: N/A
Unique System Desc:

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ERDS Point Number: 16 DW RAD 90-273A Drywell Radiation - 270 Deg

Date: 12/18/2000
Reactor Unit: BF2
Data Feeder: 1
NRC ERDS Parameter: DW RAD
Point ID: 90-273A
Plant Spec Point Desc: DW RAD-RX 560, 270 DEG AZIMUTH
GenericCond Desc: Drywell Radiation - 270 Deg

Analog/Digital: A
Engr Units/Dig States: R/HR
Engr Units: N/A
Minimum Instr Range: 4 
Maximum Instr Range: 10000000
Zero Point Reference: N/A
Reference Point Notes: N/A

PROC or SENS: S
Number of Sensors: 1
How Processed: SALG
Sensor Locations: At Level 560, 270 Degree Azimuth
Alarm/Trip Set Points: All modes: HIHI=1440, HI=1000

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

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~~ERDS Point Number: 19~~ ~~MN STEAM RAD 90 138~~ ~~Rad Level Main Steam Line B~~

~~Date:~~ ~~12/18/2000~~

~~Reactor Unit:~~ ~~BF2~~

~~Data Feeder:~~ ~~1~~

~~NRC ERDS Parameter:~~ ~~MN STEAM RAD~~

~~Point ID:~~ ~~90 138~~

~~Plant Spec Point Desc:~~ ~~MAIN STM LINE B RAD LEVEL~~

~~GenericCond Desc:~~ ~~Rad Level Main Steam Line B~~

~~Analog/Digital:~~ ~~A~~

~~Engr Units/Dig States:~~ ~~MR/HR~~

~~Engr Units~~ ~~N/A~~

~~Minimum Instr Range:~~ ~~1~~

~~Maximum Instr Range:~~ ~~1000000~~

~~Zero Point Reference:~~ ~~N/A~~

~~Reference Point Notes:~~ ~~N/A~~

~~PROC or SENS~~ ~~S~~

~~Number of Sensors:~~ ~~1~~

~~How Processed:~~ ~~SALG~~

~~Sensor Locations:~~ ~~Main Steam Tunnel~~

~~Alarm/Trip Set Points:~~ ~~All modes: HHHI=7200, HI=3600~~

~~NID Power Cutoff Level:~~ ~~N/A~~

~~NID Power Cut On~~ ~~N/A~~

~~Instrument Failure Mode:~~ ~~LOW~~

~~Temperature Compensation:~~ ~~N~~

~~Level Reference Leg:~~ ~~N/A~~

~~Unique System Desc:~~

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~~ERDS Point Number: 20~~ ~~MN STEAM RAD 90 139~~ ~~Rad Level Main Steam Line D~~

~~Date:~~ ~~12/18/2000~~

~~Reactor Unit:~~ ~~BF2~~

~~Data Feeder:~~ ~~1~~

~~NRC ERDS Parameter:~~ ~~MN STEAM RAD~~

~~Point ID:~~ ~~90 139~~

~~Plant Spec Point Desc:~~ ~~MAIN STM LINE D RAD LEVEL~~

~~GenericCond Desc:~~ ~~Rad Level Main Steam Line D~~

~~Analog/Digital:~~ ~~A~~

~~Engr Units/Dig States:~~ ~~MR/HR~~

~~Engr Units~~ ~~N/A~~

~~Minimum Instr Range:~~ ~~1~~

~~Maximum Instr Range:~~ ~~1000000~~

~~Zero Point Reference:~~ ~~N/A~~

~~Reference Point Notes:~~ ~~N/A~~

~~PROC or SENS~~ ~~S~~

~~Number of Sensors:~~ ~~1~~

~~How Processed:~~ ~~SALG~~

~~Sensor Locations:~~ ~~Main Steam Tunnel~~

~~Alarm/Trip Set Points:~~ ~~All modes: HHHI=7200, HI=3600~~

~~NID Power Cutoff Level:~~ ~~N/A~~

~~NID Power Cut On~~ ~~N/A~~

~~Instrument Failure Mode:~~ ~~LOW~~

~~Temperature Compensation:~~ ~~N~~

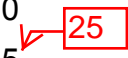
~~Level Reference Leg:~~ ~~N/A~~

~~Unique System Desc:~~

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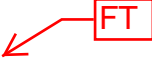

ERDS Point Number:	26	O2 CONC	76-43	Drywell or Torus Oxygen Level
Date:	12/18/2000			
Reactor Unit:	BF2			
Data Feeder:	1			
NRC ERDS Parameter:	O2 CONC			
Point ID:	76-43			
Plant Spec Point Desc:	DRYWELL OXYGEN CONCENTRATION			
GenericCond Desc:	Drywell or Torus Oxygen Level			
Analog/Digital:	A			
Engr Units/Dig States:	%			
Engr Units	N/A			
Minimum Instr Range:	0			
Maximum Instr Range:	5 			
Zero Point Reference:	N/A			
Reference Point Notes:	N/A			
PROC or SENS	S			
Number of Sensors:	1			
How Processed:	Polynomial			
Sensor Locations:	N/A			
Alarm/Trip Set Points:	All modes: HIHI=4.5, HI=4.0, LOLO=0.10			
NID Power Cutoff Level:	N/A			
NID Power Cut-On	N/A			
Instrument Failure Mode:	LOW			
Temperature Compensation:	N			
Level Reference Leg:	N/A			
Unique System Desc:	There are 2 sensors that can be switched between the Torus and Drywell. Normally 1 is set to each; therefore, this point may be difficult to interpret.			

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ERDS Point Number: 27 CST LEVEL 2-161 Condensate Storage Tank Level

Date: 12/18/2000
Reactor Unit: BF2
Data Feeder: 1
NRC ERDS Parameter: CST LEVEL
Point ID: 2-161
Plant Spec Point Desc: CST #2 (UNIT 2) LEVEL
GenericCond Desc: Condensate Storage Tank Level

Analog/Digital: A
Engr Units/Dig States: ~~FEET~~ 
Engr Units: 28 feet = 375,000 GALLONS
Minimum Instr Range: 0 
Maximum Instr Range: 32
Zero Point Reference: Below
Reference Point Notes: 2 feet above bottom of tank

PROC or SENS: S
Number of Sensors: 1
How Processed: Polynomial
Sensor Locations: N/A
Alarm/Trip Set Points: All modes: HIHI=29, HI=27, LO=12, LOLO=10

NID Power Cutoff Level: N/A
NID Power Cut-On: N/A
Instrument Failure Mode: LOW
Temperature Compensation: N
Level Reference Leg: N/A
Unique System Desc: ~~Zero point reference is 2 feet above the bottom of the tank.~~ 

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ERDS Point Number: 34 STAB CLASS CALC524 Stability Class Upper

Date: 09/19/2012

Reactor Unit: BF2

Data Feeder: 1

NRC ERDS Parameter: STAB CLASS

Point ID: CALC524

Plant Spec Point Desc: ~~Stability Class Upper~~

GenericCond Desc: Air Stability Upper

Analog/Digital:

Engr Units/Dig States: STABA

Engr Units

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 N/A

Instrument Failure Mode: N/A

Temperature Compensation: N

Level Reference Leg: N/A

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

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

STACK LVL ATM STAB
CLASS (15 MIN)

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ERDS Point Number: 35 STAB CLASS CALC525 Air Stability Intermediate

Date: 09/19/2012
Reactor Unit: BF2
Data Feeder: 1
NRC ERDS Parameter: STAB CLASS
Point ID: CALC525
Plant Spec Point Desc: ~~Stability Class Intermediate~~
GenericCond Desc: Air Stability Intermediate

**OVERALL ATM STAB
CLASS (15 MIN)**

Analog/Digital:
Engr Units/Dig States: STABA
Engr Units
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 N/A
Instrument Failure Mode: N/A
Temperature Compensation: N
Level Reference Leg: N/A
Unique System Desc: Differential Temperature Upper-Intermed. (deg C)

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

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ERDS Point Number: 36 STAB CLASS CALC526 Air Stability Lower

Date: 09/19/2012

Reactor Unit: BF2

Data Feeder: 1

NRC ERDS Parameter: STAB CLASS

Point ID: CALC526

Plant Spec Point Desc: ~~Stability Class Lower~~

GenericCond Desc: Air Stability Lower

GRND LVL ATM STAB
CLASS (15 MIN)

Analog/Digital:

Engr Units/Dig States: STABA

Engr Units

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 N/A

Instrument Failure Mode: LOW

Temperature Compensation: N

Level Reference Leg: N/A

Unique System Desc: Differential Temperature Intermed-Lower (deg C)

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

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ERDS Point Number:	2	NI INTER RNG	CALCO45	Reactor Power - Intermediate Rng
Date:	12/19/2000			
Reactor Unit:	BF3			
Data Feeder:	1			
NRC ERDS Parameter:	NI INTER RNG			
Point ID:	CALCO45			
Plant Spec Point Desc:	AVERAGE OF 8 IRM'S			
GenericCond Desc:	Reactor Power - Intermediate Rng			
Analog/Digital:	A			
Engr Units/Dig States:	%SCALE			
Engr Units	N/A			
Minimum Instr Range:	0			
Maximum Instr Range:	125			
Zero Point Reference:	N/A			
Reference Point Notes:	N/A			
PROC or SENS	P			
Number of Sensors:	8			
How Processed:	Average (AVG)			
Sensor Locations:	N/A			
Alarm/Trip Set Points:	See Below			
NID Power Cutoff Level:	N/A			
NID Power Cut-On	N/A			
Instrument Failure Mode:	N/A			
Temperature Compensation:	N			
Level Reference Leg:	N/A			
Unique System Desc:	Since the IRMs have a range switch this average is difficult to interpret.			
Alarm:	Run:	HIHI=120		
	Startup:	HIHI=108 HI=80 LO=20 LOLO=15		
	Shutdown:	HIHI=50 HI=25		
	Refuel:	HIHI=50 HI=25		

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ERDS Point Number: 4 REAC VES LEV SPDS0007 Reactor Vessel Water Level

Date: 12/19/2000
Reactor Unit: BF3
Data Feeder: 1
NRC ERDS Parameter: REAC VES LEV
Point ID: SPDS0007
Plant Spec Point Desc: RX WATER LEVEL - COMPOSED
GenericCond Desc: Reactor Vessel Water Level

Analog/Digital: A
Engr Units/Dig States: INCHES
Engr Units: N/A
Minimum Instr Range: -268
Maximum Instr Range: 400 ← 500
Zero Point Reference: MSSKRT
Reference Point Notes: 528" above vessel zero

PROC or SENS: P
Number of Sensors: 11
How Processed: Weighted Average w/Fault Detect (PSVA)
Sensor Locations: N/A
Alarm/Trip Set Points: ~~All modes:~~ HIHI=51 HI=39 LO=27 LOLO=2

NID Power Cutoff Level: N/A
NID Power Cut-On: N/A
Instrument Failure Mode: N/A
Temperature Compensation: Y
Level Reference Leg: N/A
Unique System Desc: Combines one 0 - +400 (floodup), four -10 - +70 (Normal), four -155 - +60 (Emerg) and two -268 - +32 (post accident) into one wide range indication; therefore, for off normal conditions this point could be difficult to interpret. Instruments are calibrated for normal operating conditions, except for the floodup instrument which is calibrated for atmospheric conditions, and the post accident instruments which are calibrated assuming 212 degrees Fahrenheit water in all lines. Top of fuel is at -162".

RUN/SU/SD

500

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ERDS Point Number: 5 MAIN FD FLOW ~~CALC040~~ Feedwater Flow into the Reactor

Date: 12/19/2000
Reactor Unit: BF3
Data Feeder: 1
NRC ERDS Parameter: MAIN FD FLOW
Point ID: ~~CALC040~~ ← CALC040
Plant Spec Point Desc: RFW FLOW TO REACTOR
GenericCond Desc: Feedwater Flow into the Reactor

Analog/Digital: A
Engr Units/Dig States: MLB/HR
Engr Units: N/A
Minimum Instr Range: 0
Maximum Instr Range: ~~16~~ ← 20
Zero Point Reference: N/A
Reference Point Notes: N/A

PROC or SENS: P
Number of Sensors: 2
How Processed: Sum of RFW LINE A and RFW LINE B
Sensor Locations: N/A
Alarm/Trip Set Points: Run: HIHI=14.8 HI=14.7

NID Power Cutoff Level: N/A
NID Power Cut-On: N/A
Instrument Failure Mode: N/A
Temperature Compensation: N
Level Reference Leg: N/A
Unique System Desc: Sum of feedflow instruments, uncompensated

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ERDS Point Number: 6 RCIC FLOW 71-36 Core Isolation Cooling Flow

Date: 12/19/2000
Reactor Unit: BF3
Data Feeder: 1
NRC ERDS Parameter: RCIC FLOW
Point ID: 71-36
Plant Spec Point Desc: RCIC PUMP DISCHARGE FLOW
GenericCond Desc: Core Isolation Cooling Flow

Analog/Digital: A
Engr Units/Dig States: GPM
Engr Units: N/A
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: ~~Polynomial~~
Sensor Locations: Downstream of Min Flow Line
Alarm/Trip Set Points: ~~All modes:~~ HHH=625

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

SQRT

RUN/SU/SD

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ERDS Point Number: 7 RCS PRESSURE SPDS0008 Reactor Coolant System Pressure

Date: 12/19/2000
Reactor Unit: BF3
Data Feeder: 1
NRC ERDS Parameter: RCS PRESSURE
Point ID: SPDS0008
Plant Spec Point Desc: RX PRESSURE - COMPOSED
GenericCond Desc: Reactor Coolant System Pressure

Analog/Digital: A
Engr Units/Dig States: PSIG
Engr Units: N/A
Minimum Instr Range: 0
Maximum Instr Range: 1500
Zero Point Reference: N/A
Reference Point Notes: N/A

PROC or SENS: P
Number of Sensors: 6
How Processed: Weighted Average w/Fault Detect (PSVA)
Sensor Locations: N/A
Alarm/Trip Set Points: See Below

NID Power Cutoff Level: N/A
NID Power Cut-On: N/A
Instrument Failure Mode: N/A
Temperature Compensation: Y
Level Reference Leg: N/A
Unique System Desc: Instruments are calibrated for rated operating conditions.

Alarm: Run: HIHI=1073 HI=1070 LO=918 LOLO=915
 Startup: HIHI=1073 HI=1070 LO=918 LOLO=915
 Shutdown: HIHI=1073 HI=1070
 ~~Refuel: HIHI=1073 HI=1070~~

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ERDS Point Number: 8 HPCI FLOW 73-33 High Pressure Coolant Inj. Flow

Date: 12/19/2000
Reactor Unit: BF3
Data Feeder: 1
NRC ERDS Parameter: HPCI FLOW
Point ID: 73-33
Plant Spec Point Desc: HPCI Pump Discharge Flow
GenericCond Desc: High Pressure Coolant Inj. Flow

Analog/Digital: A
Engr Units/Dig States: GPM
Engr Units: N/A
Minimum Instr Range: 0
Maximum Instr Range: 6000
Zero Point Reference: N/A
Reference Point Notes: N/A

PROC or SENS: S
Number of Sensors: 1
How Processed: Polynomial
Sensor Locations: Downstream of Min Flow Line
Alarm/Trip Set Points: ~~All modes:~~ HHH=5200

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

RUN/SU/SD

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ERDS Point Number: 9 LPCI FLOW 74-50 LPCI - RHR System 1 Flow

Date: 12/19/2000
Reactor Unit: BF3
Data Feeder: 1
NRC ERDS Parameter: LPCI FLOW
Point ID: 74-50
Plant Spec Point Desc: RHR SYS I FLOW
GenericCond Desc: LPCI - RHR System 1 Flow

Analog/Digital: A
Engr Units/Dig States: GPM
Engr Units: N/A
Minimum Instr Range: 0
Maximum Instr Range: 25000
Zero Point Reference: N/A
Reference Point Notes: N/A

PROC or SENS: S
Number of Sensors: 1
How Processed: Polynomial
Sensor Locations: Downstream of HX and Before Sprays
Alarm/Trip Set Points: ~~All Modes:~~ HIHI=20000 HI=13000

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

 RUN/SU/SD

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ERDS Point Number: 10 LPCI FLOW 74-64 LPCI - RHR System II Flow

Date: 12/19/2000
Reactor Unit: BF3
Data Feeder: 1
NRC ERDS Parameter: LPCI FLOW
Point ID: 74-64
Plant Spec Point Desc: RHR SYS II FLOW
GenericCond Desc: LPCI - RHR System II Flow

Analog/Digital: A
Engr Units/Dig States: GPM
Engr Units: N/A
Minimum Instr Range: 0
Maximum Instr Range: 25000
Zero Point Reference: N/A
Reference Point Notes: N/A

PROC or SENS: S
Number of Sensors: 1
How Processed: Polynomial
Sensor Locations: Downstream of HX and Before Sprays
Alarm/Trip Set Points: ~~All modes:~~ HIHI=20000 HI=13000

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

RUN/SU/SD

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ERDS Point Number: 11 CR SPRAY FL 75-21 Core Spray - System I Flow

Date: 12/19/2000
Reactor Unit: BF3
Data Feeder: 1
NRC ERDS Parameter: CR SPRAY FL
Point ID: 75-21
Plant Spec Point Desc: CORE SPRAY SYS I FLOW
GenericCond Desc: Core Spray - System I Flow

Analog/Digital: A
Engr Units/Dig States: GPM
Engr Units: N/A
Minimum Instr Range: 0
Maximum Instr Range: 10000
Zero Point Reference: N/A
Reference Point Notes: N/A

PROC or SENS: S
Number of Sensors: 1
How Processed: Polynomial
Sensor Locations: Downstream of Min Flow Line
Alarm/Trip Set Points: ~~All modes:~~ HHHI=6300 HI=6275

 RUN/SU/SD

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

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ERDS Point Number: 12 CR SPRAY FL 75-49 Core Spray - System II Flow

Date: 12/19/2000
Reactor Unit: BF3
Data Feeder: 1
NRC ERDS Parameter: CR SPRAY FL
Point ID: 75-49
Plant Spec Point Desc: CORE SPRAY SYS II FLOW
GenericCond Desc: Core Spray - System II Flow

Analog/Digital: A
Engr Units/Dig States: GPM
Engr Units: N/A
Minimum Instr Range: 0
Maximum Instr Range: 10000
Zero Point Reference: N/A
Reference Point Notes: N/A

PROC or SENS: S
Number of Sensors: 1
How Processed: Polynomial
Sensor Locations: Downstream of Min Flow Line
Alarm/Trip Set Points: ~~All modes:~~ HHHI=6300 HI=6275

 RUN/SU/SD

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

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ERDS Point Number: 14 CND A/E RAD 90-157 Offgas Pre Treatment Avg

Date: 12/19/2000
Reactor Unit: BF3
Data Feeder: 1
NRC ERDS Parameter: CND A/E RAD
Point ID: 90-157
Plant Spec Point Desc: OFFGAS PRE TREATMENT ~~AVG~~
GenericCond Desc: Offgas Pre Treatment Avg

RADIATION

Analog/Digital: A
Engr Units/Dig States: MR/HR
Engr Units: N/A
Minimum Instr Range: ~~-1~~
Maximum Instr Range: 1000000
Zero Point Reference: N/A
Reference Point Notes: N/A

PROC or SENS S
Number of Sensors: 1
How Processed: SALG
Sensor Locations: N/A
Alarm/Trip Set Points: Run/Startup: HIHI=1690 HI=845 LOLO=1

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

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ERDS Point Number: 15 DW RAD 90-272A Drywell Radiation - 45 Deg

Date: 12/19/2000
Reactor Unit: BF3
Data Feeder: 1
NRC ERDS Parameter: DW RAD
Point ID: 90-272A
Plant Spec Point Desc: DW RAD-RX 582, 45 DEG AZIMUTH
GenericCond Desc: Drywell Radiation - 45 Deg

Analog/Digital: A
Engr Units/Dig States: R/HR
Engr Units: N/A 0.1
Minimum Instr Range: 1
Maximum Instr Range: 10000000
Zero Point Reference: N/A
Reference Point Notes: N/A

PROC or SENS: S
Number of Sensors: 1
How Processed: SALG
Sensor Locations: At Level 582, 45 Degree Azimuth
Alarm/Trip Set Points: ~~All modes:~~ HIHI=1440 HI=1000

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

RUN/SU/SD

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ERDS Point Number: 16 DW RAD 90-273A Drywell Radiation - 270 Deg

Date: 12/19/2000
Reactor Unit: BF3
Data Feeder: 1
NRC ERDS Parameter: DW RAD
Point ID: 90-273A
Plant Spec Point Desc: DW RAD-RX 560, 270 DEG AZIMUTH
GenericCond Desc: Drywell Radiation - 270 Deg

Analog/Digital: A
Engr Units/Dig States: R/HR
Engr Units: N/A 0.1
Minimum Instr Range: 1
Maximum Instr Range: 10000000
Zero Point Reference: N/A
Reference Point Notes: N/A

PROC or SENS S
Number of Sensors: 1
How Processed: SALG
Sensor Locations: At Level 560, 270 Degree Azimuth
Alarm/Trip Set Points: ~~All modes:~~ HIHI=1440 HI=1000

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

RUN/SU/SD

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ERDS Point Number: 17 MN STEAM RAD 90-136 Rad Level - Main Steam Line A

Date: 12/19/2000
Reactor Unit: BF3
Data Feeder: 1
NRC ERDS Parameter: MN STEAM RAD
Point ID: 90-136
Plant Spec Point Desc: MAIN STM LINE A RAD LEVEL
GenericCond Desc: Rad Level - Main Steam Line A

Analog/Digital: A
Engr Units/Dig States: MR/HR
Engr Units: N/A
Minimum Instr Range: 1
Maximum Instr Range: 1000000
Zero Point Reference: N/A
Reference Point Notes: N/A

PROC or SENS: S
Number of Sensors: 1
How Processed: SALG
Sensor Locations: Main Steam Tunnel
Alarm/Trip Set Points: ~~All modes:~~ HIHI=1500 HI=750

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

 RUN/SU/SD

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ERDS Point Number: 18 MN STEAM RAD 90-137 Rad Level - Main Steam Line C

Date: 12/19/2000
Reactor Unit: BF3
Data Feeder: 1
NRC ERDS Parameter: MN STEAM RAD
Point ID: 90-137
Plant Spec Point Desc: MAIN STM LINE C RAD LEVEL
GenericCond Desc: Rad Level - Main Steam Line C

Analog/Digital: A
Engr Units/Dig States: MR/HR
Engr Units: N/A
Minimum Instr Range: 1
Maximum Instr Range: 1000000
Zero Point Reference: N/A
Reference Point Notes: N/A

PROC or SENS S
Number of Sensors: 1
How Processed: SALG
Sensor Locations: Main Steam Tunnel
Alarm/Trip Set Points: ~~All modes:~~ HIHI=1500 HI=750

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

 RUN/SU/SD

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~~ERDS Point Number: 19 MN STEAM RAD 90-138 Rad Level Main Steam Line B~~

~~Date: 12/19/2000
Reactor Unit: BF3
Data Feeder: 1
NRC ERDS Parameter: MN STEAM RAD
Point ID: 90-138
Plant Spec Point Desc: MAIN STM LINE B RAD LEVEL
GenericCond Desc: Rad Level Main Steam Line B~~

~~Analog/Digital: A
Engr Units/Dig States: MR/HR
Engr Units: N/A
Minimum Instr Range: 1
Maximum Instr Range: 1000000
Zero Point Reference: N/A
Reference Point Notes: N/A~~

~~PROC or SENS: S
Number of Sensors: 1
How Processed: SALG
Sensor Locations: Main Steam Tunnel
Alarm/Trip Set Points: All modes: HHHI=1500 HI=750~~

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

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~~ERDS Point Number: 20 MN STEAM RAD 90-139 Rad Level Main Steam Line D~~

~~Date: 12/19/2000
Reactor Unit: BF3
Data Feeder: 1
NRC ERDS Parameter: MN STEAM RAD
Point ID: 90-139
Plant Spec Point Desc: MAIN STM LINE D RAD LEVEL
GenericCond Desc: Rad Level Main Steam Line D~~

~~Analog/Digital: A
Engr Units/Dig States: MR/HR
Engr Units: N/A
Minimum Instr Range: 1
Maximum Instr Range: 1000000
Zero Point Reference: N/A
Reference Point Notes: N/A~~

~~PROC or SENS: S
Number of Sensors: 1
How Processed: SALG
Sensor Locations: Main Steam Tunnel
Alarm/Trip Set Points: All modes: HHHI=1500 HI=750~~

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

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ERDS Point Number: 21 DW PRESS SPDS0009 Drywell Pressure

Date: 12/19/2000
Reactor Unit: BF3
Data Feeder: 1
NRC ERDS Parameter: DW PRESS
Point ID: SPDS0009
Plant Spec Point Desc: DRYWELL PRESSURE - COMPOSED
GenericCond Desc: Drywell Pressure

Analog/Digital: A
Engr Units/Dig States: PSIG
Engr Units: N/A
Minimum Instr Range: -15
Maximum Instr Range: 300
Zero Point Reference: N/A
Reference Point Notes: N/A

PROC or SENS: P
Number of Sensors: 6
How Processed: Weighted Average w/Fault Detect (PSVA)
Sensor Locations: N/A
Alarm/Trip Set Points: See below

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

Alarm: Run: HIHI=2.45 HI=1.96 LO=1.15
LOLO=1.1

Startup/Shutdown/

~~Refuel:~~ HIHI=2.45 HI=1.96

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ERDS Point Number: 22 DW TEMP SPDS0010 Drywell Temperature

Date: 12/19/2000
Reactor Unit: BF3
Data Feeder: 1
NRC ERDS Parameter: DW TEMP
Point ID: SPDS0010
Plant Spec Point Desc: DRYWELL TEMPERATURE - COMPOSED
GenericCond Desc: Drywell Temperature

Analog/Digital: A
Engr Units/Dig States: DEGF
Engr Units: N/A
Minimum Instr Range: 0
Maximum Instr Range: 400
Zero Point Reference: N/A
Reference Point Notes: N/A

PROC or SENS: P
Number of Sensors: 2
How Processed: Weighted Average w/Fault Detect (PSVA)
Sensor Locations:
Alarm/Trip Set Points: See Below

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

Alarm:	Run:	HIHI=160 HI=145 LO=100 LOLO=70
	Startup:	HIHI=160 HI=145 LO=90 LOLO=70
	Shutdown/ Refuel :	HIHI=160 HI=145 LO=65 LOLO=60

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ERDS Point Number: 23 SP TEMP SPDS0016 Suppression Pool Temperature

Date: 12/19/2000
Reactor Unit: BF3
Data Feeder: 1
NRC ERDS Parameter: SP TEMP
Point ID: SPDS0016
Plant Spec Point Desc: SUPPR PL WTR TEMP - COMPOSED
GenericCond Desc: Suppression Pool Temperature

Analog/Digital: A
Engr Units/Dig States: DEGF
Engr Units: N/A
Minimum Instr Range: 30
Maximum Instr Range: 230
Zero Point Reference: N/A
Reference Point Notes: N/A

PROC or SENS: P
Number of Sensors: 16
How Processed: Average (PSVA)
Sensor Locations: Around Circumference of Torus
Alarm/Trip Set Points: ~~All modes:~~ HIHI=95 HI=93 LOLO=50

RUN/SU/SD

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

There are 4 inputs actually scanned by the computer. Two of these 4 are made of 8 individual sensors that are hardware averaged. The other 2 are selected individual sensors from the total 16 sensors.

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ERDS Point Number: 24 SP LEVEL SPDS0013 Suppression Pool Water Level

Date: 12/19/2000
Reactor Unit: BF3
Data Feeder: 1
NRC ERDS Parameter: SP LEVEL
Point ID: SPDS0013
Plant Spec Point Desc: SUPPR PL WTR LVL (IN) - COMPOSED
GenericCond Desc: Suppression Pool Water Level

Analog/Digital: A
Engr Units/Dig States: INCHES
Engr Units: N/A
Minimum Instr Range: -181.45
Maximum Instr Range: 58.55
Zero Point Reference: Below
Reference Point Notes: 181.45 inches above Torus Bottom

PROC or SENS: P
Number of Sensors: 4
How Processed: Weighted Average w/Fault Detect (PSVA)
Sensor Locations: N/A
Alarm/Trip Set Points: See Below

NID Power Cutoff Level: N/A
NID Power Cut-On: N/A
Instrument Failure Mode: N/A
Temperature Compensation: N
Level Reference Leg: N/A
Unique System Desc: ~~All modes:~~ HIHI = -1 HI = -2 LO = -5.5 LOLO = -6.25

↖ RUN/SU/SD

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ERDS Point Number: 25 H2 CONC SPDS0017 Drywell or Torus Hydrogen Level

Date: 12/19/2000
Reactor Unit: BF3
Data Feeder: 1
NRC ERDS Parameter: H2 CONC
Point ID: SPDS0017
Plant Spec Point Desc: DRYWELL H2 - COMPOSED
GenericCond Desc: Drywell or Torus Hydrogen Level

Analog/Digital: A
Engr Units/Dig States: %
Engr Units: N/A
Minimum Instr Range: 0
Maximum Instr Range: 20
Zero Point Reference: N/A
Reference Point Notes: N/A

PROC or SENS: P
Number of Sensors: 2
How Processed: Weighted Average w/Fault Detect (PSVA)
Sensor Locations: N/A
Alarm/Trip Set Points: ~~All modes:~~ HIHI=2.4 HI=2.0 LOLO=0.10

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

There are 2 sensors that can be switched between the Torus and Drywell. Normally 1 is set to each; therefore, this point may be difficult to interpret.

 **RUN/SU/SD**

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ERDS Point Number: 26 O2 CONC 76-43 Drywell or Torus Oxygen Level

Date: 12/19/2000
Reactor Unit: BF3
Data Feeder: 1
NRC ERDS Parameter: O2 CONC
Point ID: 76-43
Plant Spec Point Desc: DRYWELL OXYGEN CONCENTRATION
GenericCond Desc: Drywell or Torus Oxygen Level

Analog/Digital: A
Engr Units/Dig States: %
Engr Units: N/A
Minimum Instr Range: 0
Maximum Instr Range: 5
Zero Point Reference: N/A
Reference Point Notes: N/A

PROC or SENS: S
Number of Sensors: 1
How Processed: Polynomial
Sensor Locations: N/A
Alarm/Trip Set Points: ~~All modes:~~ HIHI=4.5 HI=4.0 LOLO=0.10

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

There are 2 sensors that can be switched between the Torus and Drywell. Normally 1 is set to each; therefore, this point may be difficult to interpret.

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RUN/SU/SD

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ERDS Point Number: 27 CST LEVEL 2-165 Condensate Storage Tank Level

Date: 12/19/2000
Reactor Unit: BF3
Data Feeder: 1
NRC ERDS Parameter: CST LEVEL
Point ID: 2-165
Plant Spec Point Desc: CST #3 (UNIT 3) LEVEL
GenericCond Desc: Condensate Storage Tank Level

Analog/Digital: A 
Engr Units/Dig States: ~~FEET~~
Engr Units: 28 feet = 375,000 GALLONS
Minimum Instr Range: 0 
Maximum Instr Range: 32
Zero Point Reference: Below
Reference Point Notes: 2 feet above bottom of tank

PROC or SENS S
Number of Sensors: 1
How Processed: Polynomial
Sensor Locations: N/A
Alarm/Trip Set Points: ~~All modes:~~ HIHI=29 HI=27 LO=12 LOLO=10

NID Power Cutoff Level: N/A 
NID Power Cut-On: N/A
Instrument Failure Mode: LOW
Temperature Compensation: N
Level Reference Leg: N/A
Unique System Desc: ~~Zero point reference is 2 feet above the bottom of the tank.~~



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ERDS Point Number: 34 STAB CLASS CALC524 Stability Class Upper

Date: 09/19/2012
 Reactor Unit: BF3
 Data Feeder: 1
 NRC ERDS Parameter: STAB CLASS
 Point ID: CALC524
 Plant Spec Point Desc: ~~Stability Class Upper~~
 GenericCond Desc: Stability Class Upper
 Analog/Digital:
 Engr Units/Dig States: STABA
 Engr Units
 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: N/A
 Instrument Failure Mode: N/A
 Temperature Compensation: N
 Level Reference Leg: N/A
 Unique System Desc: Differential Temperature Upper-Lower (deg C)

**STACK LVL ATM STAB
CLASS (15 MIN)**

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

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ERDS Point Number: 35 STAB CLASS CALC525 Air Stability Intermediate

Date: 09/19/2012
Reactor Unit: BF3
Data Feeder: 1
NRC ERDS Parameter: STAB CLASS
Point ID: CALC525
Plant Spec Point Desc: ~~Stability Class Intermediate~~
GenericCond Desc: Air Stability Intermediate

**OVERALL ATM STAB
CLASS (15 MIN)**

Analog/Digital:
Engr Units/Dig States: STABA
Engr Units
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: N/A
Instrument Failure Mode: N/A
Temperature Compensation: N
Level Reference Leg: N/A
Unique System Desc: Differential Temperature Upper-Intermed. (deg C)

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

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ERDS Point Number: 36 STAB CLASS CALC526 Air Stability Lower

Date: 09/19/2012
Reactor Unit: BF3
Data Feeder: 1
NRC ERDS Parameter: STAB CLASS
Point ID: CALC526
Plant Spec Point Desc: ~~Stability Class Lower~~
GenericCond Desc: Air Stability Lower

**GRND LVL ATM STAB
CLASS (15 MIN)**

Analog/Digital:
Engr Units/Dig States: STABA
Engr Units
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: N/A
Instrument Failure Mode: LOW
Temperature Compensation: N
Level Reference Leg: N/A
Unique System Desc: Differential Temperature Intermed-Lower (deg C)

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