

CATEGORY 1

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50-389 St. Lucie Plant, Unit 2, Florida Power & Light Co. 05000389
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STALL, J.A. Florida Power & Light Co.
RECIP.NAME RECIPIENT AFFILIATION
Records Management Branch (Document Control Desk)

SUBJECT: Forwards rev 2 to Emergency Response Data Sys (ERDS) Data Point Libraries for St Lucie Units 1 & 2. Submittal completes corrective actions for violations noted in insp repts 50-355/98-07 & 50-389/98-07.

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September 8, 1998

L-98-224
10 CFR 50 Appendix E

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

RE: St. Lucie Units 1 and 2
Docket Nos. 50-335 and 50-389
Emergency Response Data System
Data Point Library Revision 2

Pursuant to 10 CFR 50, Appendix E Section VI.3.a., Florida Power & Light Company (FPL) submits Revision 2 of the Emergency Response Data System (ERDS) Data Point Libraries for St. Lucie Unit 1 and Unit 2. The revisions provide replacement pages and follow the format recommended by NUREG 1394, *Emergency Response Data System (ERDS) Implementation, Revision 1 Appendix C (Data Point Library)*. The last revision of the St. Lucie Unit 1 and Unit 2 Emergency Response Data System (ERDS) Data Point Libraries were submitted by FPL letter L-92-300 dated October 22, 1992. This submittal completes the corrective actions for the violation of minor significance discussed in paragraph E1.2.b of NRC Integrated Inspection Report Nos. 50-335/98-07 and 50-389/98-07. The failure to notify the NRC of minor ERDS Data Point Library data changes in accordance with 10 CFR 50, Appendix E VI.3 was classified as a violation of minor significance in the inspection report and was not subject to enforcement action.

Attachment 1 is the replacement pages for the St. Lucie Unit 1 ERDS Data Point Library. Attachment 2 is the replacement pages for the St. Lucie Unit 2 ERDS Data Point Library.

In preparation of this submittal, FPL identified a potential omission in 10 CFR 50.4(b)(5), *Emergency plan and related submittals*. The potential omission is that the ERDS Data Point Library submittals required by 10 CFR 50, Appendix E VI.3 should be added to 10 CFR 50.4(b)(5), and that 10 CFR 50, Appendix E should be modified to reference 10 CFR 50.4. This would eliminate any confusion regarding the addressee or distribution of the required submittals.

Please contact us if there are any questions regarding this submittal.

Very truly yours,

J. A. Stall
Vice President
St. Lucie Plant

Handwritten initials: A026

JAS/GRM

9809150164 980908
PDR ADDCK 05000335
F PDR

cc: Regional Administrator, Region II, USNRC
Senior Resident Inspector, USNRC, St. Lucie Plant

St. Lucie Units 1 and 2
Dockets Nos. 50-335 and 50-389
L-98-224 Attachment 1

Attachment 1

St. Lucie Unit 1

ERDS

Data Point Library Updates

SL1.

UNIT 1 DPL UPDATES

Page	Plant Point Description	Original Range	Updated range	Reason for Update
2	% POWER WIDE RANGE AVERAGE	1.0E-08 to 150%	2.0E-08 to 200.00%	New Nuclear Instrumentation was installed
3	CPS POWER LEVEL	0.0 to 1.0E+3	0.0 to 1.0E+5	New Nuclear Instrumentation was installed
12	FEEDWATER FLOW A	0.00 to 6.0E+06 LBM/HR	0.00 to 6.040E+06 LBM/HR	A calibration range change, to improve instrument accuracy, was made
13	FEEDWATER FLOW B	0.00 to 6.0E+06 LBM/HR	0.00 to 6.038E+06 LBM/HR	A calibration range change, to improve instrument accuracy, was made
14	AUX FEEDWATER HEADER A FLOW	0.00 to 400.00 GPM	0.00 to 500.00 GPM	A range change to support higher flow
15	AUX FEEDWATER HEADER B FLOW	0.00 to 400.00 GPM	0.00 to 500.00 GPM	A range change to support higher flow
16	AUX FEEDWATER HEADER C FLOW	0.00 to 600.00 GPM	0.00 to 1000.00 GPM	A range change to support higher flow

SL1 DATA POINT LIBRARY REFERENCE FILE

Date:7/23/98
Reactor Unit:SL1
Data Feeder:.....N/A
NRC ERDS Parameter:NI INTER RNG
Point ID:PWR-WR-%-1
Plant Spec Point Desc:% POWER WIDE RANGE AVERAGE
Generic/Cond Desc:Nuclear Instruments, Inter. Range
Analog/Digital:.....A
Engr Units/Dig States:%
Engr Units Conversion:LOG
Minimum Instr Range:2.0E-08 /R02
Maximum Instr Range:.....200 /R02
Zero Point Reference:N/A
Reference Point Note:N/A
PROC or SENS:.....P
Number of Sensors:.....4
How Processed:.....AVERAGE WITH EXPANDED QUALITY
Sensor Locations:.....OUTER CIRCUMFERENCE OF REACTOR VESSEL
Alarm/Trip Set Points:VARIABLE
NI Detector Power Supply
Cut-Off Power Level:N/A
NI Detector Power Supply
Turn-on Power Level:N/A
Instrument Failure Mode:.....N/A
Temperature Compensation
for DP Transmitters:.....
Level Reference Leg:.....N/A
Unique System Description:.....This parameter is derived from four Reactor Protection System (RPS) channels. Below 1000 cps these channels are configured for source range. Data inputs to this parameter are the Reactor Power Wide Range signals JI001-P-1, JI002-P-1, JI003-P-1, and JI004-P-1 which are logarithmic. These signals are processed by an algorithm which provides an average with expanded quality. This function obtains the average of all values with a good status. It also sets the quality of the result based on the number of values with good status, versus the total number of inputs. The possible status values are: Greater than 50% of all inputs have good status, result is good; Only one good value and the total inputs are 3 or more, the result is poor; When there are no good data values but there are some with poor or suspect, the result is poor; The result is suspect for all other cases except all bad, in this case the result is bad.

SL1 DATA POINT LIBRARY REFERENCE FILE

Date:7/23/98
Reactor Unit:SL1
Data Feeder:N/A
NRC ERDS Parameter:NI SOURC RNG
Point ID:QA0040-1
Plant Spec Point Desc:CPS POWER LEVEL
Generic/Cond Desc:Nuclear Instruments, Source Range
Analog/Digital:A
Engr Units/Dig States:CPS
Engr Units Conversion:LOG
Minimum Instr Range:0.0
Maximum Instr Range:1.0E+5 /R02
Zero Point Reference:N/A
Reference Point Note:N/A
PROC or SENS:P
Number of Sensors:4
How Processed:AVERAGE OF GOOD VALUES
Sensor Locations:OUTER CIRCUMFERENCE OF REACTOR VESSEL
Alarm/Trip Set Points:VARIABLE
NI Detector Power Supply
Cut-Off Power Level: > 1000 CPS
NI Detector Power Supply
Turn-on Power Level: < 1000 CPS
Instrument Failure Mode:N/A
Temperature Compensation
for DP Transmitters:
Level Reference Leg:N/A
Unique System Description: This parameter is derived from four Reactor Protection System (RPS) channels. They are active in the source range up to 1000 cps. Data inputs to this parameter are the signals JI001-C-1, JI002-C-1, JI003-C-1, and JI004-C-1 which are logarithmic.

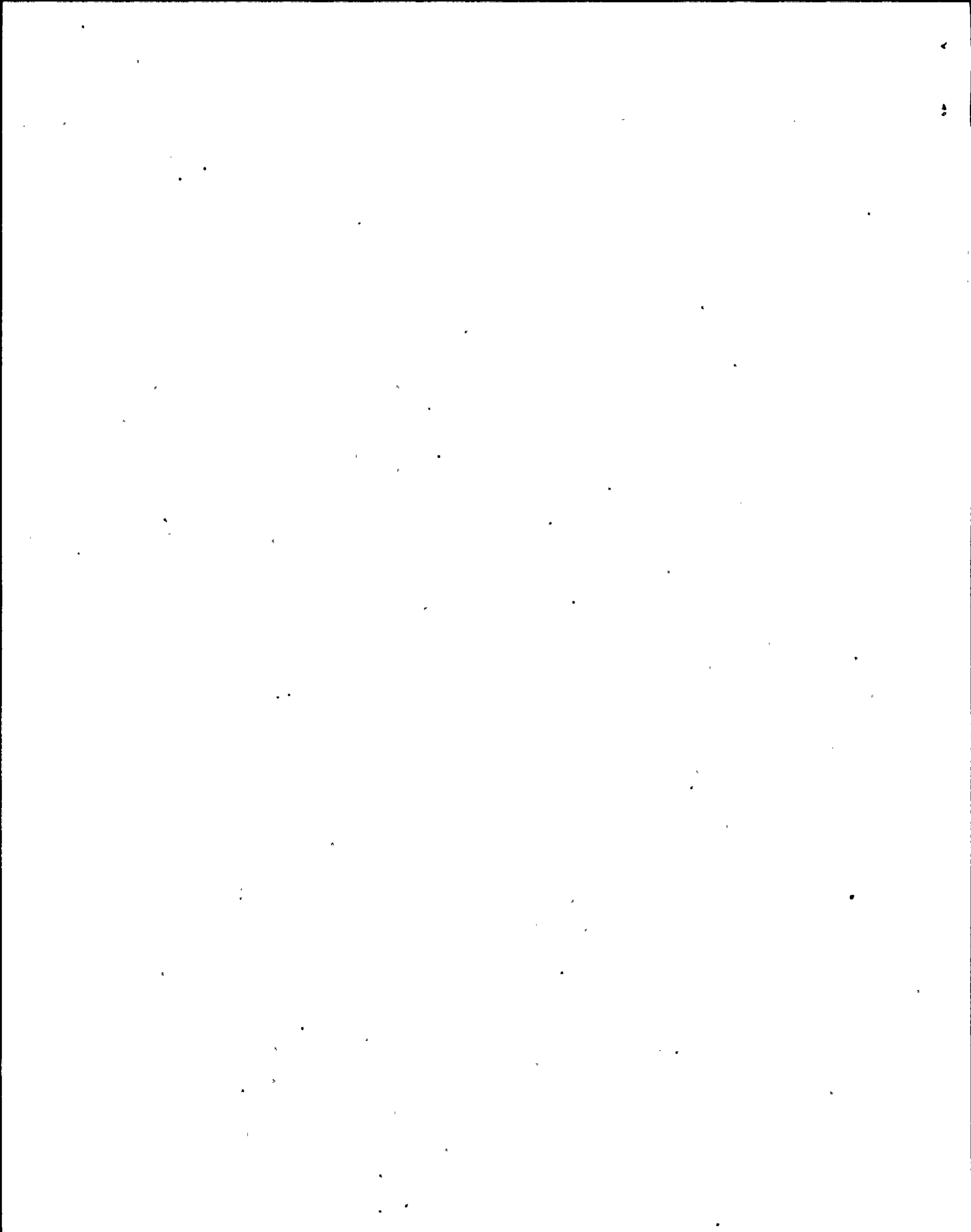
SL1 DATA POINT LIBRARY REFERENCE FILE

Date:7/23/98
Reactor Unit:SL1
Data Feeder:.....N/A
NRC ERDS Parameter:.....MN FD FL 1/A
Point ID:QA0025-1
Plant Spec Point Desc:FEEDWATER FLOW A
Generic/Cond Desc:Stm Gen A Main Feedwater Flow
Analog/Digital:.....A
Engr Units/Dig States:LBM/HR
Engr Units Conversion:N/A
Minimum Instr Range:0.00
Maximum Instr Range.....6.040E+06
Zero Point Reference:N/A
Reference Point Notes:.....N/A
PROC or SENS:.....P
Number of Sensors:.....3
How Processed:.....REDUNDANT SENSOR ALGORITHM
Sensor Locations:.....TURBINE BUILDING 43 FT. LVL
Alarm/Trip Set Points:VARIABLE
NI Detector Power Supply
Cut-Off Power LevelN/A
NI Detector Power Supply
Turn-on Power LevelN/A
Instrument Failure Mode.....N/A
Temperature Compensation
for DP Transmitters.....
Level Reference Leg:.....N/A
Unique System Description:.....This parameter is the "A" steam generator main feedwater flow. It is derived from Steam Generator Main Feedwater Flow signals FT09-3A1-1, FT09-3A2-1, and FT09-3A3-1 which are square roots. These signals are processed with a redundant sensor algorithm. This function obtains the average of the current values that have a good status and are close to the statistical majority.

/R02

SL1 DATA POINT LIBRARY REFERENCE FILE

Date:7/23/98
Reactor Unit:SL1
Data Feeder:.....N/A
NRC ERDS Parameter:MN FD FL 2/B
Point ID:QA0026-1
Plant Spec Point Desc:FEEDWATER FLOW B
Generic/Cond Desc:Stm Gen B Main Feedwater Flow
Analog/Digital:.....A
Engr Units/Dig States:LBM/HR
Engr Units Conversion:N/A
Minimum Instr Range:0.00
Maximum Instr Range:.....6.038E+06 /R02
Zero Point Reference:N/A
Reference Point Notes:.....N/A
PROC or SENS:.....P
Number of Sensors:.....3
How Processed:.....REDUNDANT SENSOR ALGORITHM
Sensor Locations:.....TURBINE BUILDING 43 FT. LVL
Alarm/Trip Set Points:VARIABLE
NI Detector Power Supply
Cut-Off Power Level:N/A
NI Detector Power Supply
Turn-on Power Level:N/A
Instrument Failure Mode:.....N/A
Temperature Compensation
for DP Transmitters:.....
Level Reference Leg:.....N/A
Unique System Description:..... This parameter is the "B" steam generator main feedwater flow. It is derived from Steam Generator Main Feedwater Flow signals FT09-3B1-1, FT09-3B2-1, and FT09-3B3-1 which are square roots. These signals are processed with a redundant sensor algorithm. This function obtains the average of the current values that have a good status and are close to the statistical majority.



SL1 DATA POINT LIBRARY REFERENCE FILE

Date:7/23/98
Reactor Unit:SL1
Data Feeder:.....N/A
NRC ERDS Parameter:AX FD FL 1/A
Point ID:FT09-2A-1
Plant Spec Point Desc:AUX FEEDWATER HEADER A FLOW
Generic/Cond Desc:Stm Gen A Auxiliary FW Flow
Analog/Digital:.....A
Engr Units/Dig States:GPM
Engr Units Conversion:LINEAR
Minimum Instr Range:0.00
Maximum Instr Range.....500.00
Zero Point Reference:N/A
Reference Point Notes:.....N/A
PROC or SENS:.....S
Number of Sensors:.....1
How Processed:.....N/A
Sensor Locations:.....STEAM TRESSEL 23 FT. LVL.
Alarm/Trip Set Points:VARIABLE
NI Detector Power Supply
Cut-Off Power Level:N/A
NI Detector Power Supply
Turn-on Power Level:N/A
Instrument Failure Mode.....N/A
Temperature Compensation
for DP Transmitters:.....
Level Reference Leg:.....N/A

/R02

Unique System Description:.....This parameter is the auxiliary feedwater flow to the "A" steam generator. It is converted to engineering units using a linear equation. The feed flow supplied to the "A" steam generator can be supplied by the "A" and or "B" aux feed pumps, depending on the valve line up. Flow supplied by "A" and "B" aux feed pumps will be measured by this instrument. The flow element is up stream of the pumps discharge cross ties. However flow supplied to "A" steam generator from "C" aux feed pump does not go through this flow element. Feed flow to the "A" generator from "C" aux feed pump is measured at FT09-2C-1 sensor and may be only a partial representation of the flow to the "A" steam generator if the "B" steam generator is being fed at the same time from the "C" feed pump.

SL1 DATA POINT LIBRARY REFERENCE FILE

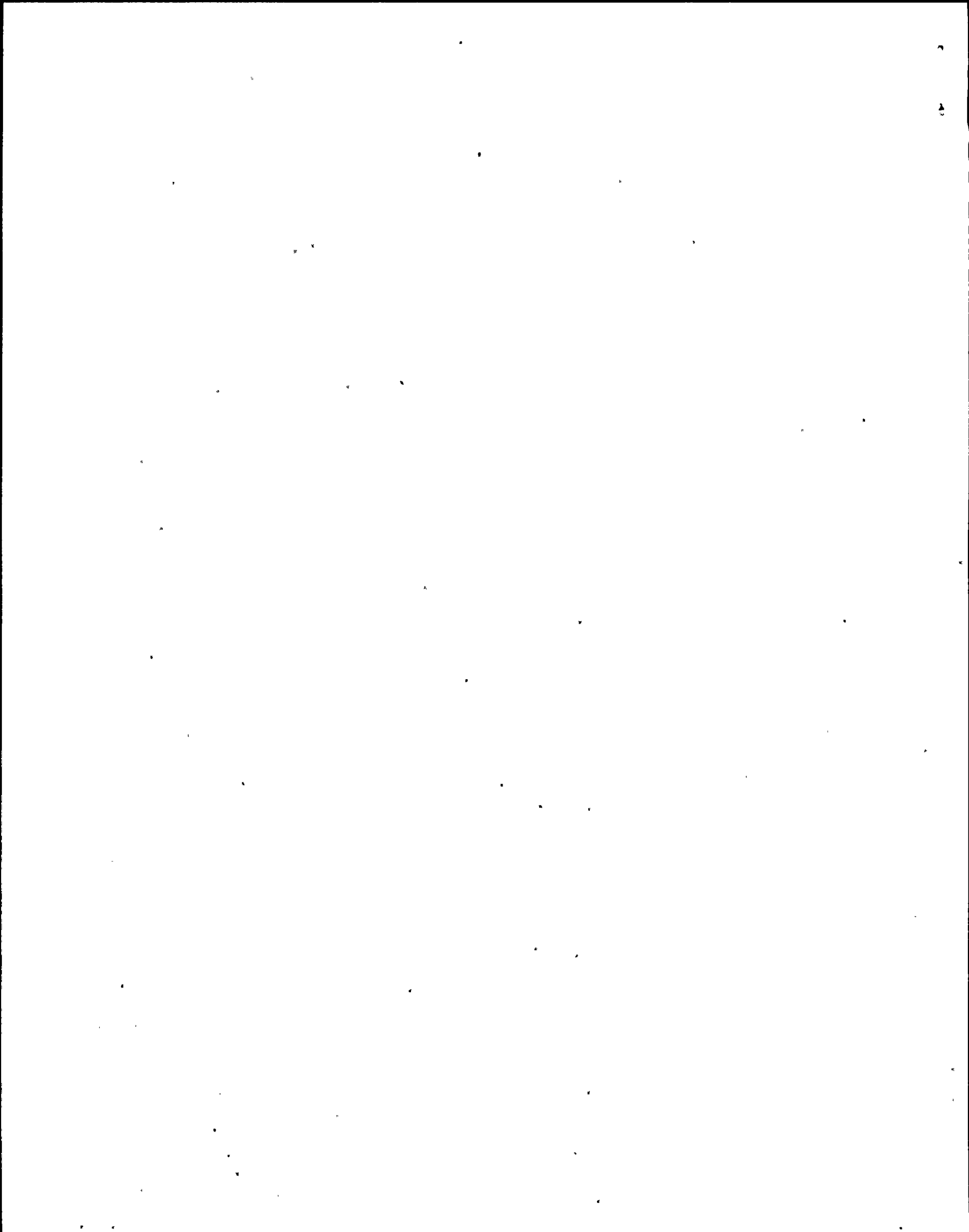
Date: 7/23/98
Reactor Unit: SL1
Data Feeder: N/A
NRC ERDS Parameter: AX FD FL 2/B
Point ID: FT09-2B-1
Plant Spec Point Desc: AUX FEEDWATER HEADER B FLOW
Generic/Cond Desc: Stm Gen B Auxiliary FW Flow
Analog/Digital: A
Engr Units/Dig States: GPM
Engr Units Conversion: LINEAR
Minimum Instr Range: 0.00
Maximum Instr Range: 500.00
Zero Point Reference: N/A
Reference Point Notes: N/A
PROC or SENS: S
Number of Sensors: 1
How Processed: N/A
Sensor Locations: STEAM TRESSEL 23 FT. LVL.
Alarm/Trip Set Points: VARIABLE
NI Detector Power Supply
Cut-Off Power Level: N/A
NI Detector Power Supply
Turn-on Power Level: N/A
Instrument Failure Mode: N/A
Temperature Compensation
for DP Transmitters:
Level Reference Leg: N/A

/R02

Unique System Description: This parameter is the auxiliary feedwater flow to the "B" steam generator. It is converted to engineering units with a linear equation. The feed flow supplied to the "B" steam generator can be supplied by the "A" and or "B" aux feed pumps, depending on the valve line up. Flow supplied by "A" and "B" aux feed pumps will be measured by this instrument. The flow element is up stream of the pumps discharge cross ties. However flow supplied to the "B" steam generator from "C" aux feed pump does not go through this flow element. Feed flow to the "B" generator from "C" aux feed pump is measured at FT09-2C-1 sensor and may be only a partial representation of flow to the "B" steam generator if the "A" steam generator is being fed at the same time from the "C" feed pump.

SL1 DATA POINT LIBRARY REFERENCE FILE

Date:7/23/98
Reactor Unit:SL1
Data Feeder:N/A
NRC ERDS Parameter:AX FD FL 3/C
Point ID:FT09-2C-1
Plant Spec Point Desc:AUX FEEDWATER HEADER C FLOW
Generic/Cond Desc:Stm Gen A/B Auxiliary FW Flow
Analog/Digital:A
Engr Units/Dig States:GPM
Engr Units Conversion:LINEAR
Minimum Instr Range:0.00
Maximum Instr Range:1000.00 /R02
Zero Point Reference:N/A
Reference Point Note:N/A
PROC or SENS:S
Number of Sensors:1
How Processed:N/A
Sensor Locations:STEAM TRESSEL 23 FT. LVL.
Alarm/Trip Set Points:VARIABLE
NI Detector Power Supply
Cut-Off Power Level:N/A
NI Detector Power Supply
Turn-on Power Level:N/A
Instrument Failure Mode:N/A
Temperature Compensation
for DP Transmitters:
Level Reference Leg:N/A
Unique System Description: This parameter is the "C" auxiliary feedwater pump header flow. It feeds either the "A" or "B" steam generator. The "C" auxiliary feedwater pump is driven with a steam turbine engine which receives its steam supply from either the "A" or "B" steam generator. It is converted to engineering units using a linear equation.



St. Lucie Units 1 and 2
Dockets Nos. 50-335 and 50-389
L-98-224 Attachment 2

Attachment 2

St. Lucie Unit 2

ERDS

Data Point Library Updates

SL2

St. Lucie Units 1 and 2
Dockets Nos. 50-335 and 50-389
L-98-224 Attachment 2

UNIT 2 DPL UPDATES

Page	Plant Point Description	Original Range	Updated Range	Reason for update
12	FEEDWATER FLOW A	0.00 to 6.0E+06 LBM/HR	0.00 to 6.388E+06 LBM/HR	A range change to support new venturi
13	FEEDWATER FLOW B	0.00 to 6.0E+06 LBM/HR	0.00 to 6.388E+06 LBM/HR	A range change to support new venturi

SL2 DATA POINT LIBRARY REFERENCE FILE

Date:7/23/98
Reactor Unit:SL2
Data Feeder:.....N/A
NRC ERDS Parameter:.....MN FD FL 1/A
Point ID:QA0025-2
Plant Spec Point Desc:FEEDWATER FLOW A
Generic/Cond Desc:Stm Gen A Main Feedwater Flow
Analog/Digital:.....A
Engr Units/Dig States:LBM/HR
Engr Units Conversion:N/A
Minimum Instr Range:0.00
Maximum Instr Range:.....6.388E+06 /R02
Zero Point Reference:N/A
Reference Point Notes:.....N/A
PROC or SENS:.....P
Number of Sensors.....3
How Processed:.....REDUNDANT SENSOR ALGORITHM
Sensor Locations:.....TURBINE BUILDING 43 FT. LVL.
Alarm/Trip Set Points:VARIABLE
NI Detector Power Supply
Cut-Off Power Level:N/A
NI Detector Power Supply
Turn-on Power Level:N/A
Instrument Failure Mode:.....N/A
Temperature Compensation
for DP Transmitters:.....
Level Reference Leg:.....N/A
Unique System Description:.....This parameter is the "A" steam generator main feedwater flow. It is derived from Steam Generator Main Feedwater Flow signals FT09-3A1-2, FT09-3A2-2, and FT09-3A3-2 which are square roots. The signals are processed with a redundant sensor algorithm. This function obtains the average of the current values that have a good status and are close to the statistical majority.

SL2 DATA POINT LIBRARY REFERENCE FILE

Date:7/23/98
Reactor Unit:SL2
Data Feeder:.....N/A
NRC ERDS Parameter:MN FD FL 2/B
Point ID:QA0026-2
Plant Spec Point Desc:FEEDWATER FLOW B
Generic/Cond Desc:Stm Gen B Main Feedwater Flow
Analog/Digital:.....A
Engr Units/Dig States:LBM/HR
Engr Units Conversion:N/A
Minimum Instr Range:0.00
Maximum Instr Range:.....6.360E+06 ..
Zero Point Reference:N/A
Reference Point Notes:N/A
PROC or SENS:.....P
Number of Sensors:.....3
How Processed:.....REDUNDANT SENSOR ALGORITHM
Sensor Locations:.....TURBINE BUILDING 43 FT. LVL
Alarm/Trip Set Points:VARIABLE
NI Detector Power Supply
Cut-Off Power LevelN/A
NI Detector Power Supply
Turn-on Power Level:N/A
Instrument Failure Mode:.....N/A
Temperature Compensation
for DP Transmitters:.....
Level Reference Leg:.....N/A

/R02

Unique System Description:.....This parameter is the "B" steam generator main feedwater flow. It is derived from Steam Generator Main Feedwater Flow signals FT09-3B1-2, FT09-3B2-2, and FT09-3B3-2 which are square roots. These signals are processed with a redundant sensor algorithm. This function obtains the average of the current values that have a good status and are close to the statistical majority.

