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JUN 05 2002

U.S. Nuclear Regulatory Commission
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**SUSQUEHANNA STEAM ELECTRIC STATION
REVISIONS TO ERDS DATA POINT LIBRARY
REFERENCE FILE DUE TO THE INSTALLATION
OF LEFM
PLA-5489**

Docket No.50-387

In accordance with 10 CFR 50 Appendix E Section VI.3, attached are revisions to the ERDS Data Point Library as a result of the installation of the Leading Edge Flow Meter (LEFM) in Susquehanna SES Unit 1.

If you have any questions, please contact Mr. C. T. Coddington at (610) 774-4019.

Sincerely,

B. L. Shriver

Attachment

copy: NRC Region I
Mr. S. L. Hansell, NRC Sr. Resident Inspector
Mr. T. G. Colburn, NRC Sr. Project Manager
Mr. E. M. Thomas, NRC Project Manager

7001



SAFETY RELATED ☐
OTHER QUALITY ☒
CRITICAL SOFTWARE (C)
NON-QUALITY ☐

CSD ER-005
FILE NO. N/A
PAGE 1 of 84

COMPUTER SYSTEM DOCUMENT

EMERGENCY RESPONSE DATA SYSTEM (ERDS)
DATA POINT LIBRARY (DPL)

PPL SUSQUEHANNA, LLC - UNITS 1 AND 2

CONTROLLED

4	05/23/02	Admin. Correction-DCN 98-0656 was incorporated into Rev. 3; Addition of LEFM Pts. To Unit 1	H.A. Clatch	N/A	<i>W. DeLuca</i>
3	06/01/01	Addition of LEFM Pts. To Unit 2	H.A. Clatch	N/A	W.A. DeLuca
2	05/13/98	Addition of Unit 1 PICSY	H.A. Clatch	N/A	G.J. Krupko
1	11/14/95	Addition of Unit 2 PICSY	M.L. Orloski	N/A	Henry P. Seager
0	11/30/92	Initial Issue	J.L. Angstadt	N/A	D.D. Kelley
REV.	DATE	DESCRIPTION	PREPARED BY	VERIFIED	APPROVED

Procedure Change Summary

TITLE: EMERGENCY RESPONSE DATA SYSTEM (ERDS) DATA POINT LIBRARY (DPL)

- 1) Administrative Change - DCN 98-0656 had been incorporated into Revision 3 but not noted on the cover sheet.
- 2) Appendix C changes -
 - a. Replaced points NFF52, NFF53 and NFF54 (pages 28, 29 and 30) in the data stream with points NFF77, NFF78 and NFF79 (old pages 78, 79 and 80).
 - b. Made the REACTOR UNIT for points NFF78, NFF79 and NFF80 SQ1/SQ2.
 - c. Deleted pages 78, 79 and 80 and re-numbered pages 78 thru 87 to pages 78 thru 84.

Emergency Response Data System (ERDS)
Data Point Library (DPL)

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1.0 SCOPE

This CSD documents the Emergency Response System Data Point Library (DPL) submitted to the U.S. Nuclear Regulatory Commission to meet the DPL requirements of NUREG-1394 Rev.1, Emergency Response Data System (ERDS) Implementation.

2.0 General Information

The Appendices of this CSD have been named to correspond to the Appendices of NUREG-1394, Rev. 1. Not all of the information required by NUREG 1394, Rev. 1 appendix is included in this document.

NOTICE

Changes to Appendix C or E of this CSD may require that the NRC be notified of the change. Reference CSD-PIC-759 for additional guidance.

The following list identifies the NUREG Appendices, and where the information (if any) required by that Appendix is provided:

<u>Appendix</u>	<u>Description</u>	<u>Response</u>
A	Emergency Response Data System ERDS Transmission/Reception Plan	PP&L response provided in letter PLA-3704 dated December 20, 1991.
B	ERDS Communication Description and Survey Questionnaire	PP&L response provided in letter PLA-3672 dated October 24, 1991.
C	Data Point Library	
D	Data Point Library Reference File Definitions	Included in this CSD. ⁽¹⁾ No response required. Appendix duplicated in this CSD for convenience. ⁽²⁾
E	Critical Safety Function Parameters	Included in this CSD. ⁽³⁾
F	Engineering Units Coding Scheme ⁽⁴⁾	
G	Zero Reference Coding Scheme ⁽⁵⁾	No response required. Reference NUREG 1394, Rev. 1 for details.
H	Coding Scheme for Unit Name and Unit ID	No response required. Reference NUREG 1394, Rev. 1 for details.
I	Computer Point Selection ⁽⁶⁾	No response required. Reference NUREG 1394, Rev. 1 for details. No response required. Reference NUREG 1394, Rev. 1 for details.

⁽¹⁾ This Appendix provides detailed information for each point listed in Appendix E.

⁽²⁾ This Appendix provides a description of each field in the Data Point Library and the fields maximum character length.

⁽³⁾ This Appendix provides a summary of all the computer points that are utilized for ERDS. Reference Appendix C of NUREG-1394 for additional guidance on Data Point Library entries.

⁽⁴⁾ This Appendix provides the preferred engineering units abbreviations for use in the Engineering Units field of the Data Point Library entries.

⁽⁵⁾ This Appendix provides the accepted abbreviations for the Zero Reference Point field of the entries in the Data Point Library that require this field.

⁽⁶⁾ This Appendix provides guidance on the selection of computer points to satisfy the ERDS requirements.

3.0 REFERENCES

- 3.1 NUREG-1394, Rev. 1, Emergency Response Data System (ERDS) Implementation
- 3.2 NSEP-QA-500, Process Computer Quality Assurance and Design Control Program

APPENDIX A & B

Appendix A & B are not included in this CSD.
Reference Section 2.0 for more information on
these appendices.

APPENDIX C
DATA POINT LIBRARY

SUSQUEHANNA STEAM ELECTRIC STATION
UNITS 1 & 2
ERDS DATA POINT LIBRARY REFERENCE FILE

Date: 05/13/98

Reactor Unit: SQ1/SQ2

Data Feeder: N/A

NRC ERDS Parameter: NI POWER RNG

Point ID: PWR

Plant Spec Point Desc.: REACTOR POWER

Generic/Cond Desc.: Nuclear Instruments, Power Range

Analog/Digital: A

Engr Units/Dig States: %

Engr Units Conversion: 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: 6

How Processed: Averaged (ref. Unique System Desc.)

Sensor Locations: Each APRM has 21 to 22 LPRMs as inputs

Alarm/Trip Set Points: Reference Unique System Desc.⁽¹⁾

NI Detector Power Supply
Cut-off Power Level: N/A

NI Detector Power Supply
Turn-on Power Level: N/A

Instrument Failure Mode: Low, High

Temperature Compensation
For DP Transmitters: N/A

Level Reference Leg: N/A

Unique System Desc.: A Supplier proprietary algorithm basically averages the highest number of on-scale APRMs whose values are in agreement.
⁽¹⁾ - Various trip set points exist for the APRMs depending on the plant Condition (i.e. Condition 1-5).

Note: PWR is a composite SPDS parameter with the following points as inputs: NM551, NM552, NM553, NM554, NM555, NM556.

SUSQUEHANNA STEAM ELECTRIC STATION
UNITS 1 & 2
ERDS DATA POINT LIBRARY REFERENCE FILE

Date: 05/13/98

Reactor Unit: SQ1/SQ2

Data Feeder: N/A

NRC ERDS Parameter: NI INTER RNG

Point ID: NN109

Plant Spec Point Desc.: IRM A FLUX (% OF SCALE)

Generic/Cond Desc.: Nuclear Instruments, Inter Rng A

Analog/Digital: A

Engr Units/Dig States: %

Engr Units Conversion: N/A

Minimum Instr Range: 0.0

Maximum Instr Range: 100.0

Zero Point Reference: N/A

Reference Point Notes: N/A

PROC or SENS: S

Number of Sensors: 1

How Processed: N/A

Sensor Locations: Reference Unique System Desc.

Alarm/Trip Set Points: Reference Unique System Desc.⁽¹⁾

NI Detector Power Supply
Cut-off Power Level: N/A

NI Detector Power Supply
Turn-on Power Level: N/A

Instrument Failure Mode: Low, High

Temperature Compensation
For DP Transmitters: N/A

Level Reference Leg: N/A

Unique System Desc.: The electrical full-in limit, positions the detector 18" above the active fuel center line. The mechanical full-in limit is 21" above the active fuel center line. The location of the detector during normal reactor operation (full-out limit) is 24" below the bottom of the active fuel. The GE coordinate (radial position) of the detector in the core is 16-53.

⁽¹⁾ - When the plant is in Condition 2-5 there is an upscale neutron flux/RPS trip = 95.8%, an upscale neutron flux/Rod Block = 86.2%, and a downscale neutron flux/Rod Block = 4.2%. These blocks/trips are bypassed in Condition 1.

SUSQUEHANNA STEAM ELECTRIC STATION
UNITS 1 & 2
ERDS DATA POINT LIBRARY REFERENCE FILE

Date: 05/13/98

Reactor Unit: SQ1/SQ2

Data Feeder: N/A

NRC ERDS Parameter: NI INTER RNG

Point ID: NN112

Plant Spec Point Desc.: IRM D FLUX (% OF SCALE)

Generic/Cond Desc.: Nuclear Instruments, Inter Rng D

Analog/Digital: A

Engr Units/Dig States: %

Engr Units Conversion: N/A

Minimum Instr Range: 0.0

Maximum Instr Range: 100.0

Zero Point Reference: N/A

Reference Point Notes: N/A

PROC or SENS: S

Number of Sensors: 1

How Processed: N/A

Sensor Locations: Reference Unique System Desc.

Alarm/Trip Set Points: Reference Unique System Desc.¹

NI Detector Power Supply
Cut-off Power Level: N/A

NI Detector Power Supply
Turn-on Power Level: N/A

Instrument Failure Mode: Low, High

Temperature Compensation
For DP Transmitters: N/A

Level Reference Leg: N/A

Unique System Desc.: The electrical full-in limit, positions the detector 18" above the active fuel center line. The mechanical full-in limit is 21" above the active fuel center line. The location of the detector during normal reactor operation (full-out limit) is 24" below the bottom of the active fuel. The GE coordinate (radial position) of the detector in the core is 32-37.
¹ - When the plant is in Condition 2-5 there is an upscale neutron flux/RPS trip = 95.8%, an upscale neutron flux/Rod Block = 86.2%, and a downscale neutron flux/Rod Block = 4.2%. These blocks/trips are bypassed in Condition 1.

SUSQUEHANNA STEAM ELECTRIC STATION
UNITS 1 & 2
ERDS DATA POINT LIBRARY REFERENCE FILE

Date: 05/13/98

Reactor Unit: SQ1/SQ2

Data Feeder: N/A

NRC ERDS Parameter: NI INTER RNG

Point ID: NN115

Plant Spec Point Desc.: IRM G FLUX (% OF SCALE)

Generic/Cond Desc.: Nuclear Instruments, Inter Rng G

Analog/Digital: A

Engr Units/Dig States: %

Engr Units Conversion: N/A

Minimum Instr Range: 0.0

Maximum Instr Range: 100.0

Zero Point Reference: N/A

Reference Point Notes: N/A

PROC or SENS: S

Number of Sensors: 1

How Processed: N/A

Sensor Locations: Reference Unique System Desc.

Alarm/Trip Set Points: Reference Unique System Desc.⁽¹⁾

NI Detector Power Supply
Cut-off Power Level: N/A

NI Detector Power Supply
Turn-on Power Level: N/A

Instrument Failure Mode: Low, High

Temperature Compensation
For DP Transmitters: N/A

Level Reference Leg: N/A

Unique System Desc.: The electrical full-in limit, positions the detector 18" above the active fuel center line. The mechanical full-in limit is 21" above the active fuel center line. The location of the detector during normal reactor operation (full-out limit) is 24" below the bottom of the active fuel. The GE coordinate (radial position) of the detector in the core is 48-13.
⁽¹⁾ - When the plant is in Condition 2-5 there is an upscale neutron flux/RPS trip = 95.8%, an upscale neutron flux/Rod Block = 86.2%, and a downscale neutron flux/Rod Block = 4.2%. These blocks/trips are bypassed in Condition 1.

SUSQUEHANNA STEAM ELECTRIC STATION
UNITS 1 & 2
ERDS DATA POINT LIBRARY REFERENCE FILE

Date: 05/13/98

Reactor Unit: SQ1/SQ2

Data Feeder: N/A

NRC ERDS Parameter: NI INTER RNG

Point ID: NN116

Plant Spec Point Desc.: IRM H FLUX (% OF SCALE)

Generic/Cond Desc.: Nuclear Instruments, Inter Rng H

Analog/Digital: A

Engr Units/Dig States: %

Engr Units Conversion: N/A

Minimum Instr Range: 0.0

Maximum Instr Range: 100.0

Zero Point Reference: N/A

Reference Point Notes: N/A

PROC or SENS: S

Number of Sensors: 1

How Processed: N/A

Sensor Locations: Reference Unique System Desc.

Alarm/Trip Set Points: Reference Unique System Desc.⁽¹⁾

NI Detector Power Supply
Cut-off Power Level: N/A

NI Detector Power Supply
Turn-on Power Level: N/A

Instrument Failure Mode: Low, High

Temperature Compensation
For DP Transmitters: N/A

Level Reference Leg: N/A

Unique System Desc.: The electrical full-in limit, positions the detector 18" above the active fuel center line. The mechanical full-in limit is 21" above the active fuel center line. The location of the detector during normal reactor operation (full-out limit) is 24" below the bottom of the active fuel. The GE coordinate (radial position) of the detector in the core is 16-13.

⁽¹⁾ - When the plant is in Condition 2-5 there is an upscale neutron flux/RPS trip = 95.8%, an upscale neutron flux/Rod Block = 86.2%, and a downscale neutron flux/Rod Block = 4.2%. These blocks/trips are bypassed in Condition 1.

SUSQUEHANNA STEAM ELECTRIC STATION
UNITS 1 & 2
ERDS DATA POINT LIBRARY REFERENCE FILE

Date: 05/13/98

Reactor Unit: SQ1/SQ2

Data Feeder: N/A

NRC ERDS Parameter: Not Listed

Point ID: NNX01

Plant Spec Point Desc.: IRM A RANGE SWITCH POSN

Generic/Cond Desc.: IRM A Range Switch Position

Analog/Digital: A

Engr Units/Dig States: N/A

Engr Units Conversion: N/A

Minimum Instr Range: 1

Maximum Instr Range: 10

Zero Point Reference: N/A

Reference Point Notes: N/A

PROC or SENS: P

Number of Sensors: 10

How Processed: Reference Unique System Desc.

Sensor Locations: Panel 1C651⁽¹⁾-11D IRM range switch A

Alarm/Trip Set Points: N/A

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: N/A

Level Reference Leg: N/A

Unique System Desc.: The analog value for switch position is calculated from the IRM switch position digital inputs.

1 - Panel 1C651 is for SQ1, Panel 2C651 is for SQ2

SUSQUEHANNA STEAM ELECTRIC STATION
UNITS 1 & 2
ERDS DATA POINT LIBRARY REFERENCE FILE

Date: 05/13/98

Reactor Unit: SQ1/SQ2

Data Feeder: N/A

NRC ERDS Parameter: Not Listed

Point ID: NNX04

Plant Spec Point Desc.: IRM D RANGE SWITCH POSN

Generic/Cond Desc.: IRM D Range Switch Position

Analog/Digital: A

Engr Units/Dig States: N/A

Engr Units Conversion: N/A

Minimum Instr Range: 1

Maximum Instr Range: 10

Zero Point Reference: N/A

Reference Point Notes: N/A

PROC or SENS: P

Number of Sensors: 10

How Processed: Reference Unique System Desc.

Sensor Locations: Panel 1C651⁽¹⁾-11D IRM range switch D

Alarm/Trip Set Points: N/A

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: N/A

Level Reference Leg: N/A

Unique System Desc.: The analog value for switch position is calculated from the IRM switch position digital inputs.

⁽¹⁾ - Panel 1C651 is for SQ1, Panel 2C651 is for SQ2

SUSQUEHANNA STEAM ELECTRIC STATION
UNITS 1 & 2
ERDS DATA POINT LIBRARY REFERENCE FILE

Date: 05/13/98

Reactor Unit: SQ1/SQ2

Data Feeder: N/A

NRC ERDS Parameter: Not Listed

Point ID: NVX07

Plant Spec Point Desc.: IRM G RANGE SWITCH POSN

Generic/Cond Desc.: IRM G Range Switch Position

Analog/Digital: A

Engr Units/Dig States: N/A

Engr Units Conversion: N/A

Minimum Instr Range: 1

Maximum Instr Range: 10

Zero Point Reference: N/A

Reference Point Notes: N/A

PROC or SENS: P

Number of Sensors: 10

How Processed: Reference Unique System Desc.

Sensor Locations: Panel 1C651⁽¹⁾-11D IRM range switch G

Alarm/Trip Set Points: N/A

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: N/A

Level Reference Leg: N/A

Unique System Desc.: The analog value for switch position is calculated from the IRM switch position digital inputs.

1 - Panel 1C651 is for SQ1, Panel 2C651 is for SQ2

SUSQUEHANNA STEAM ELECTRIC STATION
UNITS 1 & 2
ERDS DATA POINT LIBRARY REFERENCE FILE

Date: 05/13/98

Reactor Unit: SQ1/SQ2

Data Feeder: N/A

NRC ERDS Parameter: Not Listed

Point ID: NNX08

Plant Spec Point Desc.: IRM H RANGE SWITCH POSN

Generic/Cond Desc.: IRM H Range Switch Position

Analog/Digital: A

Engr Units/Dig States: N/A

Engr Units Conversion: N/A

Minimum Instr Range: 1

Maximum Instr Range: 10

Zero Point Reference: N/A

Reference Point Notes: N/A

PROC or SENS: P

Number of Sensors: 10

How Processed: Reference Unique System Desc.

Sensor Locations: Panel 1C651⁽¹⁾-11D IRM range switch H

Alarm/Trip Set Points: N/A

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: N/A

Level Reference Leg: N/A

Unique System Desc.: The analog value for switch position is calculated from the IRM switch position digital inputs.
: - Panel 1C651 is for SQ1, Panel 2C651 is for SQ2

SUSQUEHANNA STEAM ELECTRIC STATION
UNITS 1 & 2
ERDS DATA POINT LIBRARY REFERENCE FILE

Date: 05/13/98

Reactor Unit: SQ1/SQ2

Data Feeder: N/A

NRC ERDS Parameter: Not Listed

Point ID: NNZ54

Plant Spec Point Desc.: IRM DET NOT FULL IN POS

Generic/Cond Desc.: IRM Det(s) not full in Position

Analog/Digital: D

Engr Units/Dig States: NO/YES

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: S

Number of Sensors: 1

How Processed: N/A

Sensor Locations: Full in limit switch on IRM drive unit

Alarm/Trip Set Points: N/A

NI Detector Power Supply
Cut-off Power Level: N/A

NI Detector Power Supply
Turn-on Power Level: N/A

Instrument Failure Mode: Value = Yes (i.e. Not In)

Temperature Compensation
For DP Transmitters: N/A

Level Reference Leg: N/A

Unique System Desc.: This parameter is a logical 'or' of the Plant's eight (8) IRM detectors such that if any detector is not in the full in position this parameter will be true (YES).

SUSQUEHANNA STEAM ELECTRIC STATION
UNITS 1 & 2
ERDS DATA POINT LIBRARY REFERENCE FILE

Date:	05/13/98
Reactor Unit:	SQ1/SQ2
Data Feeder:	N/A
NRC ERDS Parameter:	Not Listed
Point ID:	NNZ59
Plant Spec Point Desc.:	IRM BYPASS
Generic/Cond Desc.:	IRM Bypass
Analog/Digital:	D
Engr Units/Dig States:	NO/YES
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:	S
Number of Sensors:	1
How Processed:	N/A
Sensor Locations:	Panel 1C651 ⁽¹⁾ -11D IRM bypass switch
Alarm/Trip Set Points:	N/A
NI Detector Power Supply Cut-off Power Level:	N/A
NI Detector Power Supply Turn-on Power Level:	N/A
Instrument Failure Mode:	Value = No (i.e. not Bypassed)
Temperature Compensation For DP Transmitters:	N/A
Level Reference Leg:	N/A
Unique System Desc.:	This parameter is a logical 'or' of the Plant's eight (8) IRM detectors bypass status such that if <u>any</u> detector is bypassed this parameter will be true (YES). - Panel 1C651 is for SQ1, Panel 2C651 is for SQ2

SUSQUEHANNA STEAM ELECTRIC STATION
UNITS 1 & 2
ERDS DATA POINT LIBRARY REFERENCE FILE

Date: 05/13/98

Reactor Unit: SQ1/SQ2

Data Feeder: N/A

NRC ERDS Parameter: NI SOURC RNG

Point ID: NN1001Z

Plant Spec Point Desc.: SRM A LOG RATE

Generic/Cond Desc.: Nuclear Instruments, Sourc Rng A

Analog/Digital: A

Engr Units/Dig States: CPS

Engr Units Conversion: N/A

Minimum Instr Range: .1

Maximum Instr Range: 1E6

Zero Point Reference: N/A

Reference Point Notes: N/A

PROC or SENS: S

Number of Sensors: 1

How Processed: N/A

Sensor Locations: Reference Unique System Desc.

Alarm/Trip Set Points: Reference Unique System Desc.⁽¹⁾

NI Detector Power Supply
Cut-off Power Level: N/A

NI Detector Power Supply
Turn-on Power Level: N/A

Instrument Failure Mode: Low, High

Temperature Compensation
For DP Transmitters: N/A

Level Reference Leg: N/A

Unique System Desc.: The electrical full-in limit, positions the detector 18" above the active fuel center line. The mechanical full-in limit is 21" above the active fuel center line. The location of the detector during normal reactor operation (full-out limit) is 24" below the bottom of the active fuel. The GE coordinate (radial position) of the detector in the core is 16-45.

¹ - When the plant is in Condition 2 - 5, there is an upscale alarm/rod block = 1×10^5 CPS, an upscale/non-coincident trip = 2×10^5 CPS, and a downscale/rod block = 4.1 CPS. These blocks/trips are bypassed when the plant is Condition 1. The upscale/non-coincident trip is defeated when the RPS shorting links are installed.

SUSQUEHANNA STEAM ELECTRIC STATION
UNITS 1 & 2
ERDS DATA POINT LIBRARY REFERENCE FILE

Date: 03/13/98

Reactor Unit: SQ1/SQ2

Data Feeder: N/A

NRC ERDS Parameter: NI SOURC RNG

Point ID: NN1002Z

Plant Spec Point Desc.: SRM B LOG RATE

Generic/Cond Desc.: Nuclear Instruments, Sourc Rng B

Analog/Digital: A

Engr Units/Dig States: CPS

Engr Units Conversion: N/A

Minimum Instr Range: .1

Maximum Instr Range: 1E5

Zero Point Reference: N/A

Reference Point Notes: N/A

PROC or SENS: S

Number of Sensors: 1

How Processed: N/A

Sensor Locations: Reference Unique System Desc.

Alarm/Trip Set Points: Reference Unique System Desc.⁽¹⁾

NI Detector Power Supply
Cut-off Power Level: N/A

NI Detector Power Supply
Turn-on Power Level: N/A

Instrument Failure Mode: Low, High

Temperature Compensation
For DP Transmitters: N/A

Level Reference Leg: N/A

Unique System Desc.: The electrical full-in limit, positions the detector 18" above the active fuel center line. The mechanical full-in limit is 21" above the active fuel center line. The location of the detector during normal reactor operation (full-out limit) is 24" below the bottom of the active fuel. The GE coordinate (radial position) of the detector in the core is 40-45.

⁽¹⁾ - When the plant is in Condition 2 - 5, there is an upscale alarm/rod block = 1×10^5 CPS, an upscale/non-coincident trip = 2×10^5 CPS, and a downscale/rod block = 4.1 CPS. These blocks/trips are bypassed when the plant is Condition 1. The upscale/non-coincident trip is defeated when the RPS shorting links are installed.

SUSQUEHANNA STEAM ELECTRIC STATION
UNITS 1 & 2
ERDS DATA POINT LIBRARY REFERENCE FILE

Date: 05/13/98

Reactor Unit: SQ1/SQ2

Data Feeder: N/A

NRC ERDS Parameter: NI SOURC RNG

Point ID: NN1003Z

Plant Spec Point Desc.: SRM C LOG RATE

Generic/Cond Desc.: Nuclear Instruments, Sourc Rng C

Analog/Digital: A

Engr Units/Dig States: CPS

Engr Units Conversion: N/A

Minimum Instr Range: .1

Maximum Instr Range: 1E6

Zero Point Reference: N/A

Reference Point Notes: N/A

PROC or SENS: S

Number of Sensors: 1

How Processed: N/A

Sensor Locations: Reference Unique System Desc.

Alarm/Trip Set Points: Reference Unique System Desc.⁽¹⁾

NI Detector Power Supply
Cut-off Power Level: N/A

NI Detector Power Supply
Turn-on Power Level: N/A

Instrument Failure Mode: Low, High

Temperature Compensation
For DP Transmitters: N/A

Level Reference Leg: N/A

Unique System Desc.: The electrical full-in limit, positions the detector 18" above the active fuel center line. The mechanical full-in limit is 21" above the active fuel center line. The location of the detector during normal reactor operation (full-out limit) is 24" below the bottom of the active fuel. The GE coordinate (radial position) of the detector in the core is 40-21.
- When the plant is in Condition 2 - 5, there is an upscale alarm/rod block = 1×10^5 CPS, an upscale/non-coincident trip = 2×10^5 CPS, and a downscale/rod block = 4.1 CPS. These blocks/trips are bypassed when the plant is Condition 1. The upscale/non-coincident trip is defeated when the RPS shorting links are installed.

SUSQUEHANNA STEAM ELECTRIC STATION
UNITS 1 & 2
ERDS DATA POINT LIBRARY REFERENCE FILE

Date: 05/13/98

Reactor Unit: SQ1/SQ2

Data Feeder: N/A

NRC ERDS Parameter: NI SOURC RNG

Point ID: NN1004Z

Plant Spec Point Desc.: SRM D LOG RATE

Generic/Cond Desc.: Nuclear Instruments, Sourc Rng D

Analog/Digital: A

Engr Units/Dig States: CPS

Engr Units Conversion: N/A

Minimum Instr Range: .1

Maximum Instr Range: 1E6

Zero Point Reference: N/A

Reference Point Notes: N/A

PROC or SENS: S

Number of Sensors: 1

How Processed: N/A

Sensor Locations: Reference Unique System Desc.

Alarm/Trip Set Points: Reference Unique System Desc.⁽¹⁾

NI Detector Power Supply
Cut-off Power Level: N/A

NI Detector Power Supply
Turn-on Power Level: N/A

Instrument Failure Mode: Low, High

Temperature Compensation
For DP Transmitters: N/A

Level Reference Leg: N/A

Unique System Desc.: The electrical full-in limit, positions the detector 18" above the active fuel center line. The mechanical full-in limit is 21" above the active fuel center line. The location of the detector during normal reactor operation (full-out limit) is 24" below the bottom of the active fuel. The GE coordinate (radial position) of the detector in the core is 16-21.

¹- When the plant is in Condition 2 - 5, there is an upscale alarm/rod block = 1×10^5 CPS, an upscale/non-coincident trip = 2×10^5 CPS, and a downscale/rod block = 4.1 CPS. These blocks/trips are bypassed when the plant is Condition 1. The upscale/non-coincident trip is defeated when the RPS shorting links are installed.

SUSQUEHANNA STEAM ELECTRIC STATION
UNITS 1 & 2
ERDS DATA POINT LIBRARY REFERENCE FILE

Date: 05/13/98
Reactor Unit: SQ1/SQ2
Data Feeder: N/A
NRC ERDS Parameter: Not Listed
Point ID: NPY001Z
Plant Spec Point Desc.: SRM POSITION A
Generic/Cond Desc.: SRM Position A
Analog/Digital: D
Engr Units/Dig States: NOT IN, IN
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: S
Number of Sensors: 1
How Processed: N/A
Sensor Locations: SRM drive motor limit switch
Alarm/Trip Set Points: N/A
NI Detector Power Supply
Cut-off Power Level: N/A
NI Detector Power Supply
Turn-on Power Level: N/A
Instrument Failure Mode: Value = 'Not In'
Temperature Compensation
For DP Transmitters: N/A
Level Reference Leg: N/A
Unique System Desc.:

SUSQUEHANNA STEAM ELECTRIC STATION
UNITS 1 & 2
ERDS DATA POINT LIBRARY REFERENCE FILE

Date: 05/13/98
Reactor Unit: SQ1/SQ2
Data Feeder: N/A
NRC ERDS Parameter: Not Listed
Point ID: NPY002Z
Plant Spec Point Desc.: SRM POSITION B
Generic/Cond Desc.: SRM Position B
Analog/Digital: D
Engr Units/Dig States: NOT IN,IN
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: S
Number of Sensors: 1
How Processed: N/A
Sensor Locations: SRM drive motor limit switch
Alarm/Trip Set Points: N/A
NI Detector Power Supply
Cut-off Power Level: N/A
NI Detector Power Supply
Turn-on Power Level: N/A
Instrument Failure Mode: Value = 'Not In'
Temperature Compensation
For DP Transmitters: N/A
Level Reference Leg: N/A
Unique System Desc.:

SUSQUEHANNA STEAM ELECTRIC STATION
UNITS 1 & 2
ERDS DATA POINT LIBRARY REFERENCE FILE

Date: 05/13/98
Reactor Unit: SQ1/SQ2
Data Feeder: N/A
NRC ERDS Parameter: Not Listed
Point ID: NPY003Z
Plant Spec Point Desc.: SRM POSITION C
Generic/Cond Desc.: SRM Position C
Analog/Digital: D
Engr Units/Dig States: NOT IN, IN
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: S
Number of Sensors: 1
How Processed: N/A
Sensor Locations: SRM drive motor limit switch
Alarm/Trip Set Points: N/A
NI Detector Power Supply
Cut-off Power Level: N/A
NI Detector Power Supply
Turn-on Power Level: N/A
Instrument Failure Mode: Value = 'Not In'
Temperature Compensation
For DP Transmitters: N/A
Level Reference Leg: N/A
Unique System Desc.:

SUSQUEHANNA STEAM ELECTRIC STATION
UNITS 1 & 2
ERDS DATA POINT LIBRARY REFERENCE FILE

Date: 05/13/98
Reactor Unit: SQ1/SQ2
Data Feeder: N/A
NRC ERDS Parameter: Not Listed
Point ID: NPY004Z
Plant Spec Point Desc.: SRM POSITION D
Generic/Cond Desc.: SRM Position D
Analog/Digital: D
Engr Units/Dig States: NOT IN,IN
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: S
Number of Sensors: 1
How Processed: N/A
Sensor Locations: SRM drive motor limit switch
Alarm/Trip Set Points: N/A
NI Detector Power Supply
Cut-off Power Level: N/A
NI Detector Power Supply
Turn-on Power Level: N/A
Instrument Failure Mode: Value = 'Not In'
Temperature Compensation
For DP Transmitters: N/A
Level Reference Leg: N/A
Unique System Desc.:

SUSQUEHANNA STEAM ELECTRIC STATION
UNITS 1 & 2
ERDS DATA POINT LIBRARY REFERENCE FILE

Date: 05/13/98

Reactor Unit: SQL/SQ2

Data Feeder: N/A

NRC ERDS Parameter: REAC VES LEV

Point ID: RWL

Plant Spec Point Desc.: REACTOR WATER LEVEL

Generic/Cond Desc.: Reactor Vessel Water Level

Analog/Digital: A

Engr Units/Dig States: INCHES

Engr Units Conversion: N/A

Minimum Instr Range: -310

Maximum Instr Range: 500

Zero Point Reference: BDSKRT

Reference Point Notes: BDSKRT = near bottom of dryer skirt⁽¹⁾

PROC or SENS: P

Number of Sensors: Reference Unique System Desc.

How Processed: Reference Unique System Desc.

Sensor Locations: Reactor Bldg Elevation 749'

Alarm/Trip Set Points: Reference Unique System Desc.⁽²⁾

NI Detector Power Supply
Cut-off Power Level: N/A

NI Detector Power Supply
Turn-on Power Level: N/A

Instrument Failure Mode: Low, High

Temperature Compensation
For DP Transmitters: N

Level Reference Leg: Wet

Unique System Desc.: SPDS has 13 Rx water level inputs in 6 different range groups, narrow, wide, extended, upset, shutdown & fuel zone. A Supplier proprietary algorithm will arrive at a value for RWL by either averaging only valid signals in the most appropriate range group or by selection of a single level signal.

⁽¹⁾ - Zero point reference is 527.5" above vessel zero (bottom drain 0.0"). TAF is at 366.31".

⁽²⁾ - Various initiations or trips will occur at Level 1 (-149"), Level 2 (-38"), Level 3 (+12.5") and Level 8 (+54")

Note: RWL is a composite SPDS parameter with the following points as inputs: NFL001Z, NFL002Z, NFL003Z, NFL004Z, NFL005Z, NFL007Z, NBL001Z, NBL002Z, NBL003Z, NBL004Z, NBL005Z, NBL006Z, and NBL007Z.

SUSQUEHANNA STEAM ELECTRIC STATION
UNITS 1 & 2
ERDS DATA POINT LIBRARY REFERENCE FILE

Date:	05/23/02
Reactor Unit:	SQ1/SQ2
Data Feeder:	N/A
NRC ERDS Parameter:	MAIN FD FLOW
Point ID:	NFF77
Plant Spec Point Desc.:	FW FLOW A
Generic/Cond Desc.:	Feedwater Flow A into React Syst
Analog/Digital:	A
Engr Units/Dig States:	MLBS/H
Engr Units Conversion:	N/A
Minimum Instr Range:	0.0
Maximum Instr Range:	8.000
Zero Point Reference:	N/A
Reference Point Notes:	N/A
PROC or SENS:	S
Number of Sensors:	1
How Processed:	N/A
Sensor Locations:	Reference Unique System Desc.
Alarm/Trip Set Points:	N/A
NI Detector Power Supply Cut-off Power Level:	N/A
NI Detector Power Supply Turn-on Power Level:	N/A
Instrument Failure Mode:	Low - downscale
Temperature Compensation For DP Transmitters:	N/A
Level Reference Leg:	N/A
Unique System Desc.:	Flow is measured on discharge line of Pump A prior to common feedwater header.

SUSQUEHANNA STEAM ELECTRIC STATION
UNITS 1 & 2
ERDS DATA POINT LIBRARY REFERENCE FILE

Date: 05/23/02

Reactor Unit: SQ1/SQ2

Data Feeder: N/A

NRC ERDS Parameter: MAIN FD FLOW

Point ID: NFF78

Plant Spec Point Desc.: FW FLOW B

Generic/Cond Desc.: Feedwater Flow B into React Syst

Analog/Digital: A

Engr Units/Dig States: MLBS/H

Engr Units Conversion: N/A

Minimum Instr Range: 0.0

Maximum Instr Range: 9.000

Zero Point Reference: N/A

Reference Point Notes: N/A

PROC or SENS: S

Number of Sensors: 1

How Processed: N/A

Sensor Locations: Reference Unique System Desc.

Alarm/Trip Set Points: N/A

NI Detector Power Supply
Cut-off Power Level: N/A

NI Detector Power Supply
Turn-on Power Level: N/A

Instrument Failure Mode: Low - downscale

Temperature Compensation
For DP Transmitters: N/A

Level Reference Leg: N/A

Unique System Desc.: Flow is measured on discharge line of Pump B prior to common feedwater header.

SUSQUEHANNA STEAM ELECTRIC STATION
UNITS 1 & 2
ERDS DATA POINT LIBRARY REFERENCE FILE

Date:	05/23/02
Reactor Unit:	SQ1/SQ2
Data Feeder:	N/A
NRC ERDS Parameter:	MAIN FD FLOW
Point ID:	NFF79
Plant Spec Point Desc.:	FW FLOW C
Generic/Cond Desc.:	Feedwater Flow C into React Syst
Analog/Digital:	A
Engr Units/Dig States:	MLBS/H
Engr Units Conversion:	N/A
Minimum Instr Range:	0.0
Maximum Instr Range:	8.000
Zero Point Reference:	N/A
Reference Point Notes:	N/A
PROC or SENS:	S
Number of Sensors:	1
How Processed:	N/A
Sensor Locations:	Reference Unique System Desc.
Alarm/Trip Set Points:	N/A
NI Detector Power Supply Cut-off Power Level:	N/A
NI Detector Power Supply Turn-on Power Level:	N/A
Instrument Failure Mode:	Low - downscale
Temperature Compensation For DP Transmitters:	N/A
Level Reference Leg:	N/A
Unique System Desc.:	Flow is measured on discharge line of Pump C prior to common feedwater header.

SUSQUEHANNA STEAM ELECTRIC STATION
UNITS 1 & 2
ERDS DATA POINT LIBRARY REFERENCE FILE

Date: 05/13/98
Reactor Unit: SQ1/SQ2
Data Feeder: N/A
NRC ERDS Parameter: RCIC FLOW
Point ID: NIF01
Plant Spec Point Desc.: RCIC FLOW
Generic/Cond Desc.: Reactor Core Isolat Cooling Flow
Analog/Digital: A
Engr Units/Dig States: GPM
Engr Units Conversion: N/A
Minimum Instr Range: 0.0
Maximum Instr Range: 700.0
Zero Point Reference: N/A
Reference Point Notes: N/A
PROC or SENS: S
Number of Sensors: 1
How Processed: N/A
Sensor Locations: Between RCIC pump and pump discharge valve⁽¹⁾
Alarm/Trip Set Points: Alarm, Low Flow at 60 GPM
NI Detector Power Supply
Cut-off Power Level: N/A
NI Detector Power Supply
Turn-on Power Level: N/A
Instrument Failure Mode: High, Low
Temperature Compensation
For DP Transmitters: N/A
Level Reference Leg: N/A
Unique System Desc.: - Reactor Building Elevation 645'

SUSQUEHANNA STEAM ELECTRIC STATION
UNITS 1 & 2
ERDS DATA POINT LIBRARY REFERENCE FILE

Date: 05/13/98

Reactor Unit: SQ1/SQ2

Data Feeder: N/A

NRC ERDS Parameter: RCS PRESSURE

Point ID: RXPR

Plant Spec Point Desc.: REACTOR PRESSURE

Generic/Cond Desc.: Reactor Coolant System Pressure

Analog/Digital: A

Engr Units/Dig States: PSIG

Engr Units Conversion: N/A

Minimum Instr Range: 0

Maximum Instr Range: 1500

Zero Point Reference: N/A

Reference Point Notes: N/A

PROC or SENS: P

Number of Sensors: Reference Unique System Desc.

How Processed: Reference Unique System Desc.

Sensor Locations: Reactor Bldg Elevation 749'

Alarm/Trip Set Points: Alarm @ 1020 PSIG, Trip @ 1037 PSIG

NI Detector Power Supply
Cut-off Power Level: N/A

NI Detector Power Supply
Turn-on Power Level: N/A

Instrument Failure Mode: Low, High

Temperature Compensation
For DP Transmitters: N/A

Level Reference Leg: N/A

Unique System Desc.: A Supplier proprietary algorithm arrives at a value for RXPR by either selecting a single signal or by averaging signals depending on the results of validation and verification of the five sensed pressure signal inputs.

Note: RXPR is a composite SPDS parameter with the following points as inputs: NFP001Z, NFP002Z, NFP003Z, NFP005Z, and NFP006Z.

SUSQUEHANNA STEAM ELECTRIC STATION
UNITS 1 & 2
ERDS DATA POINT LIBRARY REFERENCE FILE

Date: 05/13/98
Reactor Unit: SQ1/SQ2
Data Feeder: N/A
NRC ERDS Parameter: HPCI FLOW
Point ID: NGF01
Plant Spec Point Desc.: HPCI PP DSCH LINE FLOW
Generic/Cond Desc.: High Pressure Coolant Injec Flow
Analog/Digital: A
Engr Units/Dig States: GPM
Engr Units Conversion: N/A
Minimum Instr Range: 0.0
Maximum Instr Range: 6000
Zero Point Reference: N/A
Reference Point Notes: N/A
PROC or SENS: S
Number of Sensors: 1
How Processed: N/A
Sensor Locations: Pump discharge line - Rx Bldg Elev. 645'
Alarm/Trip Set Points: Alarm, Low Flow at 300 GPM
NI Detector Power Supply
Cut-off Power Level: N/A
NI Detector Power Supply
Turn-on Power Level: N/A
Instrument Failure Mode: High, Low
Temperature Compensation
For DP Transmitters: N/A
Level Reference Leg: N/A
Unique System Desc.:

SUSQUEHANNA STEAM ELECTRIC STATION
UNITS 1 & 2
ERDS DATA POINT LIBRARY REFERENCE FILE

Date:	05/13/98
Reactor Unit:	SQ1/SQ2
Data Feeder:	N/A
NRC ERDS Parameter:	LPCI FLOW
Point ID:	NHF01
Plant Spec Point Desc.:	RHR SYS A FLOW
Generic/Cond Desc.:	Low Press Coolant Inject A Flow
Analog/Digital:	A
Engr Units/Dig States:	GPM
Engr Units Conversion:	N/A
Minimum Instr Range:	0.0
Maximum Instr Range:	30000
Zero Point Reference:	N/A
Reference Point Notes:	N/A
PROC or SENS:	S
Number of Sensors:	1
How Processed:	N/A
Sensor Locations:	Reference Unique System Description
Alarm/Trip Set Points:	N/A
NI Detector Power Supply Cut-off Power Level:	N/A
NI Detector Power Supply Turn-on Power Level:	N/A
Instrument Failure Mode:	High, Low
Temperature Compensation For DP Transmitters:	N/A
Level Reference Leg:	N/A
Unique System Desc.:	Flow sensed by a flow element in the RHR distribution piping downstream of the RHR heat exchanger.

SUSQUEHANNA STEAM ELECTRIC STATION
UNITS 1 & 2
ERDS DATA POINT LIBRARY REFERENCE FILE

Date:	05/13/98
Reactor Unit:	SQ1/SQ2
Data Feeder:	N/A
NRC ERDS Parameter:	LPCI FLOW
Point ID:	NHF02
Plant Spec Point Desc.:	RHR SYS B FLOW
Generic/Cond Desc.:	Low Press Coolant Inject B Flow
Analog/Digital:	A
Engr Units/Dig States:	GPM
Engr Units Conversion:	N/A
Minimum Instr Range:	0.0
Maximum Instr Range:	30000
Zero Point Reference:	N/A
Reference Point Notes:	N/A
PROC or SENS:	S
Number of Sensors:	1
How Processed:	N/A
Sensor Locations:	Reference Unique System Desc.
Alarm/Trip Set Points:	N/A
NI Detector Power Supply Cut-off Power Level:	N/A
NI Detector Power Supply Turn-on Power Level:	N/A
Instrument Failure Mode:	High, Low
Temperature Compensation For DP Transmitters:	N/A
Level Reference Leg:	N/A
Unique System Desc.:	Flow sensed by a flow element in the RHR distribution piping downstream of the RHR heat exchanger.

SUSQUEHANNA STEAM ELECTRIC STATION
UNITS 1 & 2
ERDS DATA POINT LIBRARY REFERENCE FILE

Date: 05/13/98

Reactor Unit: SQ1/SQ2

Data Feeder: N/A

NRC ERDS Parameter: CR SPRAY FL

Point ID: LPCS

Plant Spec Point Desc.: TOTAL CORE SPRAY FLOW

Generic/Cond Desc.: Core Spray Cooling System Flow

Analog/Digital: A

Engr Units/Dig States: GPM

Engr Units Conversion: N/A

Minimum Instr Range: 0

Maximum Instr Range: 10,000

Zero Point Reference: N/A

Reference Point Notes: N/A

PROC or SENS: P

Number of Sensors: 2

How Processed: Sum (Reference Unique System Desc.)

Sensor Locations: Reference Unique System Description⁽¹⁾

Alarm/Trip Set Points: N/A

NI Detector Power Supply
Cut-off Power Level: N/A

NI Detector Power Supply
Turn-on Power Level: N/A

Instrument Failure Mode: High, Low

Temperature Compensation
For DP Transmitters: N/A

Level Reference Leg: N/A

Unique System Desc.: A Supplier proprietary algorithm calculates LPCS as the sum of the CS Loop A and Loop B flows. The algorithm utilizes the position of the CS Test Isolation Valve as well as drywell pressure, reactor vessel pressure, and reactor water level in the selection and validation of each loop's flow. The algorithm selects a value for flow for each loop from either the measured loop flow or the calculated loop flow (based on loop pressure and pump-head performance curve) depending on the algorithm logic table.
⁽¹⁾ -Downstream of Pump A & C (Loop A) Discharge connection and Pump B & D Loop B) Discharge connection.

Note: LPCS is a composite SPDS parameter with the following points as inputs: NSF001Z, NSF002Z, NSP001Z, and NSP002Z.

SUSQUEHANNA STEAM ELECTRIC STATION
UNITS 1 & 2
ERDS DATA POINT LIBRARY REFERENCE FILE

Date: 05/13/98

Reactor Unit: SQ1/SQ2

Data Feeder: N/A

NRC ERDS Parameter: DW FD SMP LV

Point ID: RLL004Z

Plant Spec Point Desc.: A DRWL SUMP LEVEL

Generic/Cond Desc.: Drywell Floor Drain Sump Level A

Analog/Digital: A

Engr Units/Dig States: 4

Engr Units Conversion: Each 1% \approx 1 Gallon⁽¹⁾

Minimum Instr Range: 37.5

Maximum Instr Range: 100

Zero Point Reference: BTSUMP = Bottom of Sump

Reference Point Notes: Reference Unique System Desc.⁽²⁾

PROC or SENS: S

Number of Sensors: 1

How Processed: N/A

Sensor Locations: Drywell Floor Drain Elev. 704'

Alarm/Trip Set Points: N/A

NI Detector Power Supply
Cut-off Power Level: N/A

NI Detector Power Supply
Turn-on Power Level: N/A

Instrument Failure Mode: Low

Temperature Compensation
For DP Transmitters: N/A

Level Reference Leg: N/A

Unique System Desc.:
1 Instrumentation output is level switch driven, each step is
approximately 15 gals.
2 Input referenced to bottom of sump. Actual instrument zero is .25"
below input reference point.

Upon containment isolation output of sump is also isolated.

SUSQUEHANNA STEAM ELECTRIC STATION
UNITS 1 & 2
ERDS DATA POINT LIBRARY REFERENCE FILE

Date: 05/13/98

Reactor Unit: SQ1/SQ2

Data Feeder: N/A

NRC ERDS Parameter: DW FD SMP LV

Point ID: RLL005Z

Plant Spec Point Desc.: B DRWL SUMP LEVEL

Generic/Cond Desc.: Drywell Floor Drain Sump Level B

Analogue/Digital: A

Engr Units/Dig States: %

Engr Units Conversion: Each 1% \approx 1.2 Gallon for SQ1⁽¹⁾
Each 1% \approx 1 Gallon for SQ2

Minimum Instr Range: 37.5

Maximum Instr Range: 100

Zero Point Reference: BTSUMP = Bottom of Sump

Reference Point Notes: Reference Unique System Desc.⁽²⁾

PROC or SENS: S

Number of Sensors: 1

How Processed: N/A

Sensor Locations: Drywell Floor Drain Elev. 704'

Alarm/Trip Set Points: N/A

NI Detector Power Supply
Cut-off Power Level: N/A

NI Detector Power Supply
Turn-on Power Level: N/A

Instrument Failure Mode: Low

Temperature Compensation
For DP Transmitters: N/A

Level Reference Leg: N/A

Unique System Desc.:
1 Instrumentation output is level switch driven, each step is approximately
16 gals for Unit 1 (SQ1) and 15 gals for Unit 2 (SQ2).
2 Input referenced to bottom of sump. Actual instrument zero is .25"
below input reference point.

Upon containment isolation output of sump is also isolated.

SUSQUEHANNA STEAM ELECTRIC STATION
UNITS 1 & 2
ERDS DATA POINT LIBRARY REFERENCE FILE

Date: 05/13/98

Reactor Unit: SQ1/SQ2

Data Feeder: N/A

NRC ERDS Parameter: EFF GAS RAD

Point ID: EGRNRX1

Plant Spec Point Desc.: RAD OF RELEASED NBLGAS-RX 1 VENT

Generic/Cond Desc.: Rad of Released NBLGAS-Rx 1 Vent

Analog/Digital: A

Engr Units/Dig States: uCI/Min

Engr Units Conversion: N/A

Minimum Instr Range: 0

Maximum Instr Range: N/A

Zero Point Reference: N/A

Reference Point Notes: N/A

PROC or SENS: P

Number of Sensors: 1

How Processed: Average

Sensor Locations: Reference Unique System Desc.⁽¹⁾

Alarm/Trip Set Points: N/A

NI Detector Power Supply
Cut-off Power Level: N/A

NI Detector Power Supply
Turn-on Power Level: N/A

Instrument Failure Mode: Low

Temperature Compensation
For DP Transmitters: N/A

Level Reference Leg: N/A

Unique System Desc.: The Eberline Control Terminal provides 1 min averages for the Noble Gas release component. EGRNRX1 is created by averaging the properly selected Noble Gas range (low, mid or high) 1 min average releases for a 15 min period. EGRNRX1 is updated each quarter hour (i.e. it is not a sliding 15 min average). Therefore, the same value of EGRNRX1 will be transmitted each minute for a given fifteen minute period until the next update is available.

- Isokinetic sample drawn @ Rx Bldg vent near Rx Bldg roof.

SUSQUEHANNA STEAM ELECTRIC STATION
UNITS 1 & 2
ERDS DATA POINT LIBRARY REFERENCE FILE

Date: 05/13/98

Reactor Unit: SQ1/SQ2

Data Feeder: N/A

NRC ERDS Parameter: EFF GAS RAD

Point ID: EGRPRX1

Plant Spec Point Desc.: RAD OF RELEASED PART -RX 1 VENT

Generic/Cond Desc.: Rad of Released PART -Rx 1 Vent

Analog/Digital: A

Engr Units/Dig States: uCI/Min

Engr Units Conversion: N/A

Minimum Instr Range: 0

Maximum Instr Range: N/A

Zero Point Reference: N/A

Reference Point Notes: N/A

PROC or SENS: P

Number of Sensors: 1

How Processed: Average

Sensor Locations: Reference Unique System Desc.⁽¹⁾

Alarm/Trip Set Points: N/A

NI Detector Power Supply
Cut-off Power Level: N/A

NI Detector Power Supply
Turn-on Power Level: N/A

Instrument Failure Mode: Low

Temperature Compensation
For DP Transmitters: N/A

Level Reference Leg: N/A

Unique System Desc.: The Eberline Control Terminal provides 1 min averages for the Beta Particulate release component. EGRPRX1 is created by averaging the 1 min average releases for a 15 min period. EGRPRX1 is updated each Quarter hour (i.e. it is not a sliding 15 min average). Therefore, the same value of EGRPRX1 will be transmitted each minute for a given fifteen minute period until the next update is available.
1 - Isokinetic sample drawn @ Rx Bldg vent near Rx Bldg roof.

SUSQUEHANNA STEAM ELECTRIC STATION
UNITS 1 & 2
ERDS DATA POINT LIBRARY REFERENCE FILE

Date: 05/13/98

Reactor Unit: SQ1/SQ2

Data Feeder: N/A

NRC ERDS Parameter: EFF GAS RAD

Point ID: EGRIRX1

Plant Spec Point Desc.: RAD OF RELEASED I131 -RX 1 VENT

Generic/Cond Desc.: Rad of Released I131 -Rx 1 Vent

Analog/Digital: A

Engr Units/Dig States: uCI/Min

Engr Units Conversion: N/A

Minimum Instr Range: 0

Maximum Instr Range: N/A

Zero Point Reference: N/A

Reference Point Notes: N/A

PROC or SENS: P

Number of Sensors: 1

How Processed: Average

Sensor Locations: Reference Unique System Desc.⁽¹⁾

Alarm/Trip Set Points: N/A

NI Detector Power Supply
Cut-off Power Level: N/A

NI Detector Power Supply
Turn-on Power Level: N/A

Instrument Failure Mode: Low

Temperature Compensation
For DP Transmitters: N/A

Level Reference Leg: N/A

Unique System Desc.: The Eberline Control Terminal provides 1 min averages for the I131 release component. EGRIRX1 is created by averaging the 1 min average releases for a 15 min period. EGRIRX1 is updated each quarter hour (i.e. it is not a sliding 15 min average). Therefore, the same value of EGRIRX1 will be transmitted each minute for a given fifteen minute period until the next update is available.

¹ - Isokinetic sample drawn @ Rx Bldg vent near Rx Bldg roof.

SUSQUEHANNA STEAM ELECTRIC STATION
UNITS 1 & 2
ERDS DATA POINT LIBRARY REFERENCE FILE

Date: 05/13/98

Reactor Unit: SQ1/SQ2

Data Feeder: N/A

NRC ERDS Parameter: EFF GAS RAD

Point ID: EGRNTB1

Plant Spec Point Desc.: RAD OF RELEASED NBLGAS-TB 1 VENT

Generic/Cond Desc.: Rad of Released NBLGAS-TB 1 Vent

Analog/Digital: A

Engr Units/Dig States: uCI/Min

Engr Units Conversion: N/A

Minimum Instr Range: 0

Maximum Instr Range: N/A

Zero Point Reference: N/A

Reference Point Notes: N/A

PROC or SENS: P

Number of Sensors: 1

How Processed: Average

Sensor Locations: Reference Unique System Desc.⁽¹⁾

Alarm/Trip Set Points: N/A

NI Detector Power Supply
Cut-off Power Level: N/A

NI Detector Power Supply
Turn-on Power Level: N/A

Instrument Failure Mode: Low

Temperature Compensation
For DP Transmitters: N/A

Level Reference Leg: N/A

Unique System Desc.: The Eberline Control Terminal provides 1 min averages for the Noble Gas release component. EGRNTB1 is created by averaging the properly selected Noble Gas range (low, mid or high) 1 min average releases for a 15 min period. EGRNTB1 is updated each quarter hour (i.e. it is not a sliding 15 min average). Therefore, the same value of EGRNTB1 will be transmitted each minute for a given fifteen minute period until the next update is available.

⁽¹⁾ - Isokinetic sample drawn @ Turbine Bldg vent near Rx Bldg roof.

SUSQUEHANNA STEAM ELECTRIC STATION
UNITS 1 & 2
ERDS DATA POINT LIBRARY REFERENCE FILE

Date: 05/13/98

Reactor Unit: SQ1/SQ2

Data Feeder: N/A

NRC ERDS Parameter: EFF GAS RAD

Point ID: EGRPTB1

Plant Spec Point Desc.: RAD OF RELEASED PART -TB 1 VENT

Generic/Cond Desc.: Rad of Released PART -TB 1 Vent

Analog/Digital: A

Engr Units/Dig States: uCi/Min

Engr Units Conversion: N/A

Minimum Instr Range: 0

Maximum Instr Range: N A

Zero Point Reference: N A

Reference Point Notes: N A

PROC or SENS: P

Number of Sensors: 1

How Processed: Average

Sensor Locations: Reference Unique System Desc.⁽¹⁾

Alarm/Trip Set Points: N A

NI Detector Power Supply
Cut-off Power Level: N A

NI Detector Power Supply
Turn-on Power Level: N A

Instrument Failure Mode: Low

Temperature Compensation
For DP Transmitters: N/A

Level Reference Leg: N A

Unique System Desc.: The Eberline Control Terminal provides 1 min averages for the Beta Particulate release component. EGRPTB1 is created by averaging the 1 min average releases for a 15 min period. EGRPTB1 is updated each quarter hour (i.e. it is not a sliding 15 min average). Therefore, the same value of EGRPTB1 will be transmitted each minute for a given fifteen minute period until the next update is available.
- Isokinetic sample drawn @ Turbine Bldg vent near Rx Bldg roof.

SUSQUEHANNA STEAM ELECTRIC STATION
UNITS 1 & 2
ERDS DATA POINT LIBRARY REFERENCE FILE

Date: 05/13/98

Reactor Unit: SQ1/SQ2

Data Feeder: N/A

NRC ERDS Parameter: EFF GAS RAD

Point ID: EGRITB1

Plant Spec Point Desc.: RAD OF RELEASED I131 -TB 1 VENT

Generic/Cond Desc.: Rad of Released I131 -TB 1 Vent

Analog/Digital: A

Engr Units/Dig States: uCI/Min

Engr Units Conversion: N/A

Minimum Instr Range: 0

Maximum Instr Range: N/A

Zero Point Reference: N/A

Reference Point Notes: N/A

PROC or SENS: P

Number of Sensors: 1

How Processed: Average

Sensor Locations: Reference Unique System Desc.⁽¹⁾

Alarm/Trip Set Points: N/A

NI Detector Power Supply
Cut-off Power Level: N/A

NI Detector Power Supply
Turn-on Power Level: N/A

Instrument Failure Mode: Low

Temperature Compensation
For DP Transmitters: N/A

Level Reference Leg: N/A

Unique System Desc.: The Eberline Control Terminal provides 1 min averages for the I131 release component. EGRITB1 is created by averaging the 1 min average releases for a 15 min period. EGRITB1 is updated each quarter hour (i.e. it is not a sliding 15 min average). Therefore, the same value of EGRITB1 will be transmitted each minute for a given fifteen minute period until the next update is available.
- Isokinetic sample drawn @ Turbine Bldg vent near Rx Bldg roof.

SUSQUEHANNA STEAM ELECTRIC STATION
UNITS 1 & 2
ERDS DATA POINT LIBRARY REFERENCE FILE

Date: 05/13/98

Reactor Unit: SQ1/SQ2

Data Feeder: N/A

NRC ERDS Parameter: EFF GAS RAD

Point ID: EGRNSGTS

Plant Spec Point Desc.: RAD OF RELEASED NBLGAS-SGTS VENT

Generic/Cond Desc.: Rad of Released NBLGAS-SGTS Vent

Analog/Digital: A

Engr Units/Dig States: uCI/Min

Engr Units Conversion: N/A

Minimum Instr Range: 0

Maximum Instr Range: N/A

Zero Point Reference: N/A

Reference Point Notes: N/A

PROC or SENS: P

Number of Sensors: 1

How Processed: Average

Sensor Locations: Reference Unique System Desc.

Alarm/Trip Set Points: N/A

NI Detector Power Supply
Cut-off Power Level: N/A

NI Detector Power Supply
Turn-on Power Level: N/A

Instrument Failure Mode: Low

Temperature Compensation
For DP Transmitters: N/A

Level Reference Leg: N/A

Unique System Desc.: The Eberline Control Terminal provides 1 min averages for the Noble Gas release component. EGRNSGTS is created by averaging the properly selected Noble Gas range (low, mid or high) 1 min average releases for a 15 min period. EGRNSGTS is updated each quarter hour (i.e. it is not a sliding 15 min average). Therefore, the same value of EGRNSGTS will be transmitted each minute for a given fifteen minute period until the next update is available.
- Isokinetic sample drawn @ SGTS vent near Rx Bldg roof.

SUSQUEHANNA STEAM ELECTRIC STATION
UNITS 1 & 2
ERDS DATA POINT LIBRARY REFERENCE FILE

Date: 05/13/98

Reactor Unit: SQ1/SQ2

Data Feeder: N/A

NRC ERDS Parameter: EFF GAS RAD

Point ID: EGRPSGTS

Plant Spec Point Desc.: RAD OF RELEASED PART -SGTS VENT

Generic/Cond Desc.: Rad of Released PART -SGTS Vent

Analog/Digital: A

Engr Units/Dig States: uCI/Min

Engr Units Conversion: N/A

Minimum Instr Range: 0

Maximum Instr Range: N/A

Zero Point Reference: N/A

Reference Point Notes: N/A

PROC or SENS: P

Number of Sensors: 1

How Processed: Average

Sensor Locations: Reference Unique System Desc.⁽¹⁾

Alarm/Trip Set Points: N/A

NI Detector Power Supply
Cut-off Power Level: N/A

NI Detector Power Supply
Turn-on Power Level: N/A

Instrument Failure Mode: Low

Temperature Compensation
For DP Transmitters: N/A

Level Reference Leg: N/A

Unique System Desc.: The Eberline Control Terminal provides 1 min averages for the Beta Particulate release component. EGRPSGTS is created by averaging the 1 min average releases for a 15 min period. EGRPSGTS is updated each quarter hour (i.e. it is not a sliding 15 min average). Therefore, the same value of EGRPSGTS will be transmitted each minute for a given fifteen minute period until the next update is available.
- Isokinetic sample drawn @ SGTS vent near Rx Bldg roof.

SUSQUEHANNA STEAM ELECTRIC STATION
UNITS 1 & 2
ERDS DATA POINT LIBRARY REFERENCE FILE

Date: 05/13/98

Reactor Unit: SQ1/SQ2

Data Feeder: N/A

NRC ERDS Parameter: EFF GAS RAD

Point ID: EGRISGTS

Plant Spec Point Desc.: RAD OF RELEASED I131 -SGTS VENT

Generic/Cond Desc.: Rad of Released I131 -SGTS Vent

Analog/Digital: A

Engr Units/Dig States: uCi/Min

Engr Units Conversion: N/A

Minimum Instr Range: 0

Maximum Instr Range: N/A

Zero Point Reference: N/A

Reference Point Notes: N/A

PROC or SENS: P

Number of Sensors: 1

How Processed: Average

Sensor Locations: Reference Unique System Desc.⁽¹⁾

Alarm/Trip Set Points: N/A

NI Detector Power Supply
Cut-off Power Level: N/A

NI Detector Power Supply
Turn-on Power Level: N/A

Instrument Failure Mode: Low

Temperature Compensation
For DP Transmitters: N/A

Level Reference Leg: N/A

Unique System Desc.: The Eberline Control Terminal provides 1 min averages for the I131 release component. EGRISGTS is created by averaging the 1 min average releases for a 15 min period. EGRISGTS is updated each quarter hour (i.e. it is not a sliding 15 min average). Therefore, the same value of EGRISGTS will be transmitted each minute for a given fifteen minute period until the next update is available.
⁽¹⁾ - Isokinetic sample drawn @ SGTS vent near Rx Bldg roof.

SUSQUEHANNA STEAM ELECTRIC STATION
UNITS 1 & 2
ERDS DATA POINT LIBRARY REFERENCE FILE

Date: 05/13/98

Reactor Unit: SQ1/SQ2

Data Feeder: N/A

NRC ERDS Parameter: EFF GAS RAD

Point ID: EGRNRX2

Plant Spec Point Desc.: RAD OF RELEASED NBLGAS-RX 2 VENT

Generic/Cond Desc.: Rad of Released NBLGAS-Rx 2 Vent

Analog/Digital: A

Engr Units/Dig States: uCI/Min

Engr Units Conversion: N/A

Minimum Instr Range: 0

Maximum Instr Range: N/A

Zero Point Reference: N/A

Reference Point Notes: N/A

PROC or SENS: P

Number of Sensors: 1

How Processed: Average

Sensor Locations: Reference Unique System Desc.⁽¹⁾

Alarm/Trip Set Points: N/A

NI Detector Power Supply
Cut-off Power Level: N/A

NI Detector Power Supply
Turn-on Power Level: N/A

Instrument Failure Mode: Low

Temperature Compensation
For DP Transmitters: N/A

Level Reference Leg: N/A

Unique System Desc.: The Eberline Control Terminal provides 1 min averages for the Noble Gas release component. EGRNRX2 is created by averaging the properly selected Noble Gas range (low, mid or high) 1 min average releases for a fifteen min period. EGRNRX2 is updated each quarter hour (i.e. it is not a sliding 15 min average). Therefore, the same value of EGRNRX2 will be transmitted each minute for a given fifteen minute period until the next update is available.

¹ - Isokinetic sample drawn @ Rx Bldg vent near Rx Bldg roof.

SUSQUEHANNA STEAM ELECTRIC STATION
UNITS 1 & 2
ERDS DATA POINT LIBRARY REFERENCE FILE

Date: 05/13/98

Reactor Unit: SQ1/SQ2

Data Feeder: N/A

NRC ERDS Parameter: EFF GAS RAD

Point ID: EGRPRX2

Plant Spec Point Desc.: RAD OF RELEASED PART -RX 2 VENT

Generic/Cond Desc.: Rad of Released PART -Rx 2 Vent

Analog/Digital: A

Engr Units/Dig States: uCI/Min

Engr Units Conversion: N/A

Minimum Instr Range: 0

Maximum Instr Range: N/A

Zero Point Reference: N/A

Reference Point Notes: N/A

PROC or SENS: P

Number of Sensors: 1

How Processed: Average

Sensor Locations: Reference Unique System Desc.⁽¹⁾

Alarm/Trip Set Points: N/A

NI Detector Power Supply
Cut-off Power Level: N/A

NI Detector Power Supply
Turn-on Power Level: N/A

Instrument Failure Mode: Low

Temperature Compensation
For DP Transmitters: N/A

Level Reference Leg: N/A

Unique System Desc.: The Eberline Control Terminal provides 1 min averages for the Beta Particulate release component. EGRPRX2 is created by averaging the 1 min average releases for a 15 min period. EGRPRX2 is updated each quarter hour (i.e. it is not a sliding 15 min average). Therefore, the same value of EGRPRX2 will be transmitted each minute for a given fifteen minute period until the next update is available.

¹⁾ - Isokinetic sample drawn @ Rx Bldg vent near Rx Bldg roof.

SUSQUEHANNA STEAM ELECTRIC STATION
UNITS 1 & 2
ERDS DATA POINT LIBRARY REFERENCE FILE

Date: 05/13/98

Reactor Unit: SQ1/SQ2

Data Feeder: N/A

NRC ERDS Parameter: EFF GAS RAD

Point ID: EGRIRX2

Plant Spec Point Desc.: RAD OF RELEASED I131 -RX 2 VENT

Generic/Cond Desc.: Rad of Released I131 -Rx 2 Vent

Analog/Digital: A

Engr Units/Dig States: uCI/Min

Engr Units Conversion: N/A

Minimum Instr Range: 0

Maximum Instr Range: N/A

Zero Point Reference: N/A

Reference Point Notes: N/A

PROC or SENS: P

Number of Sensors: 1

How Processed: Average

Sensor Locations: Reference Unique System Desc.⁽¹⁾

Alarm/Trip Set Points: N/A

NI Detector Power Supply
Cut-off Power Level: N/A

NI Detector Power Supply
Turn-on Power Level: N/A

Instrument Failure Mode: Low

Temperature Compensation
For DP Transmitters: N/A

Level Reference Leg: N/A

Unique System Desc.: The Eberline Control Terminal provides 1 min averages for the I131 release component. EGRIRX2 is created by averaging the 1 min average releases for a 15-min period. EGRIRX2 is updated each quarter hour (i.e. it is not a sliding 15 min average). Therefore, the same value of EGRIRX2 will be transmitted each minute for a given fifteen minute period until the next update is available.
- Isokinetic sample drawn @ Rx Bldg vent near Rx Bldg roof.

SUSQUEHANNA STEAM ELECTRIC STATION
UNITS 1 & 2
ERDS DATA POINT LIBRARY REFERENCE FILE

Date: 05/13/98

Reactor Unit: SQ1/SQ2

Data Feeder: N/A

NRC ERDS Parameter: EFF GAS RAD

Point ID: EGRNTB2

Plant Spec Point Desc.: RAD OF RELEASED NBLGAS-TB 2 VENT

Generic/Cond Desc.: Rad of Released NBLGAS-TB 2 Vent

Analog/Digital: A

Engr Units/Dig States: uCI/Min

Engr Units Conversion: N/A

Minimum Instr Range: 0

Maximum Instr Range: N/A

Zero Point Reference: N/A

Reference Point Notes: N/A

PROC or SENS: P

Number of Sensors: 1

How Processed: Average

Sensor Locations: Reference Unique System Desc.⁽¹⁾

Alarm/Trip Set Points: N/A

NI Detector Power Supply
Cut-off Power Level: N/A

NI Detector Power Supply
Turn-on Power Level: N/A

Instrument Failure Mode: Low

Temperature Compensation
For DP Transmitters: N/A

Level Reference Leg: N/A

Unique System Desc.: The Eberline Control Terminal provides 1 min averages for the Noble Gas release component. EGRNTB2 is created by averaging the properly selected Noble Gas range (low, mid or high) 1 min average releases for a 15 min period. EGRNTB2 is updated each quarter hour (i.e. it is not a sliding 15 min average). Therefore, the same value of EGRNTB2 will be transmitted each minute for a given fifteen minute period until the next update is available.

¹ - Isokinetic sample drawn @ Turbine Bldg vent near Rx Bldg roof.

SUSQUEHANNA STEAM ELECTRIC STATION
UNITS 1 & 2
ERDS DATA POINT LIBRARY REFERENCE FILE

Date: 05/13/98

Reactor Unit: SQ1/SQ2

Data Feeder: N/A

NRC ERDS Parameter: EFF GAS RAD

Point ID: EGRPTB2

Plant Spec Point Desc.: RAD OF RELEASED PART -TB 2 VENT

Generic/Cond Desc.: Rad of Released PART -TB 2 Vent

Analog/Digital: A

Engr Units/Dig States: uCI/Min

Engr Units Conversion: N/A

Minimum Instr Range: 0

Maximum Instr Range: N/A

Zero Point Reference: N/A

Reference Point Notes: N/A

PROC or SENS: P

Number of Sensors: 1

How Processed: Average

Sensor Locations: Reference Unique System Desc.⁽¹⁾

Alarm/Trip Set Points: N/A

NI Detector Power Supply
Cut-off Power Level: N/A

NI Detector Power Supply
Turn-on Power Level: N/A

Instrument Failure Mode: Low

Temperature Compensation
For DP Transmitters: N/A

Level Reference Leg: N/A

Unique System Desc.: The Eberline Control Terminal provides 1 min averages for the Beta Particulate release component. EGRPTB2 is created by averaging the 1 min average releases for a 15 min period. EGRPTB2 is updated each quarter hour (i.e. it is not a sliding 15 min average). Therefore, the same value of EGRPTB2 will be transmitted each minute for a given fifteen minute period until the next update is available.

¹ - Isokinetic sample drawn @ Turbine Bldg vent near Rx Bldg roof.

SUSQUEHANNA STEAM ELECTRIC STATION
UNITS 1 & 2
ERDS DATA POINT LIBRARY REFERENCE FILE

Date: 05/13/98

Reactor Unit: SQ1/SQ2

Data Feeder: N/A

NRC ERDS Parameter: EFF GAS RAD

Point ID: EGRITB2

Plant Spec Point Desc.: RAD OF RELEASED I131 -TB 2 VENT

Generic/Cond Desc.: Rad of Released I131 -TB 2 Vent

Analog/Digital: A

Engr Units/Dig States: uCI/Min

Engr Units Conversion: N/A

Minimum Instr Range: 0

Maximum Instr Range: N/A

Zero Point Reference: N/A

Reference Point Notes: N/A

PROC or SENS: P

Number of Sensors: 1

How Processed: Average

Sensor Locations: Reference Unique System Desc.⁽¹⁾

Alarm/Trip Set Points: N/A

NI Detector Power Supply
Cut-off Power Level: N/A

NI Detector Power Supply
Turn-on Power Level: N/A

Instrument Failure Mode: Low

Temperature Compensation
For DP Transmitters: N/A

Level Reference Leg: N/A

Unique System Desc.: The Eberline Control Terminal provides 1 min averages for the I131 release component. EGRITB2 is created by averaging the 1 min average releases for a 15 min period. EGRITB2 is updated each quarter hour (i.e. it is not a sliding 15 min average). Therefore, the same value of EGRITB2 will be transmitted each minute for a given fifteen minute period until the next update is available.
* - Isokinetic sample drawn @ Turbine Bldg vent near Rx Bldg roof.

SUSQUEHANNA STEAM ELECTRIC STATION
UNITS 1 & 2
ERDS DATA POINT LIBRARY REFERENCE FILE

Date: 05/13/98

Reactor Unit: SQ1/SQ2

Data Feeder: N/A

NRC ERDS Parameter: EFF GAS RAD

Point ID: EGRNSITE

Plant Spec Point Desc.: RAD OF RELEASED NBLGAS-SITE TOTL

Generic/Cond Desc.: Rad of Released NBLGAS-Site Totl

Analog/Digital: A

Engr Units/Dig States: uCi/Min

Engr Units Conversion: N/A

Minimum Instr Range: 0

Maximum Instr Range: N/A

Zero Point Reference: N/A

Reference Point Notes: N/A

PROC or SENS: P

Number of Sensors: 5

How Processed: Reference Unique System Desc.

Sensor Locations: N/A

Alarm/Trip Set Points: N/A

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: N/A

Level Reference Leg: N/A

Unique System Desc.: A Site Total 1 min average for the Noble Gas release component is created by summing the Noble Gas 1 min averages of the Rx 1, TB 1, SGTS, Rx 2 and TB 2 vents. EGRNSITE is created by averaging the Site Total 1 min averages for a 15 min period. EGRNSITE is updated each quarter hour (i.e. it is not a sliding 15 min average). Therefore, the same value for EGRNSITE will be transmitted each minute for a given fifteen minute period until the next update is available.

SUSQUEHANNA STEAM ELECTRIC STATION
UNITS 1 & 2
ERDS DATA POINT LIBRARY REFERENCE FILE

Date: 05/13/98

Reactor Unit: SQ1/SQ2

Data Feeder: N/A

NRC ERDS Parameter: EFF GAS RAD

Point ID: EGRPSITE

Plant Spec Point Desc.: RAD OF RELEASED PART -SITE TOTL

Generic/Cond Desc.: Rad of Released PART -Site Totl

Analog/Digital: A

Engr Units/Dig States: uCI/Min

Engr Units Conversion: N/A

Minimum Instr Range: 0

Maximum Instr Range: N/A

Zero Point Reference: N/A

Reference Point Notes: N/A

PROC or SENS: P

Number of Sensors: 5

How Processed: Reference Unique System Desc.

Sensor Locations: N/A

Alarm/Trip Set Points: N/A

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: N/A

Level Reference Leg: N/A

Unique System Desc.: A Site Total 1 min average for the Beta Particulate release component is created by summing the Beta Particulate 1 min averages of the Rx 1, TB 1, SGTS, Rx 2 and TB 2 vents. EGRPSITE is created by averaging the Site Total 1 min averages for a 15 min period. EGRPSITE is updated each quarter hour (i.e. it is not a sliding 15 min average). Therefore, the same value for EGRPSITE will be transmitted each minute for a given fifteen minute period until the next update is available.

SUSQUEHANNA STEAM ELECTRIC STATION
UNITS 1 & 2
ERDS DATA POINT LIBRARY REFERENCE FILE

Date: 05/13/98

Reactor Unit: SQ1/SQ2

Data Feeder: N/A

NRC ERDS Parameter: EFF GAS RAD

Point ID: EGRISITE

Plant Spec Point Desc.: RAD OF RELEASED I131 -SITE TOTL

Generic/Cond Desc.: Rad of Released I131 -Site Totl

Analog/Digital: A

Engr Units/Dig States: uCI/Min

Engr Units Conversion: N/A

Minimum Instr Range: 0

Maximum Instr Range: N/A

Zero Point Reference: N/A

Reference Point Notes: N/A

PROC or SENS: P

Number of Sensors: 5

How Processed: Reference Unique System Desc.

Sensor Locations: N/A

Alarm/Trip Set Points: N/A

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: N/A

Level Reference Leg: N/A

Unique System Desc.: A Site Total 1 min average for the I131 release component is created by summing the I131 1 min averages of the Rx 1, TB 1, SGTS, Rx 2 and TB 2 vents. EGRISITE is created by averaging the Site Total 1 min averages for a 15-min period. EGRISITE is updated each quarter hour (i.e. it is not a sliding 15-min average). Therefore, the same value for EGRISITE will be transmitted each minute for a given fifteen minute period until the next update is available.

SUSQUEHANNA STEAM ELECTRIC STATION
UNITS 1 & 2
ERDS DATA POINT LIBRARY REFERENCE FILE

Date: 05/13/98

Reactor Unit: SQ1/SQ2

Data Feeder: N/A

NRC ERDS Parameter: EFF LIQ RAD

Point ID: VDR001Z

Plant Spec Point Desc.: LRW DSCH RAD MON

Generic/Cond Desc.: Radioactivity of Released Liq'ds

Analog/Digital: A

Engr Units/Dig States: CPM

Engr Units Conversion: N/A

Minimum Instr Range: 10

Maximum Instr Range: 1E6

Zero Point Reference: N/A

Reference Point Notes: N/A

PROC or SENS: S

Number of Sensors: 1

How Processed: N/A

Sensor Locations: Ref. Unique System Desc.⁽¹⁾

Alarm/Trip Set Points: Varies - Ref. Unique System Desc.⁽²⁾

NI Detector Power Supply
Cut-off Power Level: N/A

NI Detector Power Supply
Turn-on Power Level: N/A

Instrument Failure Mode: Low

Temperature Compensation
For DP Transmitters: N/A

Level Reference Leg: N/A

Unique System Desc.: ⁽¹⁾ Sample drawn from LRW discharge pipe prior to release to environment.

The Liquid Radwaste Effluent Monitor is a microprocessor based NMC Liquid Radiation Monitor. A single gamma scintillation detector is exposed to the sample of the discharge stream. Discharge is governed by Radiation Effluent release permit.

⁽²⁾ Detector alarm settings are determined for each release based upon tank activity & background values at the sample unit.

SUSQUEHANNA STEAM ELECTRIC STATION
UNITS 1 & 2
ERDS DATA POINT LIBRARY REFERENCE FILE

Date:	05/13/98
Reactor Unit:	SQ1/SQ2
Data Feeder:	N/A
NRC ERDS Parameter:	Not Listed
Point ID:	VDF001Z
Plant Spec Point Desc.:	LRW DISCHARGE FLOW
Generic/Cond Desc.:	LRW Discharge Flow
Analog/Digital:	A
Engr Units/Dig States:	GPM
Engr Units Conversion:	N/A
Minimum Instr Range:	0
Maximum Instr Range:	100
Zero Point Reference:	N/A
Reference Point Notes:	N/A
PROC or SENS:	S
Number of Sensors:	1
How Processed:	N/A
Sensor Locations:	Reference Unique System Desc. ⁽¹⁾
Alarm/Trip Set Points:	N/A
NI Detector Power Supply Cut-off Power Level:	N/A
NI Detector Power Supply Turn-on Power Level:	N/A
Instrument Failure Mode:	Low
Temperature Compensation For DP Transmitters:	N/A
Level Reference Leg:	N/A
Unique System Desc.:	¹ On Liquid Radwaste discharge line prior to environment. The liquid radwaste line discharges into the Cooling tower discharge pipe. The cooling tower discharge pipe goes to the Susquehanna River.

SUSQUEHANNA STEAM ELECTRIC STATION
UNITS 1 & 2
ERDS DATA POINT LIBRARY REFERENCE FILE

Date: 05/13/98

Reactor Unit: SQ1/SQ2

Data Feeder: N/A

NRC ERDS Parameter: DW RAD

Point ID: PCA

Plant Spec Point Desc.: PRIMARY CONTAINMENT ACTIVITY

Generic/Cond Desc.: Radiation Level in the Drywell

Analog/Digital: A

Engr Units/Dig States: R/HR

Engr Units Conversion: N/A

Minimum Instr Range: 1

Maximum Instr Range: 1E8

Zero Point Reference: N/A

Reference Point Notes: N/A

PROC or SENS: P

Number of Sensors: 2

How Processed: Average (ref. Unique System Desc.)

Sensor Locations: Drywell on Bioshield Wall

Alarm/Trip Set Points: Alarm 400 R/HR and 2000 R/HR

NI Detector Power Supply
Cut-off Power Level: N/A

NI Detector Power Supply
Turn-on Power Level: N/A

Instrument Failure Mode: Low

Temperature Compensation
For DP Transmitters: N/A

Level Reference Leg: N/A

Unique System Desc.: A Supplier proprietary algorithm selects the point with the higher value if the difference between the two points exceeds a predefined delta.

Note: PCA is a composite SPDS parameter with the following points as inputs: MAR001Z and MAR002Z.

SUSQUEHANNA STEAM ELECTRIC STATION
UNITS 1 & 2
ERDS DATA POINT LIBRARY REFERENCE FILE

Date: 05/13/98
Reactor Unit: SQ1/SQ2
Data Feeder: N/A
NRC ERDS Parameter: MN STEAM RAD
Point ID: NAR01
Plant Spec Point Desc.: MAIN STEAM LINE RAD A
Generic/Cond Desc.: Radiation Lvl of Main Stm Line A
Analog/Digital: A
Engr Units/Dig States: MR/H
Engr Units Conversion: N/A
Minimum Instr Range: 1.000
Maximum Instr Range: 1.0E6
Zero Point Reference: N/A
Reference Point Notes: N/A
PROC or SENS: S
Number of Sensors: 1
How Processed: N/A
Sensor Locations: Reference Unique System Desc.⁽¹⁾
Alarm/Trip Set Points: 7 times Background at Full Power
NI Detector Power Supply
Cut-off Power Level: N/A
NI Detector Power Supply
Turn-on Power Level: N/A
Instrument Failure Mode: Low
Temperature Compensation
For DP Transmitters: N/A
Level Reference Leg: N/A
Unique System Desc.: Standard BWR Main Steam Line Radiation Monitoring design and configuration.
- The detectors (A-D) are located in the steam tunnel as close as practical to the containment. The detectors are arranged such that each detector will view all steam lines with approximately the same response.

SUSQUEHANNA STEAM ELECTRIC STATION
UNITS 1 & 2
ERDS DATA POINT LIBRARY REFERENCE FILE

Date: 05/13/98
Reactor Unit: SQ1/SQ2
Data Feeder: N/A
NRC ERDS Parameter: MN STEAM RAD
Point ID: NAR02
Plant Spec Point Desc.: MAIN STEAM LINE RAD B
Generic/Cond Desc.: Radiation Lvl of Main Stm Line B
Analog/Digital: A
Engr Units/Dig States: MR/H
Engr Units Conversion: N/A
Minimum Instr Range: 1.000
Maximum Instr Range: 1.0E6
Zero Point Reference: N/A
Reference Point Notes: N/A
PROC or SENS: S
Number of Sensors: 1
How Processed: N/A
Sensor Locations: Reference Unique System Desc.⁽¹⁾
Alarm/Trip Set Points: 7 times Background at Full Power
NI Detector Power Supply
Cut-off Power Level: N/A
NI Detector Power Supply
Turn-on Power Level: N/A
Instrument Failure Mode: Low
Temperature Compensation
For DP Transmitters: N/A
Level Reference Leg: N/A
Unique System Desc.: Standard BWR Main Steam Line Radiation Monitoring design and configuration.

¹ - The detectors (A-D) are located in the steam tunnel as close as practical to the containment. The detectors are arranged such that each detector will view all steam lines with approximately the same response.

SUSQUEHANNA STEAM ELECTRIC STATION
UNITS 1 & 2
ERDS DATA POINT LIBRARY REFERENCE FILE

Date: 05/13/98

Reactor Unit: SQ1/SQ2

Data Feeder: N/A

NRC ERDS Parameter: MN STEAM RAD

Point ID: NAR03

Plant Spec Point Desc.: MAIN STEAM LINE RAD C

Generic/Cond Desc.: Radiation Lvl of Main Stm Line C

Analog/Digital: A

Engr Units/Dig States: MR/H

Engr Units Conversion: N/A

Minimum Instr Range: 1.000

Maximum Instr Range: 1.0E6

Zero Point Reference: N/A

Reference Point Notes: N/A

PROC or SENS: S

Number of Sensors: 1

How Processed: N/A

Sensor Locations: Reference Unique System Desc.⁽¹⁾

Alarm/Trip Set Points: 7 times Background at Full Power

NI Detector Power Supply
Cut-off Power Level: N/A

NI Detector Power Supply
Turn-on Power Level: N/A

Instrument Failure Mode: Low

Temperature Compensation
For DP Transmitters: N/A

Level Reference Leg: N/A

Unique System Desc.: Standard BWR Main Steam Line Radiation Monitoring design and configuration.
- The detectors (A-D) are located in the steam tunnel as close as practical to the containment. The detectors are arranged such that each detector will view all steam lines with approximately the same response.

SUSQUEHANNA STEAM ELECTRIC STATION
UNITS 1 & 2
ERDS DATA POINT LIBRARY REFERENCE FILE

Date:	05/13/98
Reactor Unit:	SQ1/SQ2
Data Feeder:	N/A
NRC ERDS Parameter:	MN STEAM RAD
Point ID:	NAR04
Plant Spec Point Desc.:	MAIN STEAM LINE RAD D
Generic/Cond Desc.:	Radiation Lvl of Main Stm Line D
Analog/Digital:	A
Engr Units/Dig States:	MR/H
Engr Units Conversion:	N/A
Minimum Instr Range:	1.000
Maximum Instr Range:	1.0E6
Zero Point Reference:	N/A
Reference Point Notes:	N/A
PROC or SENS:	S
Number of Sensors:	1
How Processed:	N/A
Sensor Locations:	Reference Unique System Desc. ⁽¹⁾
Alarm/Trip Set Points:	7 times Background at Full Power
NI Detector Power Supply Cut-off Power Level:	N/A
NI Detector Power Supply Turn-on Power Level:	N/A
Instrument Failure Mode:	Lcw
Temperature Compensation For DP Transmitters:	N/A
Level Reference Leg:	N/A
Unique System Desc.:	Standard BWR Main Steam Line Radiation Monitoring design and configuration.

⁽¹⁾ - The detectors (A-D) are located in the steam tunnel as close as practical to the containment. The detectors are arranged such that each detector will view all steam lines with approximately the same response.

SUSQUEHANNA STEAM ELECTRIC STATION
UNITS 1 & 2
ERDS DATA POINT LIBRARY REFERENCE FILE

Date: 05/13/98

Reactor Unit: SQ1/SQ2

Data Feeder: N/A

NRC ERDS Parameter: DW PRESS

Point ID: DWPR

Plant Spec Point Desc.: DRYWELL PRESSURE

Generic/Cond Desc.: Drywell Pressure

Analog/Digital: A

Engr Units/Dig States: PSIG

Engr Units Conversion: N/A

Minimum Instr Range: -15.0

Maximum Instr Range: 250.0

Zero Point Reference: N/A

Reference Point Notes: N/A

PROC or SENS: P

Number of Sensors: 5

How Processed: Reference Unique System Desc.

Sensor Locations: Reactor Bldg. Elevation 719'

Alarm/Trip Set Points: Trip @ 1.72 PSIG

NI Detector Power Supply
Cut-off Power Level: N/A

NI Detector Power Supply
Turn-on Power Level: N/A

Instrument Failure Mode: High, Low

Temperature Compensation
For DP Transmitters: N/A

Level Reference Leg: N/A

Unique System Desc.: A Supplier proprietary algorithm selects the value for DWPR by using up to five inputs, one Narrow Range (NR) signal (-3.0 to +3.0 PSIG), two Intermediate Range (IR) signals (-15.0 to +65.0 PSIG), and two Wide Range (WR) signals (0 to +250.0 PSIG). If the NR signal is onscale then it is selected for DWPR. If the NR signal is invalid and the IR signal(s) are onscale then they are utilized for DWPR. If both NR and IR signals are invalid then the WR signals will be utilized for DWPR.

Note: DWPR is a composite SPDS parameter with the following points as inputs: MAP001Z, MAP003Z, MAP004Z, MAP005Z, and MAP006Z.

SUSQUEHANNA STEAM ELECTRIC STATION
UNITS 1 & 2
ERDS DATA POINT LIBRARY REFERENCE FILE

Date: 05/13/98

Reactor Unit: SQ1/SQ2

Data Feeder: N/A

NRC ERDS Parameter: DWT TEMP

Point ID: DWT

Plant Spec Point Desc.: DRYWELL TEMPERATURE

Generic/Cond Desc.: Drywell Temperature

Analog/Digital: A

Engr Units/Dig States: DEGF

Engr Units Conversion: N/A

Minimum Instr Range: 40

Maximum Instr Range: 440

Zero Point Reference: N/A

Reference Point Notes: N/A

PROC or SENS: P

Number of Sensors: 8

How Processed: Average (Reference Unique System Desc.)

Sensor Locations: Reference Unique System Desc.

Alarm/Trip Set Points: Alarm 135°F

NI Detector Power Supply
Cut-off Power Level: N/A

NI Detector Power Supply
Turn-on Power Level: N/A

Instrument Failure Mode: High, Low

Temperature Compensation
For DP Transmitters: N/A

Level Reference Leg: N/A

Unique System Desc.: A Supplier proprietary algorithm uses the Technical Specification method for calculating drywell average air temperature which selects the higher valid signal from a minimum of 3 of the following drywell areas: top, middle, bottom and pedestal. DWT is then calculated as the average of the 3 or 4 valid signals selected. If there is less than 3 valid signals then the algorithm cannot calculate an average value. Sensor Locations (elevation, azimuth): (797' 8", 295°), (797' 8", 110°), (752' 2", 270°), (752' 2", 90°), (737' 300°), (737' 150°), (711' 270°), (720' 85°)

Note: DWT is a composite SPDS parameter with the following points as inputs: MAT001Z, MAT002Z, MAT003Z, MAT004Z, MAT005Z, MAT006Z, MAT007Z, and MAT008Z.

SUSQUEHANNA STEAM ELECTRIC STATION
UNITS 1 & 2
ERDS DATA POINT LIBRARY REFERENCE FILE

Date: 05/13/98

Reactor Unit: SQ1/SQ2

Data Feeder: N/A

NRC ERDS Parameter: SP TEMP

Point ID: SPT

Plant Spec Point Desc.: SUPPRESSION POOL TEMPERATURE

Generic/Cond Desc.: Suppression Pool Temperature

Analog/Digital: A

Engr Units/Dig States: DEGF

Engr Units Conversion: 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: 2

How Processed: Average

Sensor Locations: Reference Unique System Desc.

Alarm/Trip Set Points: Alarm at 90°F, 105°F, 110°F & 120°F

NI Detector Power Supply
Cut-off Power Level: N/A

NI Detector Power Supply
Turn-on Power Level: N/A

Instrument Failure Mode: Low, High

Temperature Compensation
For DP Transmitters: N/A

Level Reference Leg: N/A

Unique System Desc.: A Supplier proprietary algorithm calculates SPT as the average of the two inputs if they are valid and agree, otherwise the higher of the two signals is selected. Each of the inputs to the algorithm is provided by a Suppression Pool Temperature Monitoring System (SPOTMOS). The SPOTMOS unit uses up to 8 temperature inputs to calculate the average temperature. The RTD inputs to SPOTMOS that are used to calculate the average temperature are located at approximately the 21 foot level in the suppression pool.

Note: SPT is a composite SPDS parameter with the following points as inputs: MAT012Z and MAT013Z.

SUSQUEHANNA STEAM ELECTRIC STATION
UNITS 1 & 2
ERDS DATA POINT LIBRARY REFERENCE FILE

Date: 05/13/98

Reactor Unit: SQ1/SQ2

Data Feeder: N/A

NRC ERDS Parameter: SP LEVEL

Point ID: SPWL

Plant Spec Point Desc.: SUPPRESSION POOL WATER LEVEL

Generic/Cond Desc.: Suppression Pool Water Level

Analog/Digital: A

Engr Units/Dig States: FEET

Engr Units Conversion: N/A

Minimum Instr Range: 4.5

Maximum Instr Range: 49

Zero Point Reference: TNKBOT

Reference Point Notes: N/A

PROC or SENS: P

Number of Sensors: 4

How Processed: Reference Unique System Desc.

Sensor Locations: Rx Bldg Elev. 645'

Alarm/Trip Set Points: High \geq 23.75 ft, Low \leq 22.25 ft

NI Detector Power Supply
Cut-off Power Level: N/A

NI Detector Power Supply
Turn-on Power Level: N/A

Instrument Failure Mode: Low, High

Temperature Compensation
For DP Transmitters: N/A

Level Reference Leg: Wet

Unique System Desc.: A Supplier proprietary algorithm uses 2 Narrow Range (NR), 18-26.5 ft, and 2 Wide Range (WR), 4.5-49 ft, signals to arrive at a value for SPWL. The NR signals are given preference over the WR signals. In cases in which NR signals do not agree and are not confirmed by WR signals, a signal (or average of signals) with greater deviation from Normal Water Level (NWL), measured at 23 ft, is used because it is a critical safety concern. A WR signal (or average of WR signals) may be chosen over a NR signal if it is verified as having a greater deviated value from the NWL than the NR signal.

Note: SPWL is a composite SPDS parameter with the following points as inputs: MAL001Z, MAL002Z, MAL003Z, and MAL004Z.

SUSQUEHANNA STEAM ELECTRIC STATION
UNITS 1 & 2
ERDS DATA POINT LIBRARY REFERENCE FILE

Date: 05/13/98

Reactor Unit: SQ1/SQ2

Data Feeder: N/A

NRC ERDS Parameter: H2 CONC

Point ID: HYDGN

Plant Spec Point Desc.: CONTNMNT. HYDROGEN CONCENTRATION

Generic/Cond Desc.: Drywell Hydrogen Concentration

Analog/Digital: A

Engr Units/Dig States: %

Engr Units Conversion: N/A

Minimum Instr Range: 0

Maximum Instr Range: 30

Zero Point Reference: N/A

Reference Point Notes: N/A

PROC or SENS: P

Number of Sensors: 2

How Processed: Average (ref. Unique System Desc.)

Sensor Locations: Reference Unique System Desc.⁽¹⁾

Alarm/Trip Set Points: N/A

NI Detector Power Supply
Cut-off Power Level: N/A

NI Detector Power Supply
Turn-on Power Level: N/A

Instrument Failure Mode: Low, High

Temperature Compensation
For DP Transmitters: N/A

Level Reference Leg: N/A

Unique System Desc.: Each of the inputs has dual range capability and will have a range of 0-10% or 0-30%. A Supplier proprietary algorithm will calculate HYDGN as the average of the two inputs if they are both on the same range and agree. Any other combination of valid points (e.g. points disagree, are on different ranges, only one on-scale) will cause the algorithm to select only one of the two inputs for the value of HYDGN.

⁽¹⁾ - Sample drawn from drywell or suppression chamber and measured at Panel 1C226A & B for SQ1 and 2C226A & B for SQ2, Reactor Building Elev. 719'.

Note: HYDGN is a composite SPDS parameter with the following points as inputs: MAC003Z and MAC004Z.

SUSQUEHANNA STEAM ELECTRIC STATION
UNITS 1 & 2
ERDS DATA POINT LIBRARY REFERENCE FILE

Date: 05/13/98

Reactor Unit: SQ1/SQ2

Data Feeder: N/A

NRC ERDS Parameter: O2 CONC

Point ID: OXYGN

Plant Spec Point Desc.: CONTNMNT. OXYGEN CONCENTRATION

Generic/Cond Desc.: Drywell Oxygen Concentration

Analog/Digital: A

Engr Units/Dig States: %

Engr Units Conversion: N/A

Minimum Instr Range: 0

Maximum Instr Range: 25

Zero Point Reference: N/A

Reference Point Notes: N/A

PROC or SENS: P

Number of Sensors: 2

How Processed: Average (ref. Unique System Desc.)

Sensor Locations: Reference Unique System Desc.⁽¹⁾

Alarm/Trip Set Points: N/A

NI Detector Power Supply
Cut-off Power Level: N/A

NI Detector Power Supply
Turn-on Power Level: N/A

Instrument Failure Mode: Low, High

Temperature Compensation
For DP Transmitters: N/A

Level Reference Leg: N/A

Unique System Desc.: Each of the inputs has dual range capability and will have a range of 0-10% or 0-25%. A Supplier proprietary algorithm will calculate OXYGN as the average of the two inputs if they are both on the same range and agree. Any other combination of valid points (e.g. points disagree, are on different ranges, only one on-scale) will cause the algorithm to select only one of the two inputs for the value of OXYGN.

⁽¹⁾ - Sample drawn from drywell or suppression chamber and measured at Panel 1C226A & B for SQ1 and 2C226A & B for SQ2, Reactor Building Elev. 719'.

Note: OXYGN is a composite SPDS parameter with the following points as inputs: MAC001Z and MAC002Z.

SUSQUEHANNA STEAM ELECTRIC STATION
UNITS 1 & 2
ERDS DATA POINT LIBRARY REFERENCE FILE

Date: 05/13/98

Reactor Unit: SQ1/SQ2

Data Feeder: N/A

NRC ERDS Parameter: CST LEVEL

Point ID: CSL01

Plant Spec Point Desc.: COND STORAGE TANK 1 LVL

Generic/Cond Desc.: Condensate Storage Tank 1 Level

Analog/Digital: A

Engr Units/Dig States: %

Engr Units Conversion: Each 1% \approx 3,000 Gallons

Minimum Instr Range: 0.0

Maximum Instr Range: 100.0

Zero Point Reference: TNKBOT

Reference Point Notes: Zero is 13.5 inches above tank bottom

PROC or SENS: S

Number of Sensors: 1

How Processed: N/A

Sensor Locations: 7.5 inches below zero reference

Alarm/Trip Set Points: Low level at 0% (ref. Unique System Desc.)

NI Detector Power Supply
Cut-off Power Level: N/A

NI Detector Power Supply
Turn-on Power Level: N/A

Instrument Failure Mode: Low or High (on LI, LR and Computer point)

Temperature Compensation
For DP Transmitters: N/A

Level Reference Leg: N/A

Unique System Desc.: Zero is 10,000 gallons above HPCI suction.

The RWST and both CSTs can be manually cross connected. The capacity of each CST is 300,000 gallons and the RWST capacity is 680,000 gallons.

SUSQUEHANNA STEAM ELECTRIC STATION
UNITS 1 & 2
ERDS DATA POINT LIBRARY REFERENCE FILE

Date: 05/13/98

Reactor Unit: SQ1/SQ2

Data Feeder: N/A

NRC ERDS Parameter: CST LEVEL

Point ID: CSL02

Plant Spec Point Desc.: COND STORAGE TANK 2 LVL

Generic/Cond Desc.: Condensate Storage Tank 2 Level

Analog/Digital: A

Engr Units/Dig States: %

Engr Units Conversion: Each 1% \approx 3,000 gallons

Minimum Instr Range: 0.0

Maximum Instr Range: 100.0

Zero Point Reference: TNKBOT

Reference Point Notes: Zero is 13.5 inches above tank bottom

PROC or SENS: S

Number of Sensors: 1

How Processed: N/A

Sensor Locations: 7.5 inches below zero reference

Alarm/Trip Set Points: Low level at 0% (ref. Unique System Desc.)

NI Detector Power Supply
Cut-off Power Level: N/A

NI Detector Power Supply
Turn-on Power Level: N/A

Instrument Failure Mode: Low or High (on LI, LR and Computer point)

Temperature Compensation
For DP Transmitters: N/A

Level Reference Leg: N/A

Unique System Desc.: Zero is 10,000 gallons above HPCI suction.

The RWST and both CSTs can be manually cross connected. The capacity of each CST is 300,000 gallons and the RWST capacity is 680,000 gallons.

SUSQUEHANNA STEAM ELECTRIC STATION
UNITS 1 & 2
ERDS DATA POINT LIBRARY REFERENCE FILE

Date: 05/13/98
Reactor Unit: SQ1/SQ2
Data Feeder: N/A
NRC ERDS Parameter: WIND SPEED
Point ID: METULS
Plant Spec Point Desc.: WIND SPEED-60M
Generic/Cond Desc.: Wind Speed at Reactor Site -60M
Analog/Digital: A
Engr Units/Dig States: MPH
Engr Units Conversion: N/A
Minimum Instr Range: 1.0
Maximum Instr Range: 50.0
Zero Point Reference: N/A
Reference Point Notes: N/A
PROC or SENS: P
Number of Sensors: 1
How Processed: 15 min average (ref. Unique System Desc)
Sensor Locations: Met Tower is \approx 1,200 ft. ESE of Rx Bldg
Alarm/Trip Set Points: N/A
NI Detector Power Supply
Cut-off Power Level: N/A
NI Detector Power Supply
Turn-on Power Level: N/A
Instrument Failure Mode: Low
Temperature Compensation
For DP Transmitters: N/A
Level Reference Leg: N/A
Unique System Desc.: 15 min average is a sliding 15 min average.

SUSQUEHANNA STEAM ELECTRIC STATION
UNITS 1 & 2
ERDS DATA POINT LIBRARY REFERENCE FILE

Date: 05/13/98
Reactor Unit: SQ1/SQ2
Data Feeder: N/A
NRC ERDS Parameter: WIND SPEED
Point ID: METLLS
Plant Spec Point Desc.: WIND SPEED-10M
Generic/Cond Desc.: Wind Speed at Reactor Site -10M
Analog/Digital: A
Engr Units/Dig States: MPH
Engr Units Conversion: N/A
Minimum Instr Range: 1.0
Maximum Instr Range: 50.0
Zero Point Reference: N/A
Reference Point Notes: N/A
PROC or SENS: P
Number of Sensors: 1
How Processed: 15 min average (ref. Unique System Desc)
Sensor Locations: Met Tower is \approx 1,200 ft. ESE of Rx Bldg
Alarm/Trip Set Points: N/A
NI Detector Power Supply
Cut-off Power Level: N/A
NI Detector Power Supply
Turn-on Power Level: N/A
Instrument Failure Mode: Low
Temperature Compensation
For DP Transmitters: N/A
Level Reference Leg: N/A
Unique System Desc.: 15 min average is a sliding 15 min average.

SUSQUEHANNA STEAM ELECTRIC STATION
UNITS 1 & 2
ERDS DATA POINT LIBRARY REFERENCE FILE

Date: 05/13/98
Reactor Unit: SQ1/SQ2
Data Feeder: N/A
NRC ERDS Parameter: WIND DIR
Point ID: METULD
Plant Spec Point Desc.: WIND DIR - 60 M
Generic/Cond Desc.: Wind Dir at the React Site -60M
Analog/Digital: A
Engr Units/Dig States: DEGFR
Engr Units Conversion: N/A
Minimum Instr Range: 0
Maximum Instr Range: 360
Zero Point Reference: N/A
Reference Point Notes: N/A
PROC or SENS: P
Number of Sensors: 1
How Processed: 15 min vector average⁽¹⁾
Sensor Locations: Met Tower is \approx 1,200 ft. ESE of Rx Bldg
Alarm/Trip Set Points: N/A
NI Detector Power Supply
Cut-off Power Level: N/A
NI Detector Power Supply
Turn-on Power Level: N/A
Instrument Failure Mode: Low
Temperature Compensation
For DP Transmitters: N/A
Level Reference Leg: N/A
Unique System Desc.: ⁽¹⁾ - 15 min average is a sliding 15 min average.

SUSQUEHANNA STEAM ELECTRIC STATION
UNITS 1 & 2
ERDS DATA POINT LIBRARY REFERENCE FILE

Date: 05/13/98
Reactor Unit: SQ1/SQ2
Data Feeder: N/A
NRC ERDS Parameter: WIND DIR
Point ID: METLLD
Plant Spec Point Desc.: WIND DIR - 10 M
Generic/Cond Desc.: Wind Dir at the React Site -10M
Analog/Digital: A
Engr Units/Dig States: DEGFR
Engr Units Conversion: N/A
Minimum Instr Range: 0
Maximum Instr Range: 360
Zero Point Reference: N/A
Reference Point Notes: N/A
PROC or SENS: P
Number of Sensors: 1
How Processed: 15 min vector average⁽¹⁾
Sensor Locations: Met Tower is \approx 1,200 ft. ESE of Rx Bldg
Alarm/Trip Set Points: N/A
NI Detector Power Supply
Cut-off Power Level: N/A
NI Detector Power Supply
Turn-on Power Level: N/A
Instrument Failure Mode: Low
Temperature Compensation
For DP Transmitters: N/A
Level Reference Leg: N/A
Unique System Desc.: ⁽¹⁾ - 15 min average is a sliding 15 min average.

SUSQUEHANNA STEAM ELECTRIC STATION
UNITS 1 & 2
ERDS DATA POINT LIBRARY REFERENCE FILE

Date: 05/13/98

Reactor Unit: SQ1/SQ2

Data Feeder: N/A

NRC ERDS Parameter: STAB CLASS

Point ID: METSTAB

Plant Spec Point Desc.: AIR STABILITY AT THE REACT SITE

Generic/Cond Desc.: Air Stability at the React Site

Analog/Digital: A

Engr Units/Dig States: STABI

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: 1

How Processed: Reference Unique System Desc.

Sensor Locations: Reference Unique System Desc.

Alarm/Trip Set Points: N/A

NI Detector Power Supply
Cut-off Power Level: N/A

NI Detector Power Supply
Turn-on Power Level: N/A

Instrument Failure Mode: Reference Unique System Desc.

Temperature Compensation
For DP Transmitters: N/A

Level Reference Leg: N/A

Unique System Desc.: The parameter is derived from the Delta Temperature between the 10 meter and 60 meter levels. If the Delta Temperature signal is invalid then the parameter is derived from the Sigma Theta of wind direction. A value of 1 through 7 which corresponds to a stability class of A through F, or 9 (invalid) will be transmitted for METSTAB.

SUSQUEHANNA STEAM ELECTRIC STATION
UNITS 1 & 2
ERDS DATA POINT LIBRARY REFERENCE FILE

Date:	05/13/98
Reactor Unit:	SQ1/SQ2
Data Feeder:	N/A
NRC ERDS Parameter:	Not Listed
Point ID:	EXERCISE
Plant Spec Point Desc.:	EXERCISE DATA
Generic/Cond Desc.:	Exercise Data
Analog/Digital:	D
Engr Units/Dig States:	NO/YES
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:	S
Number of Sensors:	1
How Processed:	N/A
Sensor Locations:	RDAS variable (i.e. pseudo point)
Alarm/Trip Set Points:	N/A
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:	N/A
Level Reference Leg:	N/A
Unique System Desc.:	This parameter is a constant whose value is equal to 0 when actual plant data is being transmitted and 1 when exercise/drill data is being transmitted.

APPENDIX D
DATA POINT LIBRARY REFERENCE
FILE DEFINITIONS

APPENDIX D

DATA POINT LIBRARY
REFERENCE FILE DEFINITIONS

Date:	The date that this form is filled out or modified. (Eight characters)
Reactor Unit:	The nuclear power plant name and abbreviation from the enclosed list of sites. (Three characters)
Data Feeder:	If there is more than one data feeder for your system, enter the acronym for the data feeder from which the point comes. If there is only one data feeder, enter "N/A" in this field (Ten characters)
NRC ERDS Parameter:	One of the parameters from the enclosed BWR or PWR parameter list. A single value should be transmitted for each parameter for each loop. If not on the list, insert "Not Listed" or "NL". (Twelve characters)
Point ID:	Alphanumeric point description used to label the point during transmission. (Twelve characters)
Plant-Specific Point Description:	Licensee computer point description for the transmitted point. (Forty characters)
Generic Or Condensed Description:	Parameter description from the enclosed list of points for a BWR or PWR. If not on the list, condense the plant-specific point description. (Thirty-two characters)
Analog/Digital:	"A" if the signal is analog or numerical or "D" if the signal is off/on. (One character)
Engineering Units Or Digital States	Engineering units used by the licensee for display on licensee output devices. Use the engineering units abbreviations from the enclosed list when possible. When specifying pressure, use "PSIA" or "PSIG" rather than "PSI". For digital signals, give the "OFF" and "ON" state descriptors. (Twelve characters)
Engineering Units Conversion:	Notes about any special features of the A/D conversion and scaling. (Forty characters)
Minimum Instrument Range:	Engineering units value below which data cannot go (bottom-of-scale value). (Ten characters)

Maximum Instrument Range:	Engineering units value above which data cannot go (top-of-scale value). (Ten characters)
Zero Reference Point:	Zero-point of engineering units scale used primarily for levels or heights. Use the zero reference point abbreviations from the enclosed list when possible. (Six characters)
Reference Point Notes:	Notes about the reference point or other important and special features of the parameter. (Forty characters)
PROC or SENS:	Is the point formed by processing more than one signal, or is the source a single sensor ("P" or "S")? (One character)
Number of Sensors:	The number of signals processed in a full calculation assuming no bypassed or inoperative sensors. (Three characters)
How Processed:	The processing algorithm (sum, average, weighted average, highest, lowest, or a short description). (Forty characters)
Sensor Locations:	Description of the location(s) of the instrument(s) used. (Forty characters)
Alarm or Trip Setpoints:	The most important setpoints for the parameter. State whether the limit is high or low. (Forty characters)
NI Detector Power Supply Cut-Off Power Level:	The power level at which the power supply for the NI detector switches off. (Fifteen characters)
NI Detector Power Supply Turn-On Power Level:	The power level at which the power supply for the NI detector switches on. (Fifteen characters)
Instrument Failure Mode:	The mode in which this instrument fails. Possible answers are HIGH, MEDIUM, OR LOW. If available, provide the numeric value at which the instrument fails. (Thirty characters)
Temperature Compensation For DP Transmitters:	This question pertains to differential pressure transmitters. Possible answers are "YES" or "NO" ("Y" or "N"). If the answer is "NO", please attach a copy of the correction curve. (One character)

Level Reference Leg:

The type of level measurement (dry or wet) used on the level reference leg. (Three characters)

Unique System Description:

Additional important information which will assist the NRC Operations Center personnel in understanding how the plant team interprets the data. (600 characters)

PICSY

Plant Integrated Computer System - Unit 2

APPENDIX E
CRITICAL SAFETY FUNCTION PARAMETERS

CRITICAL SAFETY FUNCTION PARAMETERS - ERDS

	<u>PARAMETER DESCRIPTION</u>	<u>UNITS</u>
NI POWER RNG	Nuclear Instruments, Power Range	%
NI INTER RNG	Nuclear Instruments, Inter Rng A	%
NI INTER RNG	Nuclear Instruments, Inter Rng D	%
NI INTER RNG	Nuclear Instruments, Inter Rng G	%
NI INTER RNG	Nuclear Instruments, Inter Rng H	%
Not Listed	IRM A Range Switch Position	
Not Listed	IRM D Range Switch Position	
Not Listed	IRM G Range Switch Position	
Not Listed	IRM H Range Switch Position	
Not Listed	IRM Det(s) not Pull in Position	NO/YES
Not Listed	IRM Bypass	NO/YES
NI SOURC RNG	Nuclear Instruments, Sourc Rng A	CPS
NI SOURC RNG	Nuclear Instruments, Sourc Rng B	CPS
NI SOURC RNG	Nuclear Instruments, Sourc Rng C	CPS
NI SOURC RNG	Nuclear Instruments, Sourc Rng D	CPS
Not Listed	SRM Position A	NOT IN/IN
Not Listed	SRM Position B	NOT IN/IN
Not Listed	SRM Position C	NOT IN/IN
Not Listed	SRM Position D	NOT IN/IN

CORE COOLING

REAC VES LEV	Reactor Vessel Water Level	
MAIN FD FLOW	Feedwater Flow A into React Syst	MLBS/H
MAIN FD FLOW	Feedwater Flow B into React Syst	MLBS/H
MAIN FD FLOW	Feedwater Flow C into React Syst	MLBS/H
RCIC FLOW	Reactor Core Isolat Cooling Flow	GPM

RCS INTEGRITY

RCS PRESSURE	Reactor Coolant System Pressure	PSIG
HPCI FLOW	High Pressure Coolant Injec Flow	GPM
LPCI FLOW	Low Press Coolant Inject A Flow	GPM
LPCI FLOW	Low Press Coolant Inject B Flow	GPM
CR SPRAY FL	Core Spray Cooling System Flow	GPM
DW FD SMP LV	Drywell Floor Drain Sump Level A	%
DW FD SMP LV	Drywell Floor Drain Sump Level B	%

RADIOACTIVITY CONTROL

EFF GAS RAD	Rad of Released NBLGAS-Rx 1 Vent	uCI/MIN
EFF GAS RAD	Rad of Released PART -Rx 1 Vent	uCI/MIN
EFF GAS RAD	Rad of Released I131 -Rx 1 Vent	uCI/MIN
EFF GAS RAD	Rad of Released NBLGAS-TB 1 Vent	uCI/MIN
EFF GAS RAD	Rad of Released PART -TB 1 Vent	uCI/MIN
EFF GAS RAD	Rad of Released I131 -TB 1 Vent	uCI/MIN
EFF GAS RAD	Rad of Released NBLGAS-SGTS Vent	uCI/MIN
EFF GAS RAD	Rad of Released PART -SGTS Vent	uCI/MIN
EFF GAS RAD	Rad of Released I131 -SGTS Vent	uCI/MIN
EFF GAS RAD	Rad of Released NBLGAS-Rx 2 Vent	uCI/MIN
EFF GAS RAD	Rad of Released PART -Rx 2 Vent	uCI/MIN
EFF GAS RAD	Rad of Released I131 -Rx 2 Vent	uCI/MIN
EFF GAS RAD	Rad of Released NBLGAS-TB 2 Vent	uCI/MIN
EFF GAS RAD	Rad of Released PART -TB 2 Vent	uCI/MIN
EFF GAS RAD	Rad of Released I131 -TB 2 Vent	uCI/MIN
EFF GAS RAD	Rad of Released NBLGAS-Site Totl	uCI/MIN
EFF GAS RAD	Rad of Released PART -Site Totl	uCI/MIN
EFF GAS RAD	Rad of Released I131 -Site Totl	uCI/MIN

EFF LIQ RAD	Radioactivity of Released Liq'ds	CPM
Not Listed	LRW Discharge Flow	GPM
CND A/E RAD	Condenser Air Ejector Radioactivity	
DW RAD	Radiation Level in the Drywell	R/HR
MN STEAM RAD	Radiation Lvl of Main Stm Line A	MR/H
MN STEAM RAD	Radiation Lvl of Main Stm Line B	MR/H
MN STEAM RAD	Radiation Lvl of Main Stm Line C	MR/H
MN STEAM RAD	Radiation Lvl of Main Stm Line D	MR/H

CONTAINMENT CONDITIONS

DW PRESS	Drywell Pressure	PSIG
DW TEMP	Drywell Temperature	DEGF
SP TEMP	Suppression Pool Temperature	DEGF
SP LEVEL	Suppression Pool Water Level	FEET
H2 CONC	Drywell Hydrogen Concentration	%
O2 CONC	Drywell Oxygen Concentration	%

MISCELLANEOUS PARAMETERS

CST LEVEL	Condensate Storage Tank 1 Level	%
CST LEVEL	Condensate Storage Tank 2 Level	%
WIND SPEED	Wind Speed at Reactor Site -60M	MPH
WIND SPEED	Wind Speed at Reactor Site -10M	MPH
WIND DIR	Wind Dir at the React Site -60M	DEGFR
WIND DIR	Wind Dir at the React Site -10M	DEGFR
STAB CLASS	Air Stability at the React Site	STABA
EXERCISE DATA	Exercise Data	NO/YES