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## Prairie Island 1 – Quarterly Performance Indicators

### 2Q/2017 Performance Indicators

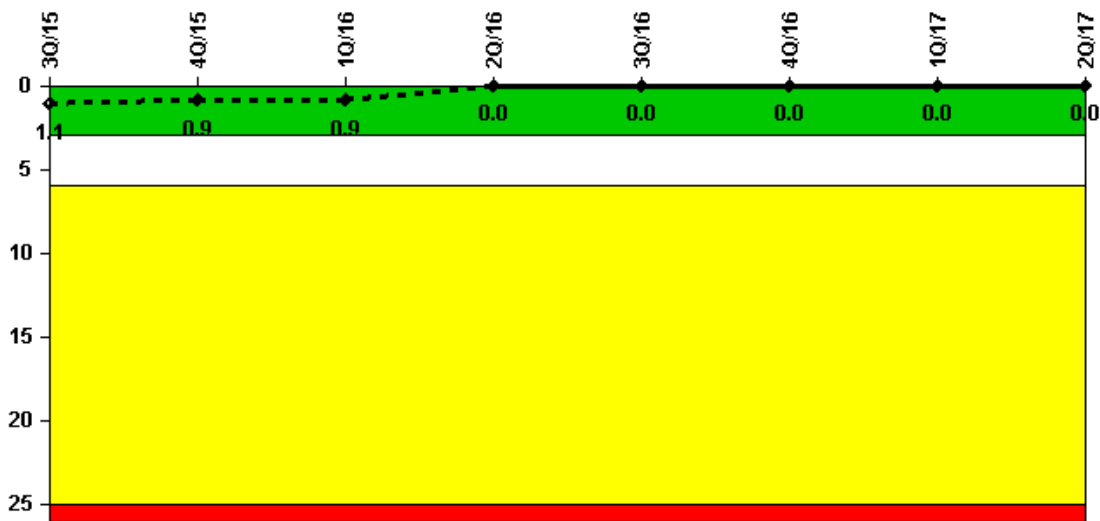
The solid trend line represents the current reporting period.

Licensee's General Comments: none

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- Unplanned Power Changes per 7000 Critical Hours (IE03)
- Unplanned Scrams with Complications (IE04)
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- Emergency AC Power Systems (MS06)
- High Pressure Injection Systems (MS07)
- Heat Removal Systems (MS08)
- Residual Heat Removal Systems (MS09)
- Cooling Water Systems (MS10)
- Reactor Coolant System Activity (BI01)
- Reactor Coolant System Leakage (BI02)
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- Occupational Exposure Control Effectiveness (OR01)
- RETS/OCDM Radiological Effluent Occurrence (PR01)
- Protected Area Equipment (PP01)

### Unplanned Scrams per 7000 Critical Hrs



Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

#### Notes

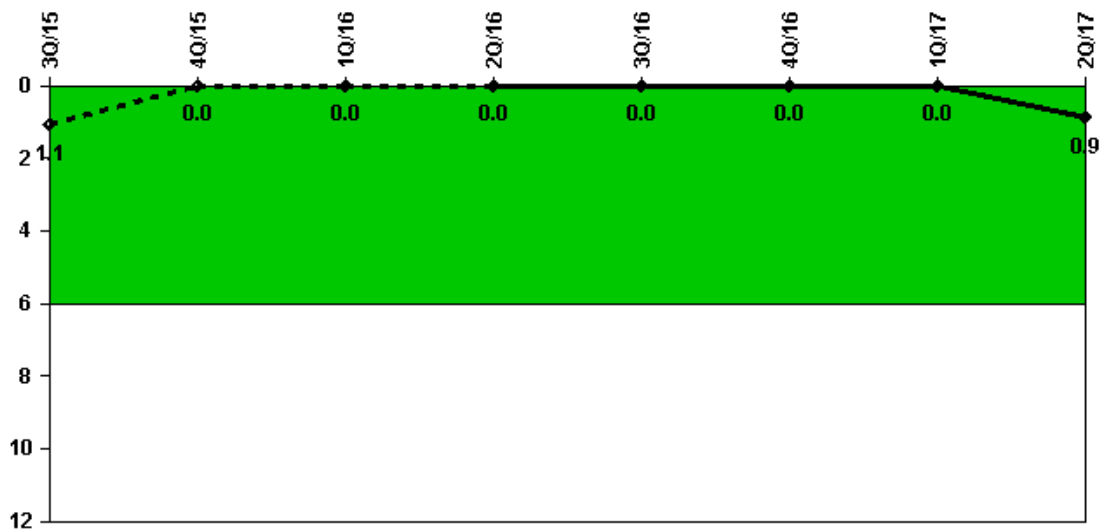
Unplanned Scrams per 7000 Critical Hrs	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17
Unplanned scrams	0	0	0	0	0	0	0	0
Critical hours	2208.0	2209.0	2183.0	2184.0	2208.0	1349.3	2159.0	2184.0

Indicator value	1.1	0.9	0.9	0	0	0	0	0
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Licensee Comments: none

### Unplanned Power Changes per 7000 Critical Hrs



Thresholds: White > 6.0

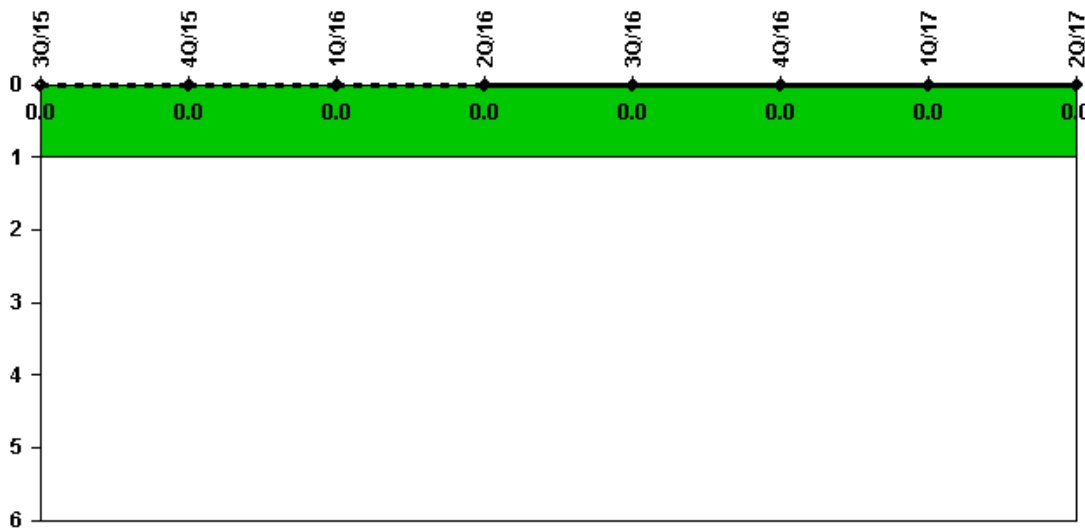
**Notes**

<b>Unplanned Power Changes per 7000 Critical Hrs</b>	<b>3Q/15</b>	<b>4Q/15</b>	<b>1Q/16</b>	<b>2Q/16</b>	<b>3Q/16</b>	<b>4Q/16</b>	<b>1Q/17</b>	<b>2Q/17</b>
Unplanned power changes	0	0	0	0	0	0	0	1.0
Critical hours	2208.0	2209.0	2183.0	2184.0	2208.0	1349.3	2159.0	2184.0
<b>Indicator value</b>	<b>1.1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.9</b>

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Licensee Comments: none

**Unplanned Scrams with Complications**



Thresholds: White > 1.0

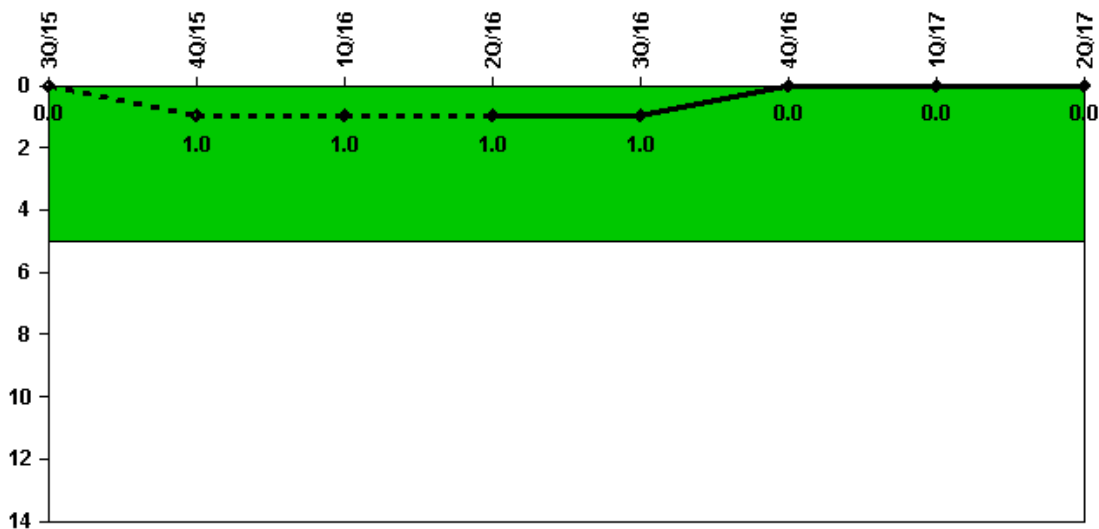
**Notes**

<b>Unplanned Scrams with Complications</b>	<b>3Q/15</b>	<b>4Q/15</b>	<b>1Q/16</b>	<b>2Q/16</b>	<b>3Q/16</b>	<b>4Q/16</b>	<b>1Q/17</b>	<b>2Q/17</b>
Scrams with complications	0	0	0	0	0	0	0	0
<b>Indicator value</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>

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Licensee Comments: none

### Safety System Functional Failures (PWR)



Thresholds: White > 5.0

#### Notes

Safety System Functional Failures (PWR) 3Q/15 4Q/15 1Q/16 2Q/16 3Q/16 4Q/16 1Q/17 2Q/17

Safety System Functional Failures 0 1 0 0 0 0 0 0

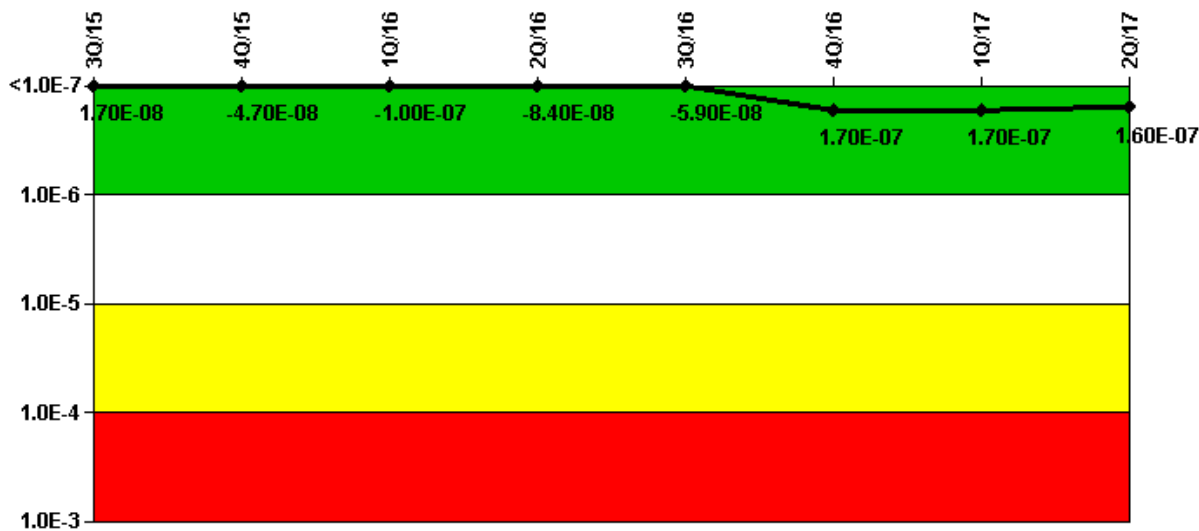
Indicator value 0 1 1 1 1 0 0 0

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Licensee Comments:

4Q/15: LER 50-282/2015-006-00, reported on 10/5/15 for Quarterly Containment Spray Pump Surveillance Test Methodology

### Mitigating Systems Performance Index, Emergency AC Power System



Thresholds: White > 1.00E-6 Yellow > 1.00E-5 Red > 1.00E-4

**Notes**

**Mitigating Systems Performance Index, Emergency AC Power System**

	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17
UAI (ΔCDF)	3.08E-08	2.23E-08	2.39E-09	1.95E-08	4.46E-08	1.56E-07	1.61E-07	1.55E-07
URI (ΔCDF)	-1.39E-08	-6.89E-08	-1.04E-07	-1.04E-07	-1.04E-07	1.07E-08	6.66E-09	9.00E-09
PLE	NO	NO	NO	NO	NO	NO	NO	NO
<b>Indicator value</b>	<b>1.70E-08</b>	<b>-4.70E-08</b>	<b>-1.00E-07</b>	<b>-8.40E-08</b>	<b>-5.90E-08</b>	<b>1.70E-07</b>	<b>1.70E-07</b>	<b>1.60E-07</b>

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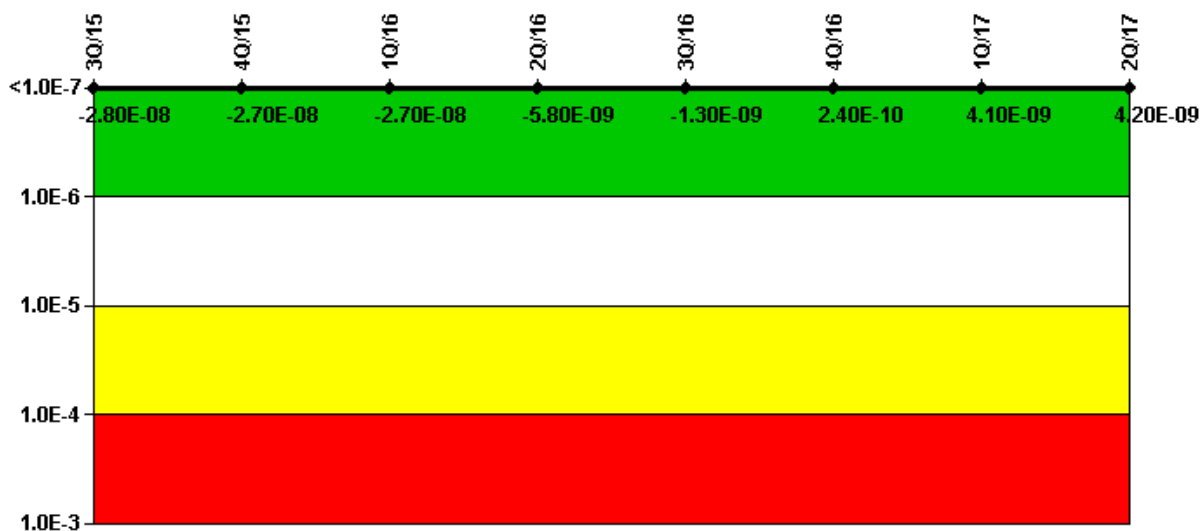
Licensee Comments:

1Q/17: Changed PRA Parameter(s).

1Q/16: Changed PRA Parameter(s). The PINGP PRA Model Revision 5.2 was approved on 11/30/2015 with corresponding MSPI Basis Document Revision 20 approved 3/18/2016. This incorporates FAQ 14-01, data analysis update and plant installed Mayer Groove RCP seals.

3Q/15: PINGP PRA Model Revision 5.1 was approved on 4/20/2014 with a corresponding MSPI Basis Document Revision 18 approved on 6/10/2015 and Coefficients effective 7/1/2015. The PRA model revision was to incorporate Mayer Groove RCP seals installed on Unit 1 and minor updates identified in the PRA Change Database Process.

### Mitigating Systems Performance Index, High Pressure Injection System



Thresholds: White > 1.00E-6 Yellow > 1.00E-5 Red > 1.00E-4

**Notes**

**Mitigating Systems Performance Index, High Pressure Injection System**

	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17
UAI ( $\Delta$ CDF)	-5.44E-09	-6.11E-09	-2.86E-09	1.85E-08	2.29E-08	2.46E-08	2.92E-08	2.93E-08
URI ( $\Delta$ CDF)	-2.28E-08	-2.07E-08	-2.42E-08	-2.42E-08	-2.42E-08	-2.44E-08	-2.51E-08	-2.51E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
<b>Indicator value</b>	<b>-2.80E-08</b>	<b>-2.70E-08</b>	<b>-2.70E-08</b>	<b>-5.80E-09</b>	<b>-1.30E-09</b>	<b>2.40E-10</b>	<b>4.10E-09</b>	<b>4.20E-09</b>

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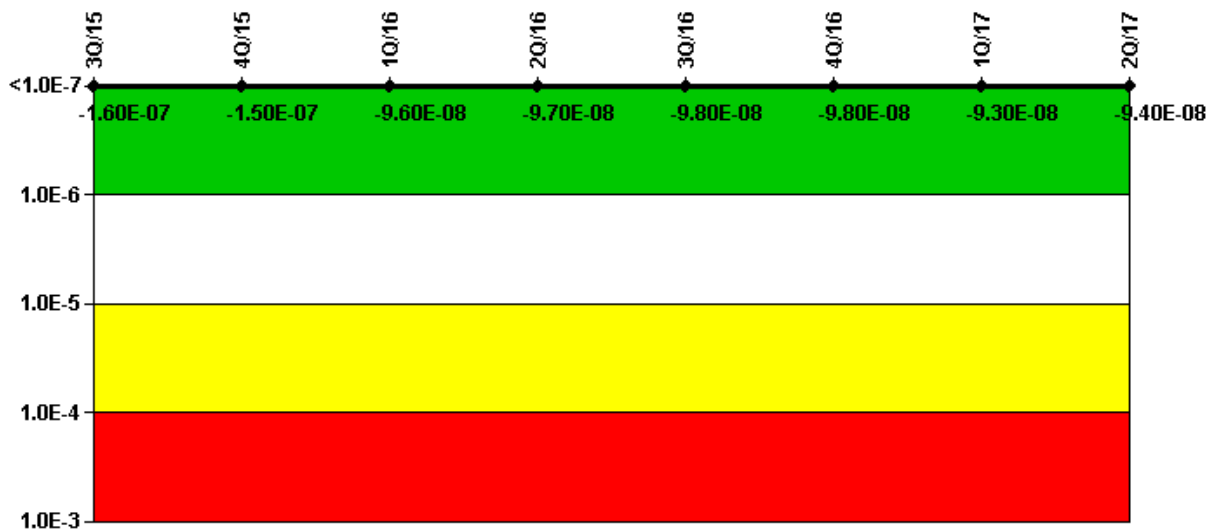
Licensee Comments:

1Q/17: Changed PRA Parameter(s).

1Q/16: Changed PRA Parameter(s). The PINGP PRA Model Revision 5.2 was approved on 11/30/2015 with corresponding MSPI Basis Document Revision 20 approved 3/18/2016. This incorporates FAQ 14-01, data analysis update and plant installed Mayer Groove RCP seals.

3Q/15: PINGP PRA Model Revision 5.1 was approved on 4/20/2014 with a corresponding MSPI Basis Document Revision 18 approved on 6/10/2015 and Coefficients effective 7/1/2015. The PRA model revision was to incorporate Mayer Groove RCP seals installed on Unit 1 and minor updates identified in the PRA Change Database Process.

### Mitigating Systems Performance Index, Heat Removal System



Thresholds: White > 1.00E-6 Yellow > 1.00E-5 Red > 1.00E-4

**Notes**

**Mitigating Systems Performance Index, Heat Removal System**

	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17
UAI (ΔCDF)	-2.38E-08	-2.38E-08	-2.10E-08	-2.10E-08	-2.10E-08	-2.01E-08	-1.89E-08	-1.89E-08
URI (ΔCDF)	-1.32E-07	-1.27E-07	-7.47E-08	-7.57E-08	-7.67E-08	-7.76E-08	-7.38E-08	-7.47E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
<b>Indicator value</b>	<b>-1.60E-07</b>	<b>-1.50E-07</b>	<b>-9.60E-08</b>	<b>-9.70E-08</b>	<b>-9.80E-08</b>	<b>-9.80E-08</b>	<b>-9.30E-08</b>	<b>-9.40E-08</b>

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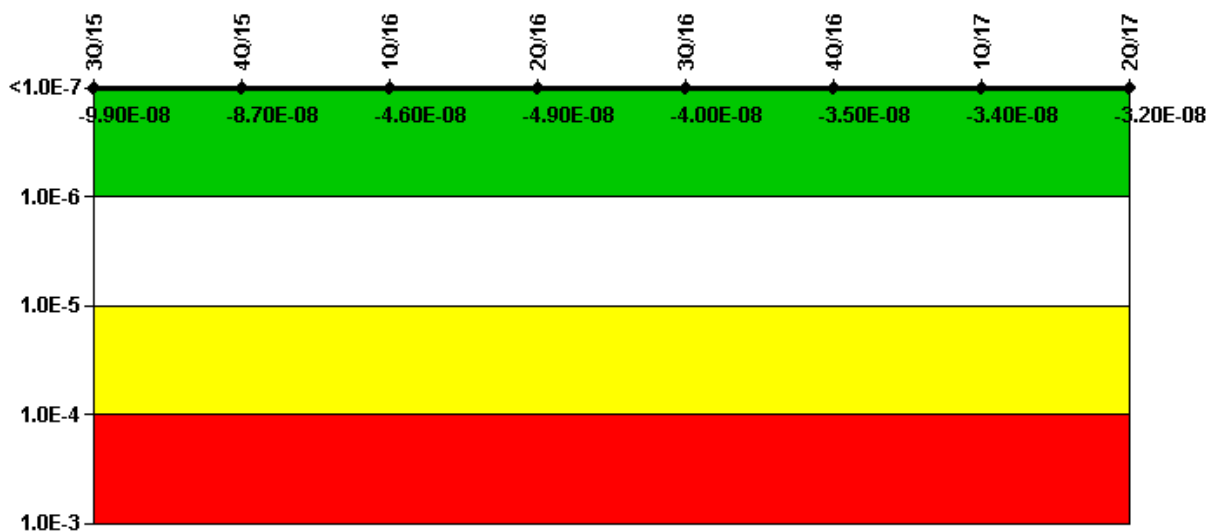
Licensee Comments:

1Q/17: Changed PRA Parameter(s).

1Q/16: Changed PRA Parameter(s). The PINGP PRA Model Revision 5.2 was approved on 11/30/2015 with corresponding MSPI Basis Document Revision 20 approved 3/18/2016. This incorporates FAQ 14-01, data analysis update and plant installed Mayer Groove RCP seals.

3Q/15: PINGP PRA Model Revision 5.1 was approved on 4/20/2014 with a corresponding MSPI Basis Document Revision 18 approved on 6/10/2015 and Coefficients effective 7/1/2015. The PRA model revision was to incorporate Mayer Groove RCP seals installed on Unit 1 and minor updates identified in the PRA Change Database Process.

### Mitigating Systems Performance Index, Residual Heat Removal System



Thresholds: White > 1.00E-6 Yellow > 1.00E-5 Red > 1.00E-4

**Notes**

**Mitigating Systems Performance Index, Residual Heat Removal System**

	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17
UAI (ΔCDF)	2.55E-08	1.75E-08	1.16E-08	9.76E-09	1.87E-08	3.02E-08	3.11E-08	3.32E-08
URI (ΔCDF)	-1.24E-07	-1.05E-07	-5.80E-08	-5.84E-08	-5.86E-08	-6.56E-08	-6.52E-08	-6.54E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
<b>Indicator value</b>	<b>-9.90E-08</b>	<b>-8.70E-08</b>	<b>-4.60E-08</b>	<b>-4.90E-08</b>	<b>-4.00E-08</b>	<b>-3.50E-08</b>	<b>-3.40E-08</b>	<b>-3.20E-08</b>

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Licensee Comments:

1Q/17: Changed PRA Parameter(s).

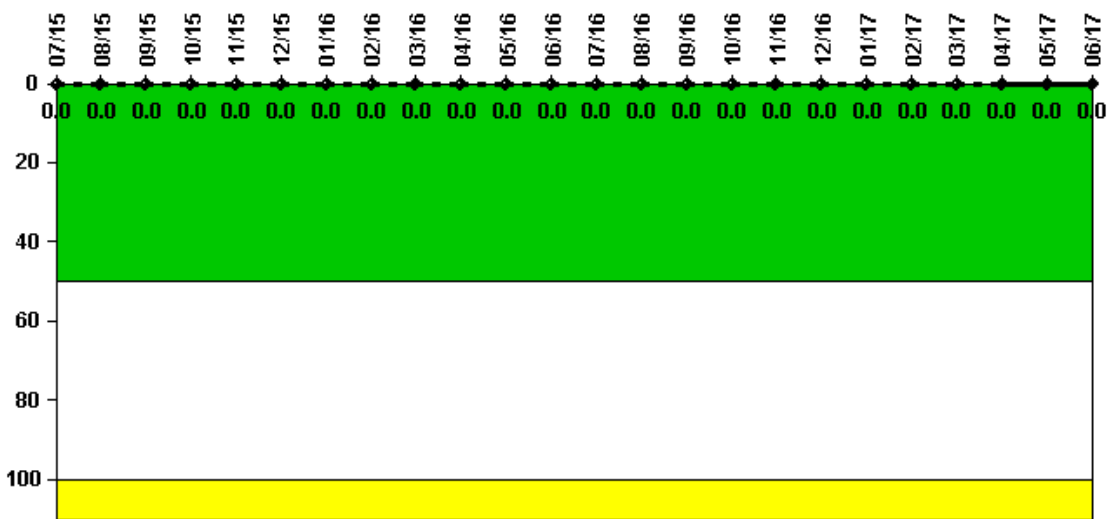
1Q/16: Changed PRA Parameter(s). The PINGP PRA Model Revision 5.2 was approved on 11/30/2015 with corresponding MSPI Basis Document Revision 20 approved 3/18/2016. This incorporates FAQ 14-01, data analysis update and plant installed Mayer Groove RCP seals.

3Q/15: PINGP PRA Model Revision 5.1 was approved on 4/20/2014 with a corresponding MSPI Basis Document Revision 18 approved on 6/10/2015 and Coefficients effective 7/1/2015. The PRA model revision was to incorporate Mayer Groove RCP seals installed on Unit 1 and minor updates identified in the PRA Change Database Process.





### Reactor Coolant System Activity



Thresholds: White > 50.0 Yellow > 100.0

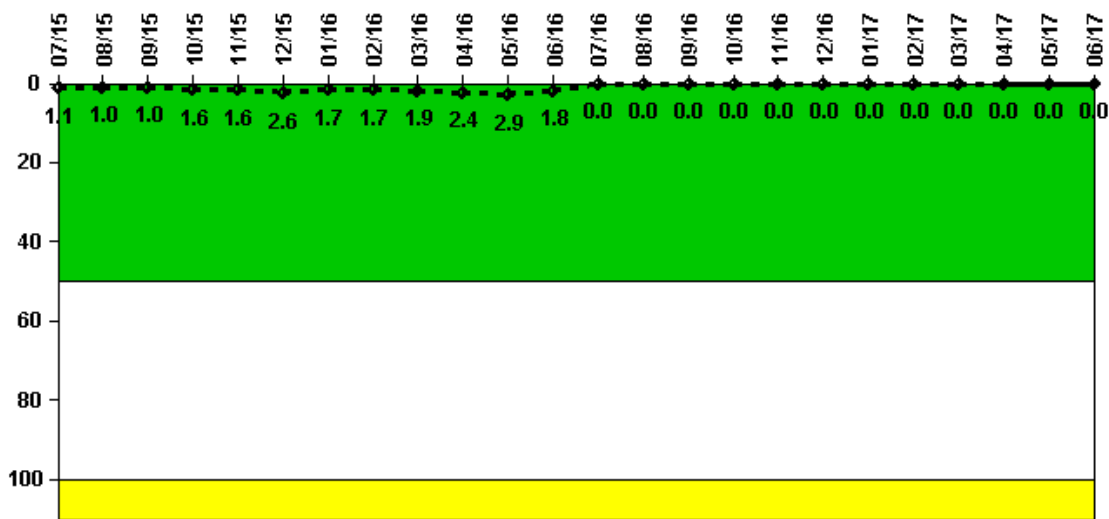
**Notes**

Reactor Coolant System Activity	7/15	8/15	9/15	10/15	11/15	12/15	1/16	2/16	3/16	4/16	5/16	6/16
Maximum activity	0.000042	0.000040	0.000039	0.000040	0.000041	0.000042	0.000043	0.000044	0.000049	0.000047	0.000054	0.000052
Technical specification limit	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
<b>Indicator value</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Reactor Coolant System Activity	7/16	8/16	9/16	10/16	11/16	12/16	1/17	2/17	3/17	4/17	5/17	6/17
Maximum activity	0.000052	0.000129	0.000057	0.000050	0.000028	0.000038	0.000031	0.000036	0.000047	0.000034	0.000036	0.000036
Technical specification limit	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
<b>Indicator value</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

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Licensee Comments: none

### Reactor Coolant System Leakage



Thresholds: White > 50.0 Yellow > 100.0

**Notes**

Reactor Coolant System Leakage	7/15	8/15	9/15	10/15	11/15	12/15	1/16	2/16	3/16	4/16	5/16	6/16
Maximum leakage	0.112	0.096	0.096	0.156	0.163	0.260	0.165	0.172	0.188	0.237	0.291	0.178
Technical specification limit	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0

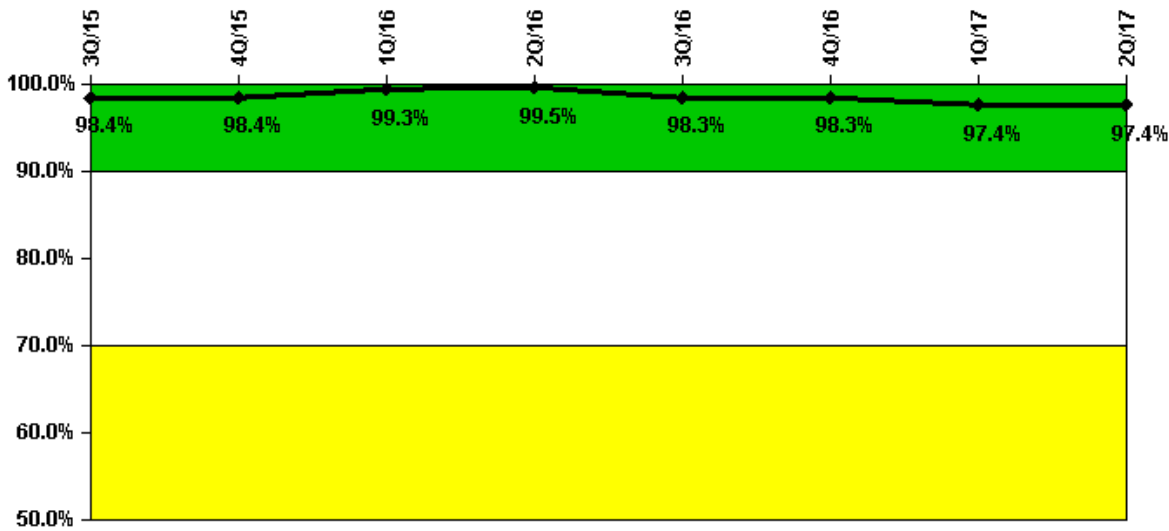
Indicator value	1.1	1.0	1.0	1.6	1.6	2.6	1.7	1.7	1.9	2.4	2.9	1.8
Reactor Coolant System Leakage	7/16	8/16	9/16	10/16	11/16	12/16	1/17	2/17	3/17	4/17	5/17	6/17
Maximum leakage	0	0	0	0	0	0	0	0	0	0	0	0
Technical specification limit	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0

Indicator value	0	0	0	0	0	0	0	0	0	0	0	0
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Licensee Comments: none

### Drill/Exercise Performance



Thresholds: White < 90.0% Yellow < 70.0%

#### Notes

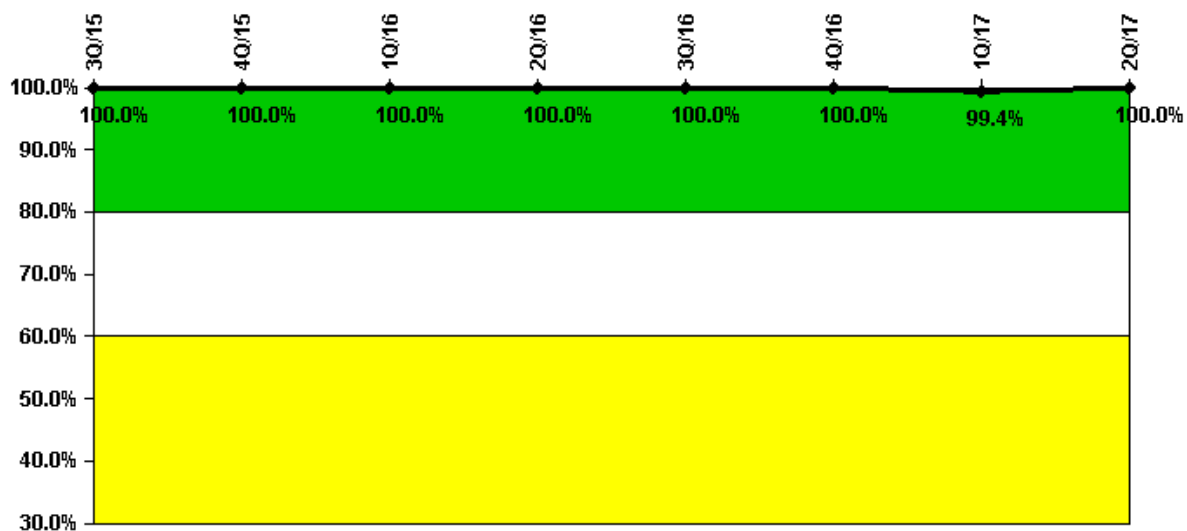
Drill/Exercise Performance	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17
Successful opportunities	2.0	4.0	40.0	33.0	22.0	10.0	13.0	26.0
Total opportunities	2.0	4.0	40.0	34.0	24.0	10.0	14.0	26.0

Indicator value                    98.4% 98.4% 99.3% 99.5% 98.3% 98.3% 97.4% 97.4%

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Licensee Comments: none

### ERO Drill Participation



Thresholds: White < 80.0% Yellow < 60.0%

#### Notes

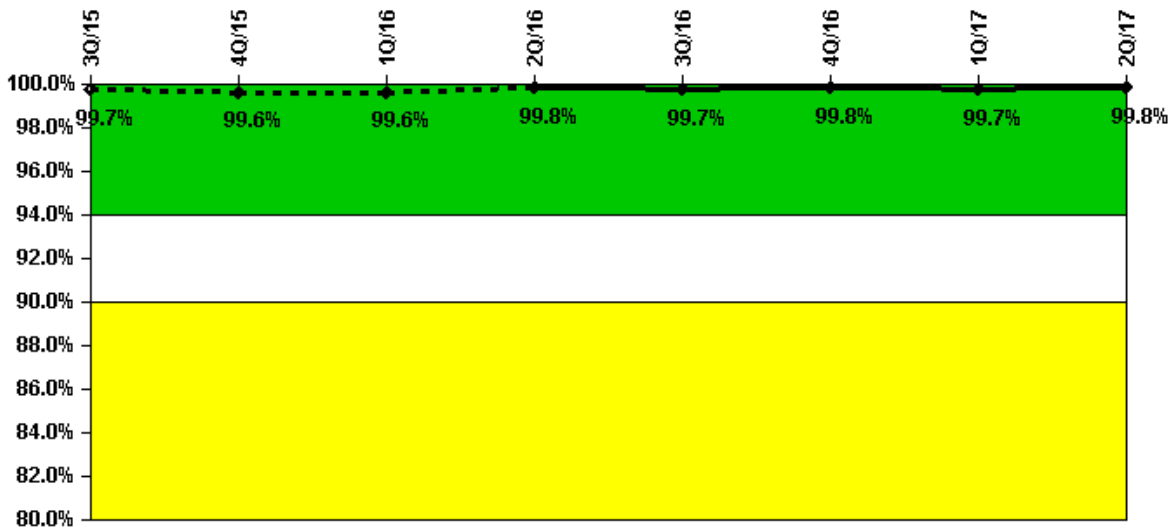
ERO Drill Participation	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17
Participating Key personnel	142.0	136.0	132.0	126.0	163.0	156.0	159.0	158.0
Total Key personnel	142.0	136.0	132.0	126.0	163.0	156.0	160.0	158.0

**Indicator value**                    **100.0% 100.0% 100.0% 100.0% 100.0% 100.0% 99.4% 100.0%**

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Licensee Comments: none

### Alert & Notification System



Thresholds: White < 94.0% Yellow < 90.0%

#### Notes

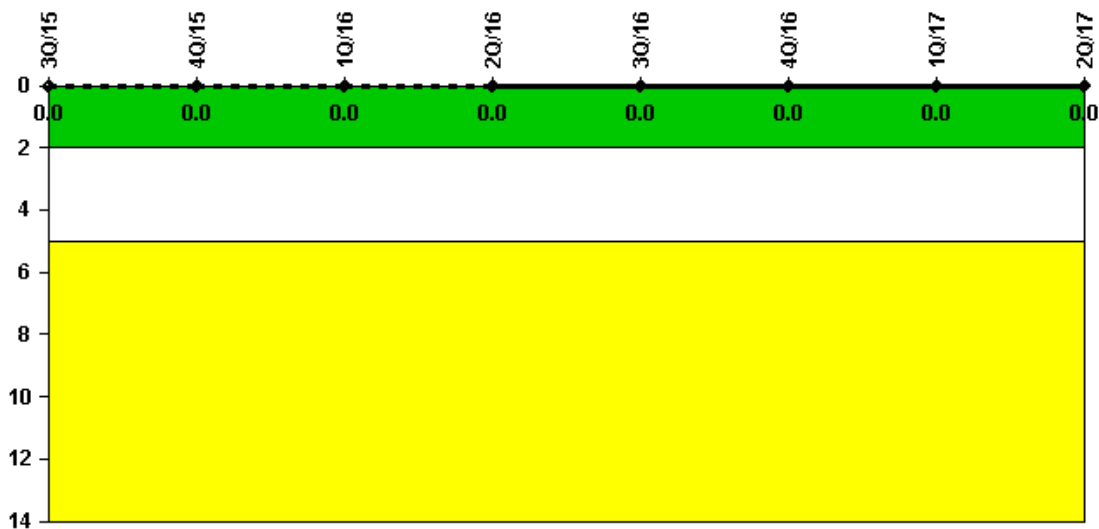
Alert & Notification System	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17
Successful siren-tests	1722	1591	1596	1594	1595	1597	1594	1597
Total sirens-tests	1722	1599	1599	1599	1599	1599	1599	1599

Indicator value                    99.7% 99.6% 99.6% 99.8% 99.7% 99.8% 99.7% 99.8%

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Licensee Comments: none

### Occupational Exposure Control Effectiveness



Thresholds: White > 2.0 Yellow > 5.0

**Notes**

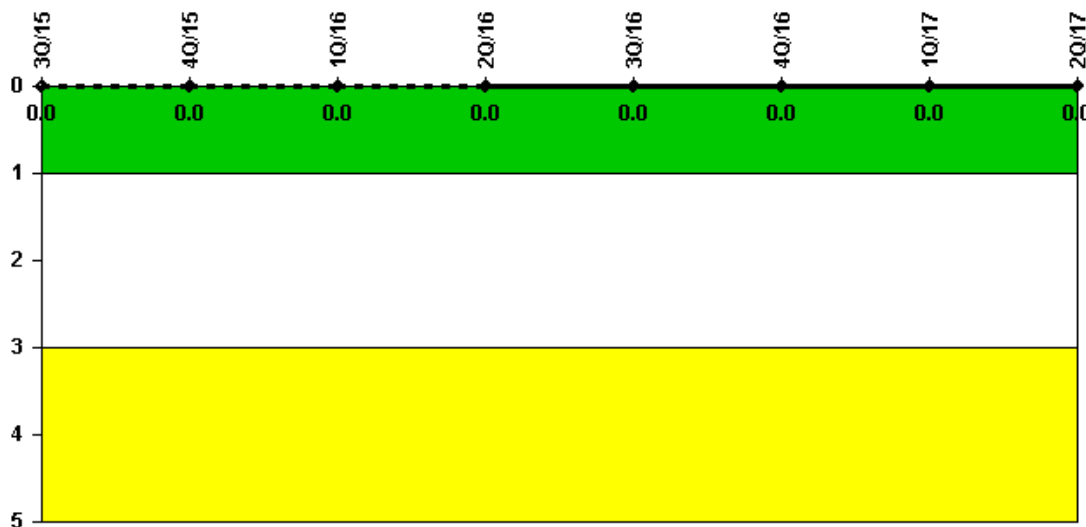
**Occupational Exposure Control Effectiveness** 3Q/15 4Q/15 1Q/16 2Q/16 3Q/16 4Q/16 1Q/17 2Q/17

High radiation area occurrences	0	0	0	0	0	0	0	0
Very high radiation area occurrences	0	0	0	0	0	0	0	0
Unintended exposure occurrences	0	0	0	0	0	0	0	0
<b>Indicator value</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

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Licensee Comments: none

### RETS/ODCM Radiological Effluent



Thresholds: White > 1.0 Yellow > 3.0

**Notes**

**RETS/ODCM Radiological Effluent** 3Q/15 4Q/15 1Q/16 2Q/16 3Q/16 4Q/16 1Q/17 2Q/17

RETS/ODCM occurrences                    0    0    0    0    0    0    0    0

**Indicator value**                            0    0    0    0    0    0    0    0

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Licensee Comments: none

Although the Security Cornerstone is included in the Reactor Oversight Process assessment program, the Commission has decided that specific information related to findings and performance indicators pertaining to the Security Cornerstone will not be publicly available to ensure that security information is not provided to a possible adversary. Other than the fact that a finding or performance indicator is Green or Greater-Than-Green, security related information will not be displayed on the public web page.

*Current data as of: July 26, 2017*

*Page Last Reviewed/Updated Wednesday, June 07, 2017*

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