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## Quad Cities 1 – Quarterly Performance Indicators

### 3Q/2017 Performance Indicators

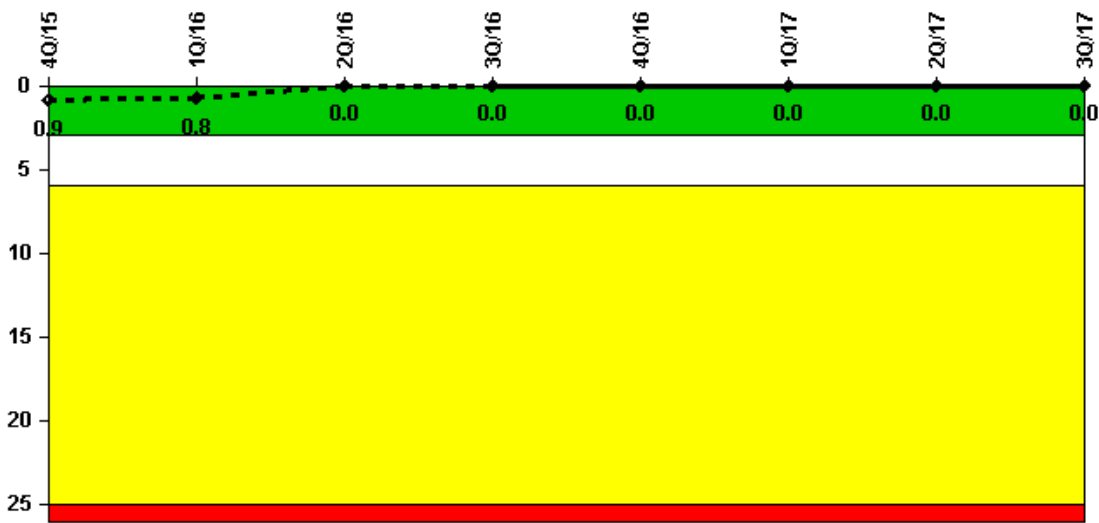
The solid trend line represents the current reporting period.

Licensee's General Comments: none

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- Unplanned Scrams with Complications (IE04)
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- Protected Area Equipment (PP01)

### Unplanned Scrams per 7000 Critical Hrs



Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

#### Notes

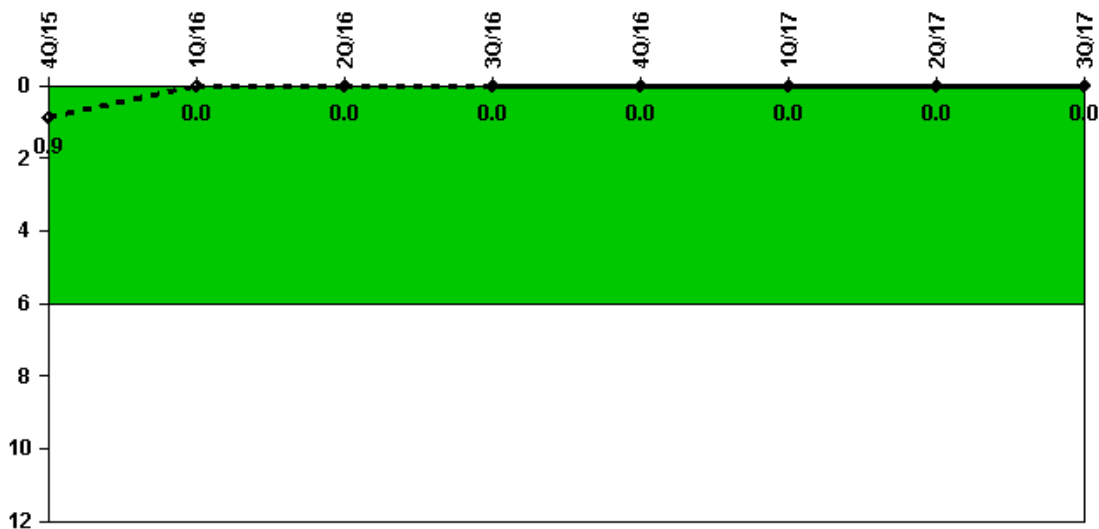
Unplanned Scrams per 7000 Critical Hrs	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17
Unplanned scrams	0	0	0	0	0	0	0	0
Critical hours	2209.0	2183.0	2184.0	2208.0	2209.0	2040.4	1873.4	2208.0

Indicator value	0.9	0.8	0	0	0	0	0	0
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Licensee Comments: none

### Unplanned Power Changes per 7000 Critical Hrs



Thresholds: White > 6.0

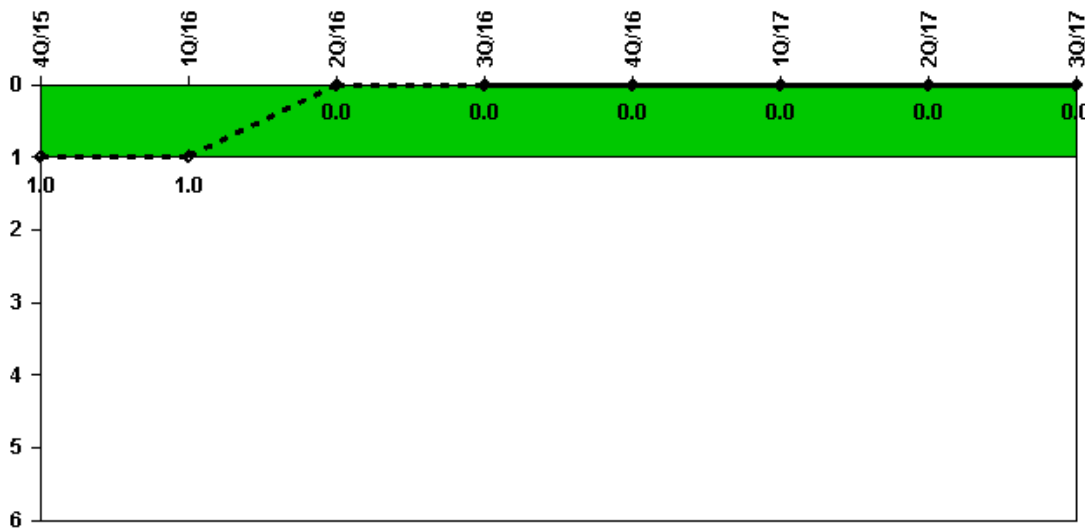
**Notes**

<b>Unplanned Power Changes per 7000 Critical Hrs</b>	<b>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>	<b>3Q/17</b>
Unplanned power changes	0	0	0	0	0	0	0	0
Critical hours	2209.0	2183.0	2184.0	2208.0	2209.0	2040.4	1873.4	2208.0
<b>Indicator value</b>	<b>0.9</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

**Unplanned Scrams with Complications**



Thresholds: White > 1.0

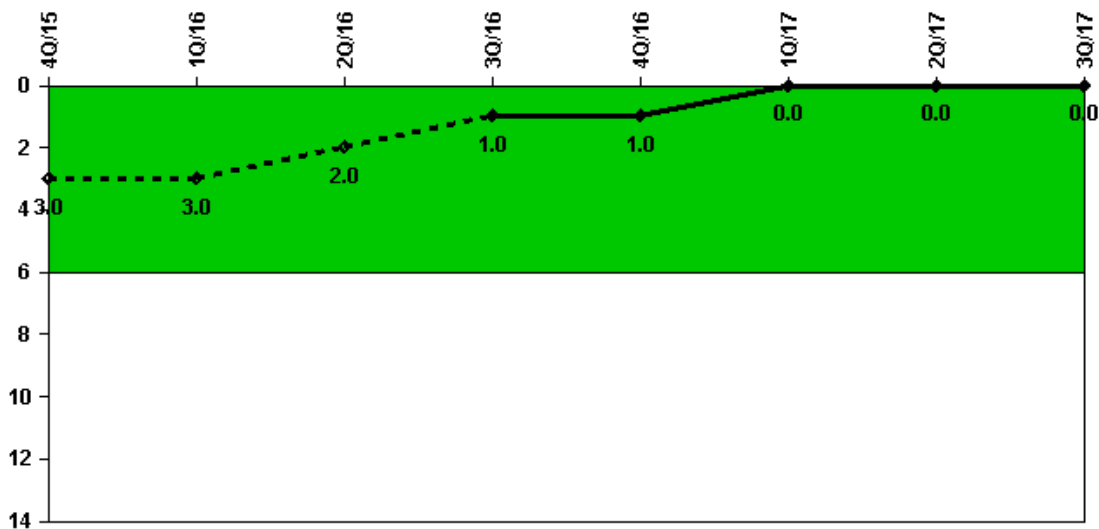
**Notes**

<b>Unplanned Scrams with Complications</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>	<b>3Q/17</b>
Scrams with complications	0	0	0	0	0	0	0	0
<b>Indicator value</b>	<b>1.0</b>	<b>1.0</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 (BWR)



Thresholds: White > 6.0

#### Notes

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

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

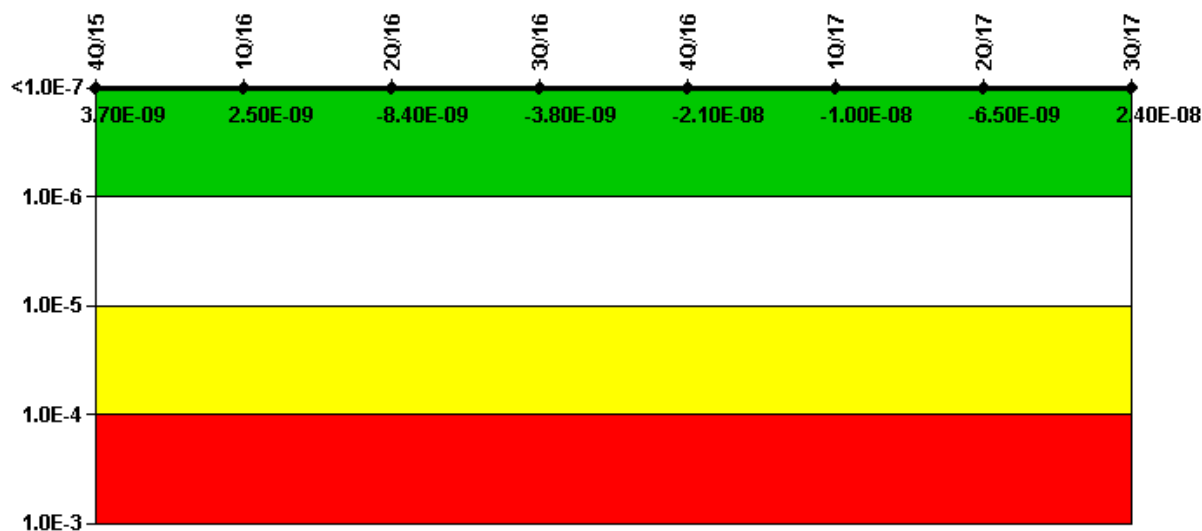
Indicator value 3 3 2 1 1 0 0 0

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Licensee Comments:

1Q/16: LER 254/2015-010-00, Loss of Control Room Emergency Ventilation System Due to Differential Pressure Switch Failure

### 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

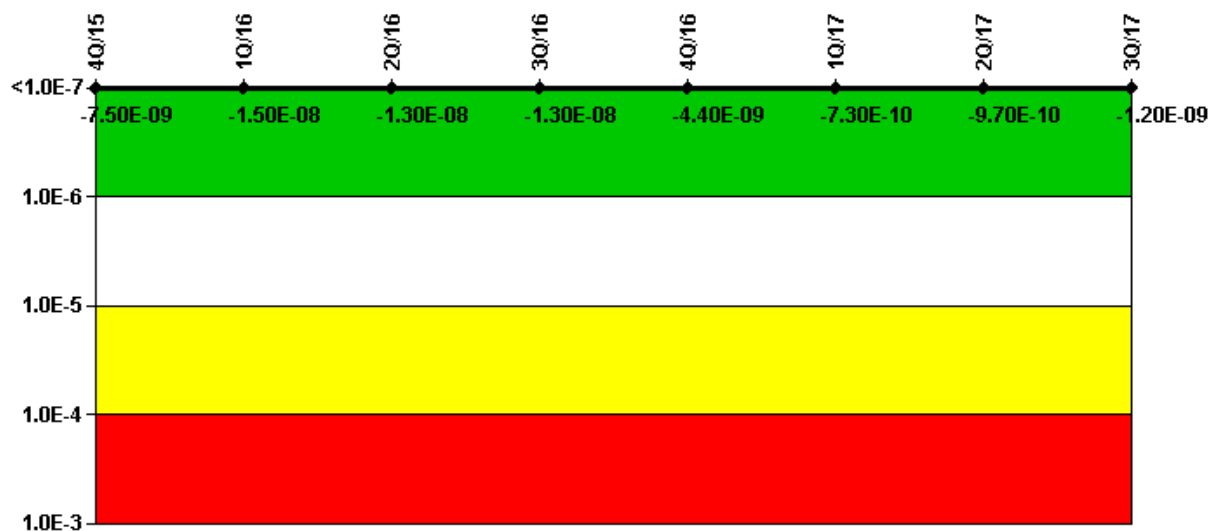
	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17
UAI ( $\Delta$ CDF)	7.42E-08	6.83E-08	5.76E-08	6.16E-08	4.75E-08	5.82E-08	6.20E-08	9.18E-08
URI ( $\Delta$ CDF)	-7.05E-08	-6.59E-08	-6.60E-08	-6.54E-08	-6.82E-08	-6.86E-08	-6.85E-08	-6.80E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
<b>Indicator value</b>	<b>3.70E-09</b>	<b>2.50E-09</b>	<b>8.40E-09</b>	<b>3.80E-09</b>	<b>2.10E-08</b>	<b>1.00E-08</b>	<b>6.50E-09</b>	<b>2.40E-08</b>

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Licensee Comments:

4Q/15: November data corrected

### 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**

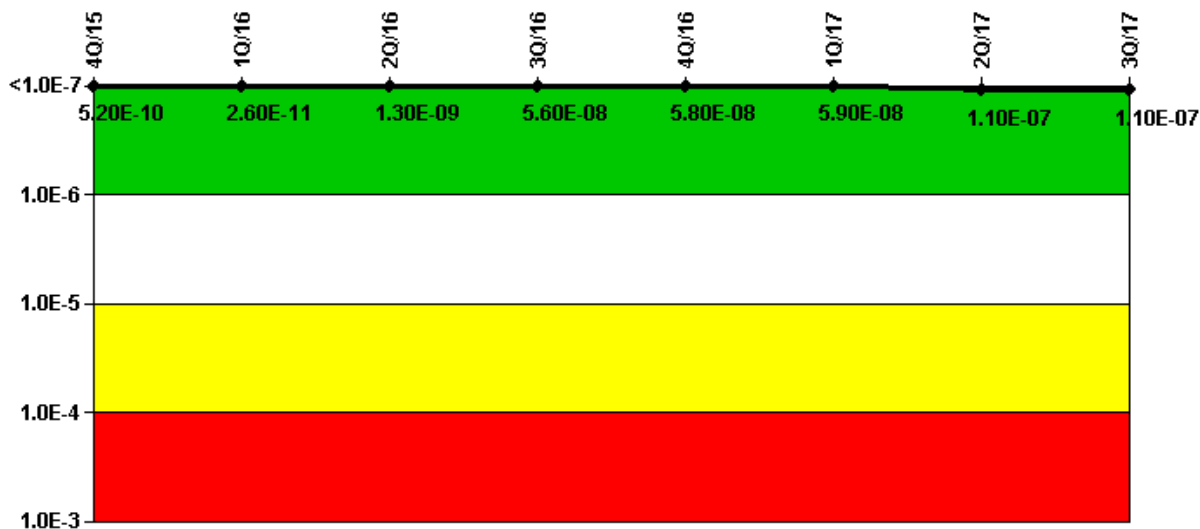
	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17
UAI ( $\Delta$ CDF)	1.18E-08	5.18E-09	5.17E-09	5.39E-09	1.35E-08	1.72E-08	1.84E-08	1.82E-08
URI ( $\Delta$ CDF)	-1.94E-08	-2.01E-08	-1.79E-08	-1.79E-08	-1.79E-08	-1.79E-08	-1.94E-08	-1.94E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
<b>Indicator value</b>	<b>-7.50E-09</b>	<b>-1.50E-08</b>	<b>-1.30E-08</b>	<b>-1.30E-08</b>	<b>-4.40E-09</b>	<b>-7.30E-10</b>	<b>-9.70E-10</b>	<b>-1.20E-09</b>

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Licensee Comments:

4Q/15: November data corrected.

### 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**

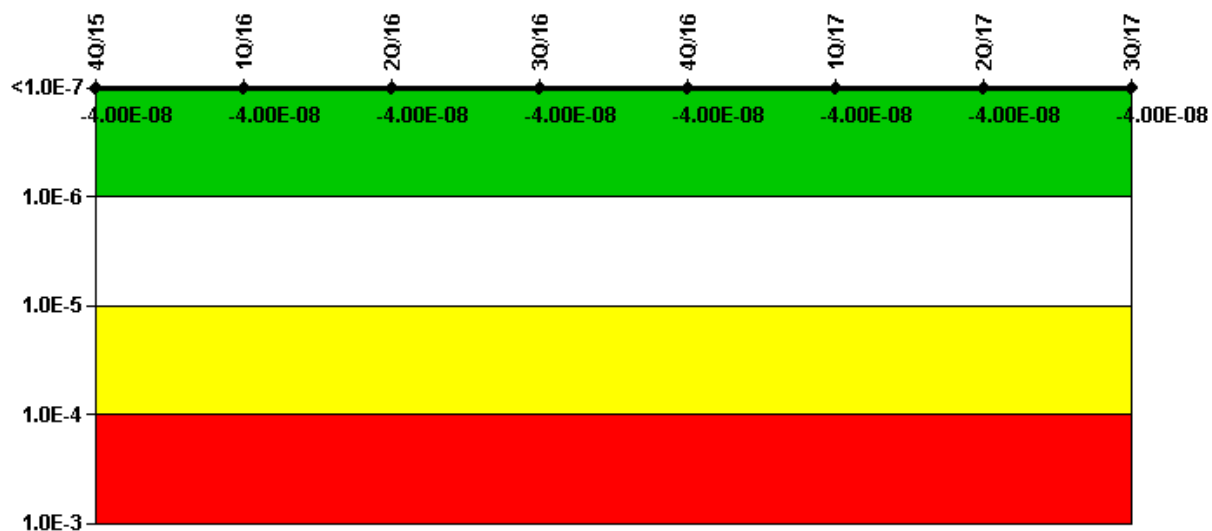
	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17
UAI ( $\Delta$ CDF)	1.75E-09	1.25E-09	1.99E-09	3.66E-09	4.77E-09	6.71E-09	1.09E-08	1.04E-08
URI ( $\Delta$ CDF)	-1.22E-09	-1.22E-09	-7.28E-10	5.28E-08	5.28E-08	5.28E-08	9.96E-08	9.96E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
<b>Indicator value</b>	<b>5.20E-10</b>	<b>2.60E-11</b>	<b>1.30E-09</b>	<b>5.60E-08</b>	<b>5.80E-08</b>	<b>5.90E-08</b>	<b>1.10E-07</b>	<b>1.10E-07</b>

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Licensee Comments:

3Q/16: July - Reference IR 02696095 (U-1 RCIC FIC, WO 01941037)

### 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**

	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17
UAI ( $\Delta$ CDF)	-1.35E-08	-1.35E-08	-1.35E-08	-1.35E-08	-1.35E-08	-1.35E-08	-1.35E-08	-1.35E-08
URI ( $\Delta$ CDF)	-2.65E-08	-2.65E-08	-2.65E-08	-2.65E-08	-2.65E-08	-2.65E-08	-2.65E-08	-2.65E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
<b>Indicator value</b>	<b>-4.00E-08</b>	<b>-4.00E-08</b>	<b>-4.00E-08</b>	<b>-4.00E-08</b>	<b>-4.00E-08</b>	<b>-4.00E-08</b>	<b>-4.00E-08</b>	<b>-4.00E-08</b>

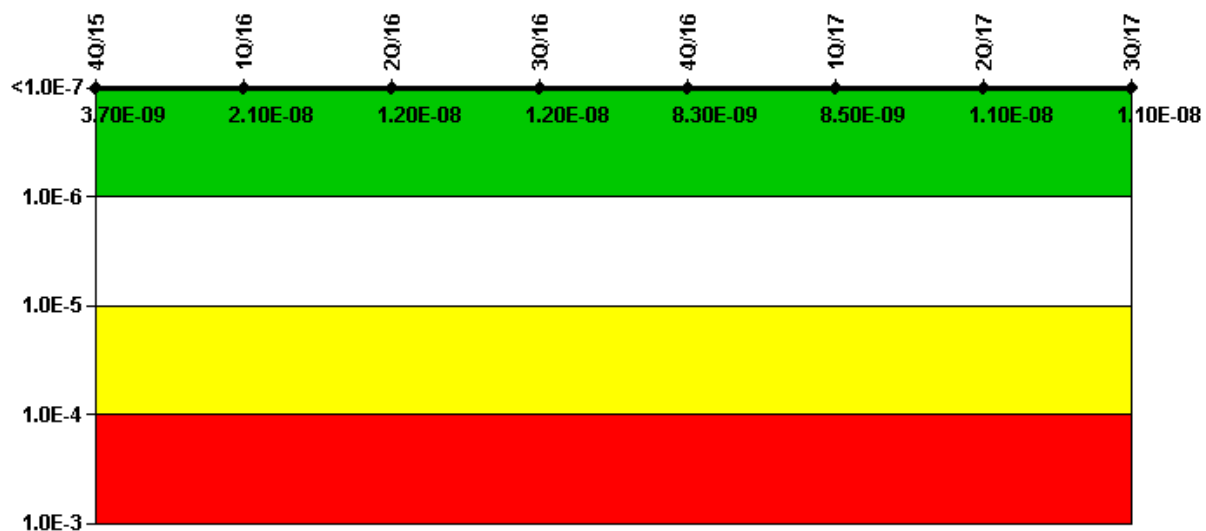
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Licensee Comments:

3Q/16: 1B HRH Seal Cooler 7/27/2016 04:00 - 7/28/2016 20:15



### Mitigating Systems Performance Index, Cooling Water Systems



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

#### Notes

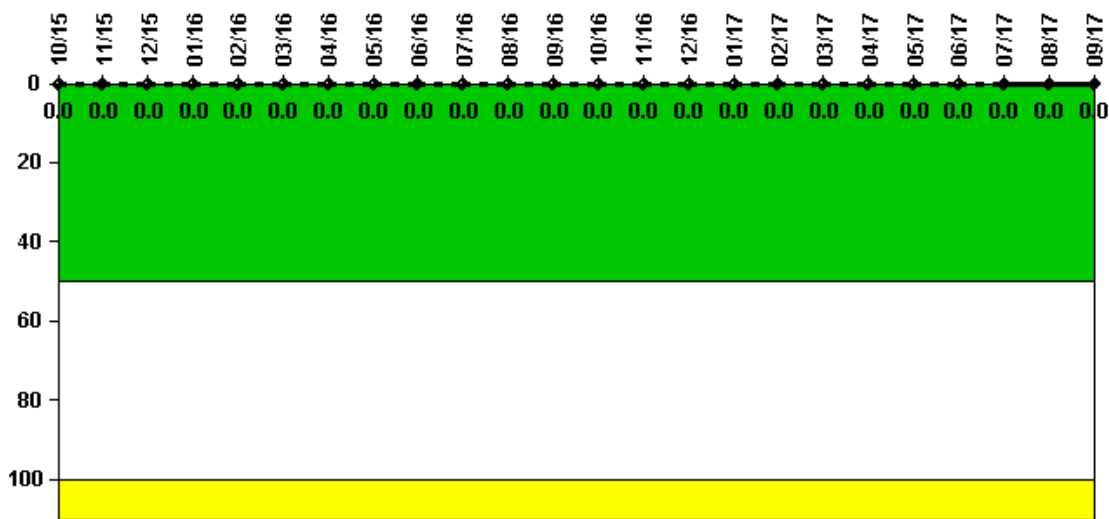
#### Mitigating Systems Performance Index, Cooling Water Systems

	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17
UAI (ΔCDF)	3.84E-09	2.13E-08	1.25E-08	1.25E-08	8.45E-09	8.59E-09	1.13E-08	1.13E-08
URI (ΔCDF)	-1.39E-10	-1.39E-10	-1.39E-10	-1.39E-10	-1.39E-10	-1.39E-10	-1.39E-10	-1.39E-10
PLE	NO	NO	NO	NO	NO	NO	NO	NO
<b>Indicator value</b>	<b>3.70E-09</b>	<b>2.10E-08</b>	<b>1.20E-08</b>	<b>1.20E-08</b>	<b>8.30E-09</b>	<b>8.50E-09</b>	<b>1.10E-08</b>	<b>1.10E-08</b>

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Licensee Comments: none

### Reactor Coolant System Activity



Thresholds: White > 50.0 Yellow > 100.0

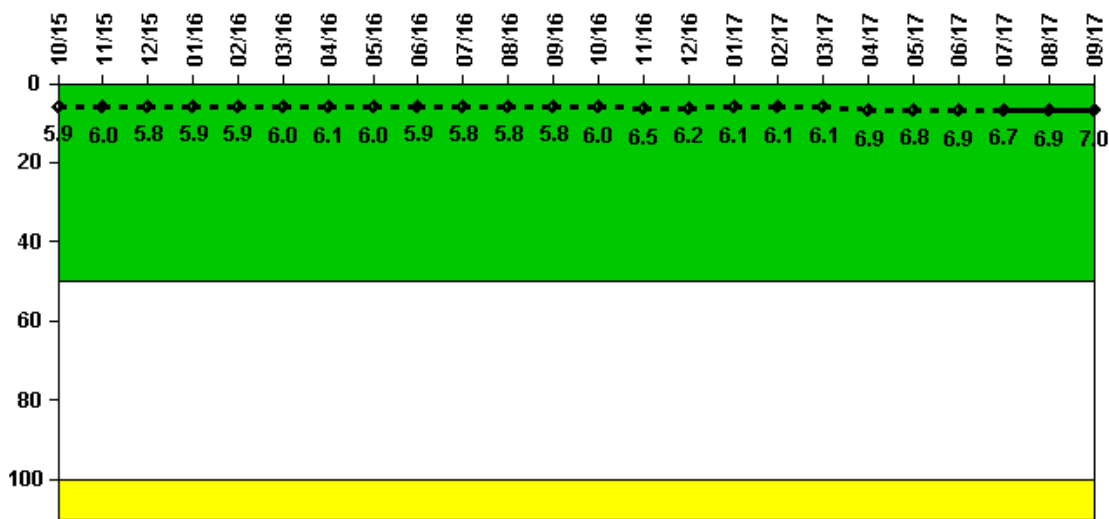
**Notes**

Reactor Coolant System Activity	10/15	11/15	12/15	1/16	2/16	3/16	4/16	5/16	6/16	7/16	8/16	9/16
Maximum activity	0.000036	0.000041	0.000043	0.000046	0.000040	0.000047	0.000049	0.000067	0.000068	0.000040	0.000068	0.000055
Technical specification limit	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
<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	10/16	11/16	12/16	1/17	2/17	3/17	4/17	5/17	6/17	7/17	8/17	9/17
Maximum activity	0.000052	0.000055	0.000052	0.000054	0.000063	0.000067	0.000016	0.000019	0.000021	0.000022	0.000036	0.000033
Technical specification limit	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
<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	10/15	11/15	12/15	1/16	2/16	3/16	4/16	5/16	6/16	7/16	8/16	9/16
Maximum leakage	1.476	1.506	1.455	1.465	1.478	1.490	1.521	1.495	1.474	1.459	1.459	1.452
Technical specification limit	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0

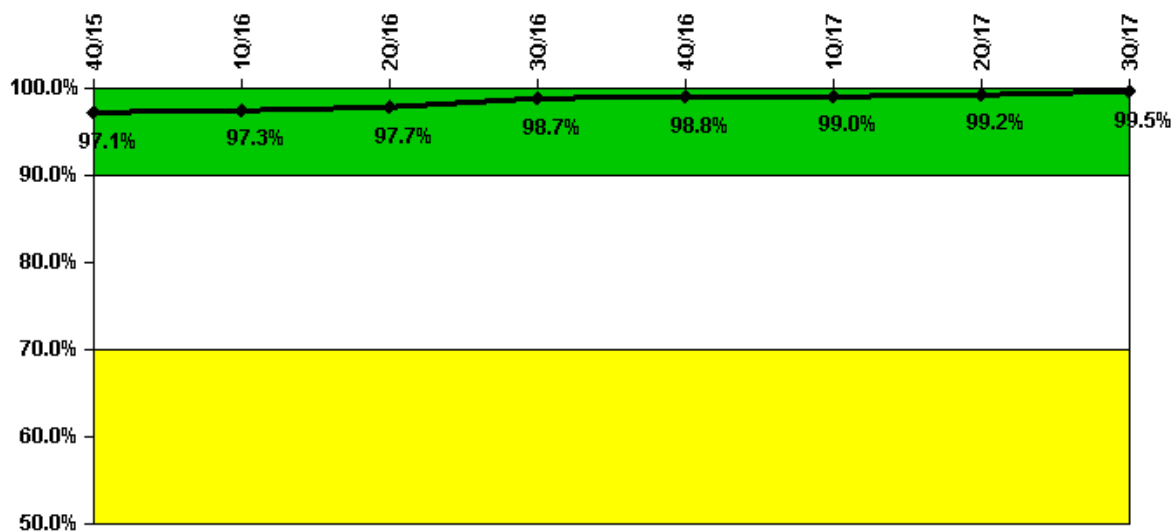
<b>Indicator value</b>	<b>5.9</b>	<b>6.0</b>	<b>5.8</b>	<b>5.9</b>	<b>5.9</b>	<b>6.0</b>	<b>6.1</b>	<b>6.0</b>	<b>5.9</b>	<b>5.8</b>	<b>5.8</b>	<b>5.8</b>
Reactor Coolant System Leakage	10/16	11/16	12/16	1/17	2/17	3/17	4/17	5/17	6/17	7/17	8/17	9/17
Maximum leakage	1.501	1.619	1.542	1.526	1.537	1.516	1.719	1.710	1.722	1.685	1.715	1.739
Technical specification limit	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0

<b>Indicator value</b>	<b>6.0</b>	<b>6.5</b>	<b>6.2</b>	<b>6.1</b>	<b>6.1</b>	<b>6.1</b>	<b>6.9</b>	<b>6.8</b>	<b>6.9</b>	<b>6.7</b>	<b>6.9</b>	<b>7.0</b>
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Licensee Comments: none

### Drill/Exercise Performance



Thresholds: White < 90.0% Yellow < 70.0%

#### Notes

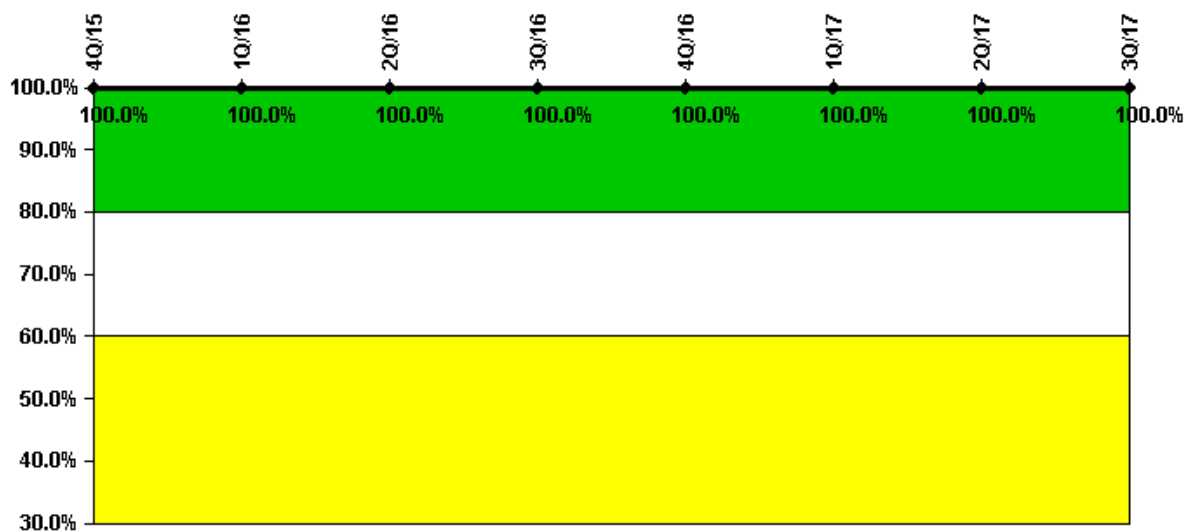
Drill/Exercise Performance	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17
Successful opportunities	33.0	35.0	70.0	34.0	42.0	92.0	37.0	23.0
Total opportunities	33.0	35.0	70.0	36.0	42.0	92.0	37.0	23.0

Indicator value                    97.1% 97.3% 97.7% 98.7% 98.8% 99.0% 99.2% 99.5%

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Licensee Comments: none

### ERO Drill Participation



Thresholds: White < 80.0% Yellow < 60.0%

**Notes**

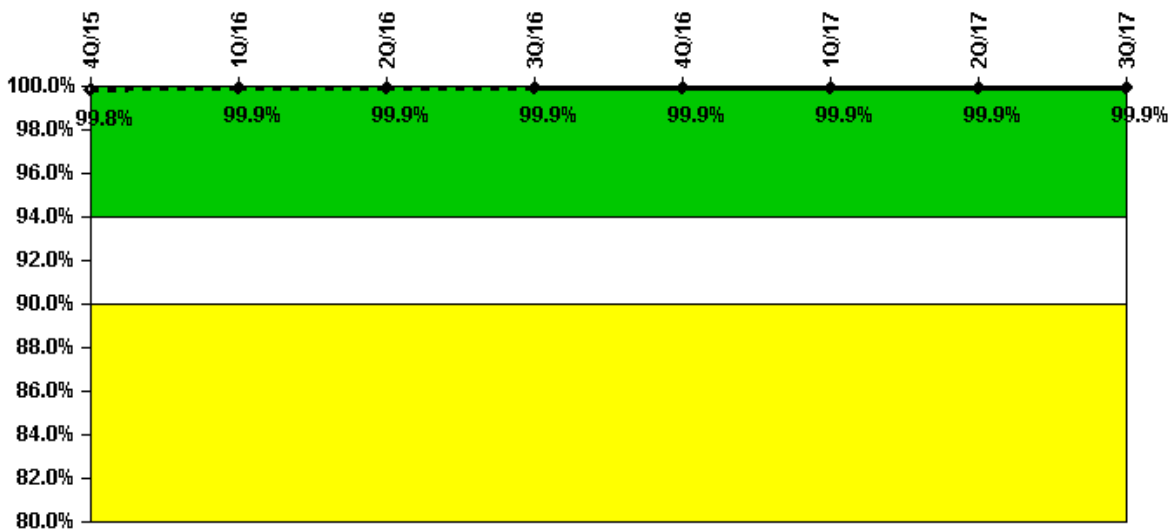
ERO Drill Participation	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17
Participating Key personnel	73.0	74.0	76.0	85.0	86.0	87.0	85.0	81.0
Total Key personnel	73.0	74.0	76.0	85.0	86.0	87.0	85.0	81.0

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

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Licensee Comments: none

### Alert & Notification System



Thresholds: White < 94.0% Yellow < 90.0%

**Notes**

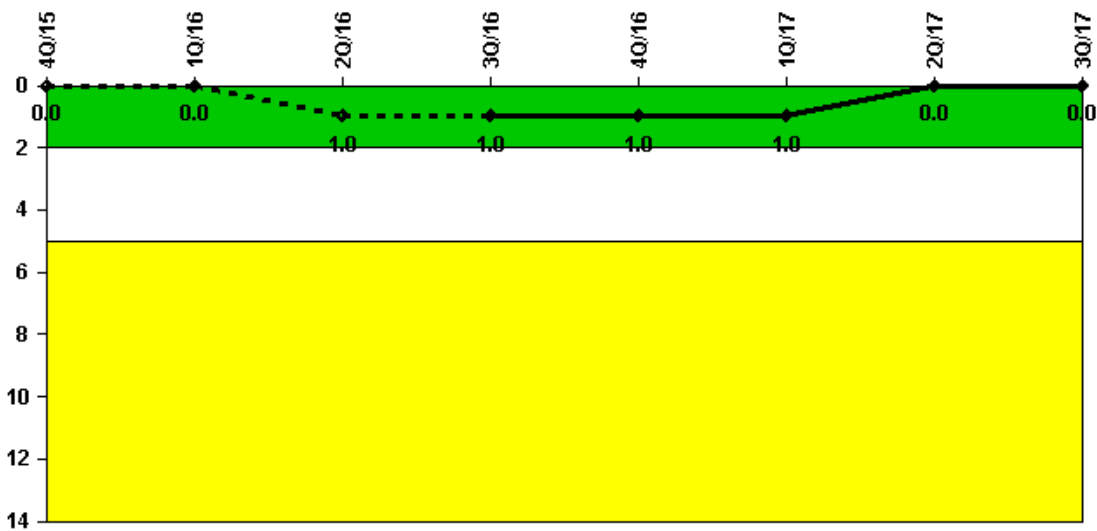
Alert & Notification System	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17
Successful siren-tests	2686	2687	2687	2682	2604	2729	2686	2641
Total sirens-tests	2688	2688	2688	2688	2604	2730	2688	2646

**Indicator value**                    99.8% 99.9% 99.9% 99.9% 99.9% 99.9% 99.9% 99.9%

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Licensee Comments: none

### Occupational Exposure Control Effectiveness



Thresholds: White > 2.0 Yellow > 5.0

**Notes**

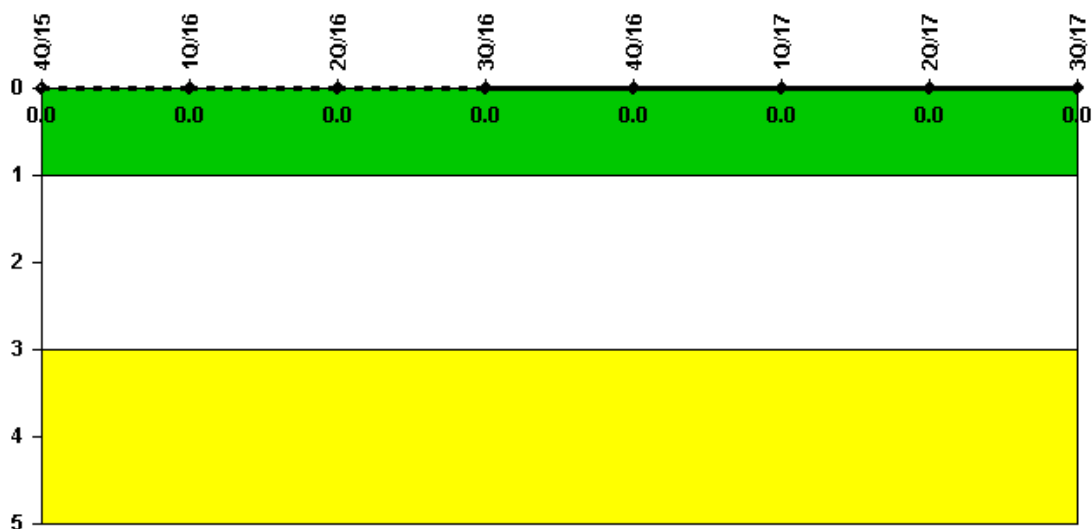
**Occupational Exposure Control Effectiveness** 4Q/15 1Q/16 2Q/16 3Q/16 4Q/16 1Q/17 2Q/17 3Q/17

High radiation area occurrences	0	0	1	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>1</b>	<b>1</b>	<b>1</b>	<b>1</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** 4Q/15 1Q/16 2Q/16 3Q/16 4Q/16 1Q/17 2Q/17 3Q/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: October 31, 2017*

*Page Last Reviewed/Updated Monday, November 06, 2017*