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## **Pilgrim 1 – Quarterly Performance Indicators**

### **1Q/2017 Performance Indicators**

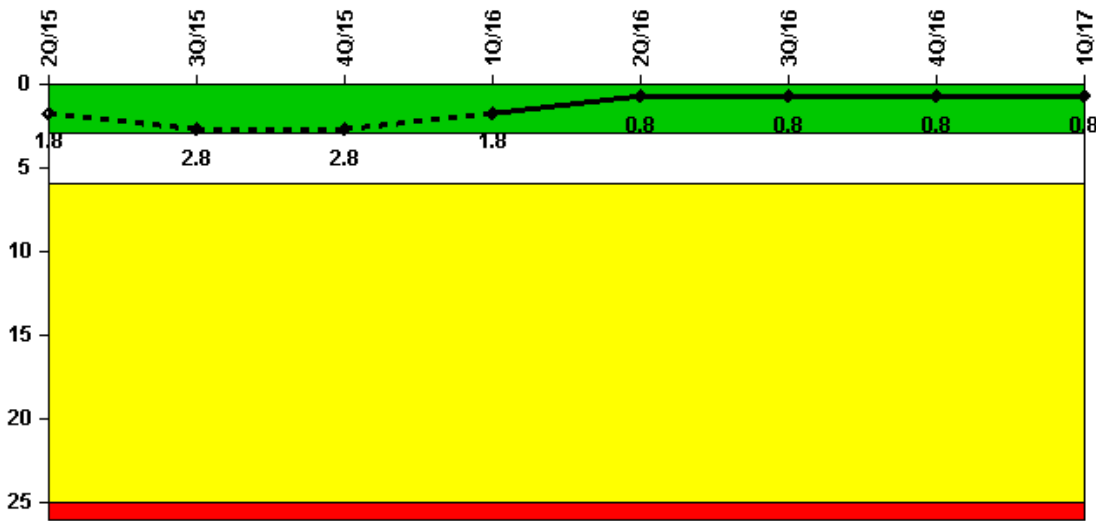
The solid trend line represents the current reporting period.

Licensee's General Comments: none

On this page:

- Unplanned Scrams (IE01)
- Unplanned Power Changes per 7000 Critical Hours (IE03)
- Unplanned Scrams with Complications (IE04)
- Safety System Functional Failures (MS05)
- Emergency AC Power Systems (MS06)
- High Pressure Injection Systems (MS07)
- Heat Removal Systems (MS08)
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- Cooling Water Systems (MS10)
- Reactor Coolant System Activity (BI01)
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- Emergency Response Organization Drill Participation (EP02)
- Alert and Notification System Reliability (EP03)
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- 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**

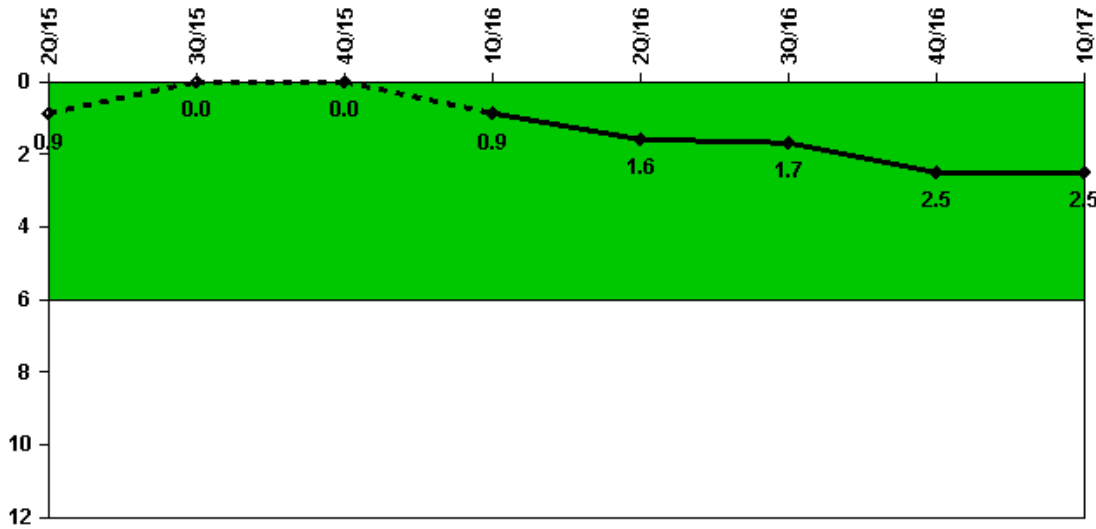
Unplanned Scrams per 7000 Critical Hrs	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17
Unplanned scrams	1.0	1.0	0	0	0	1.0	0	0
Critical hours	1424.1	2151.7	2209.0	2137.9	2184.0	1918.2	2080.2	2098.0

Indicator value	1.8	2.8	2.8	1.8	0.8	0.8	0.8	0.8
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Licensee Comments: none

### Unplanned Power Changes per 7000 Critical Hrs



Thresholds: White > 6.0

**Notes**

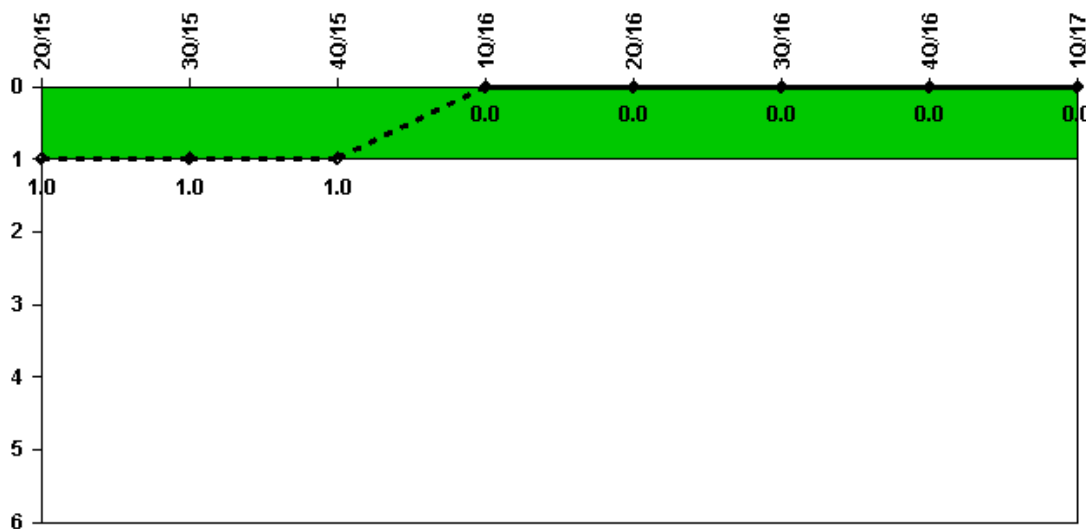
Unplanned Power Changes per 7000 Critical Hrs	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17
Unplanned power changes	0	0	0	1.0	1.0	0	1.0	1.0
Critical hours	1424.1	2151.7	2209.0	2137.9	2184.0	1918.2	2080.2	2098.0

<b>Indicator value</b>	<b>0.9</b>	<b>0</b>	<b>0</b>	<b>0.9</b>	<b>1.6</b>	<b>1.7</b>	<b>2.5</b>	<b>2.5</b>
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Licensee Comments: none

**Unplanned Scrams with Complications**



Thresholds: White > 1.0

**Notes**

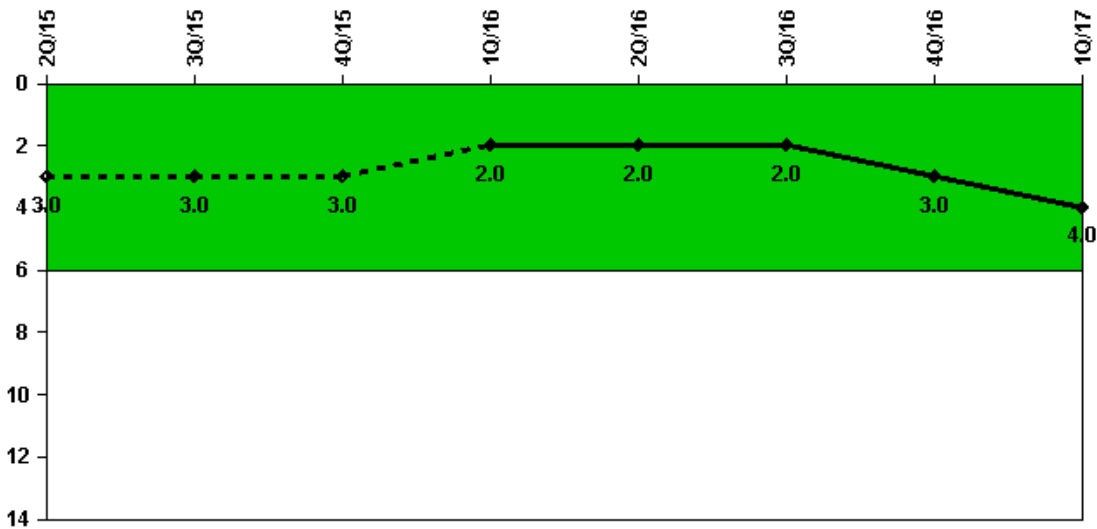
Unplanned Scrams with Complications	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17
Scrams with complications	0	0	0	0	0	0	0	0

<b>Indicator value</b>	<b>1.0</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>
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Licensee Comments: none

### Safety System Functional Failures (BWR)



Thresholds: White > 6.0

#### Notes

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

Safety System Functional Failures 2 0 0 0 2 0 1 1

Indicator value 3 3 3 2 2 2 3 4

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#### Licensee Comments:

1Q/17: 2017-01 - LER 2016-009-00 "HPCI Declared Inoperable" was evaluated by engineering and determined to not be a safety system functional failure. 2017-03 - LER 2017-001-00 - "Reactor Building Isolation Dampers Failed to Isolate"

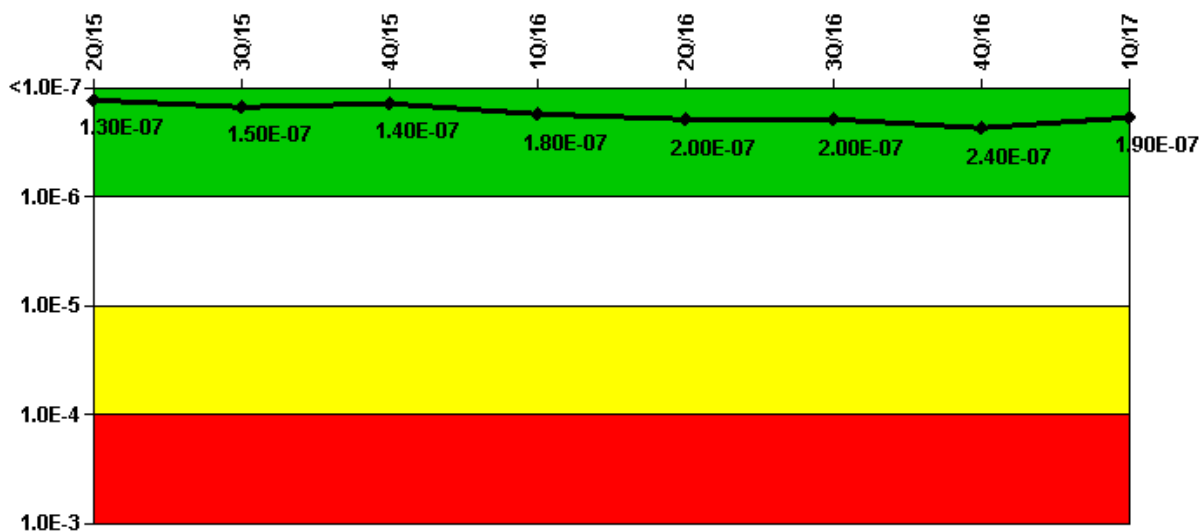
4Q/16: LER 2016-005-00 - Evaluated to not be a reportable SSFF per NEI 99-02. LER 2016-008-00 is a SSFF due to inoperability of both EDGs.

2Q/16: LER 2016-001-00 and LER 2016-002-00

4Q/15: Licensee Event Report (LER) 2015-006-00 documented the Ultimate Heat Sink (UHS) temperature exceeded the Technical Specification limit resulting in the UHS and the Salt Service Water (SSW) System being declared inoperable. The LER was submitted pursuant to 10 CFR 50.73(a)(2)(v)(B) and (D), any event or condition that could have prevented the fulfillment of the safety function of structures or systems that are needed to remove residual heat and mitigate the consequences of an accident, respectively. As documented in the LER, an evaluation of a similar 2013 event determined the safety function of the UHS and SSW System was satisfied when the temperature exceeded the Technical Specification limit for a longer duration and higher value. The 2015 temperature excursion is bounded by that evaluation based on the lower maximum temperature recorded and the shorter duration of this excursion. Thus, this event is not counted as a safety system functional failure per NEI 99-02, Section 2.2.

2Q/15: LER 2015-002-00 and LER 2015-004-00

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



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

**Notes**

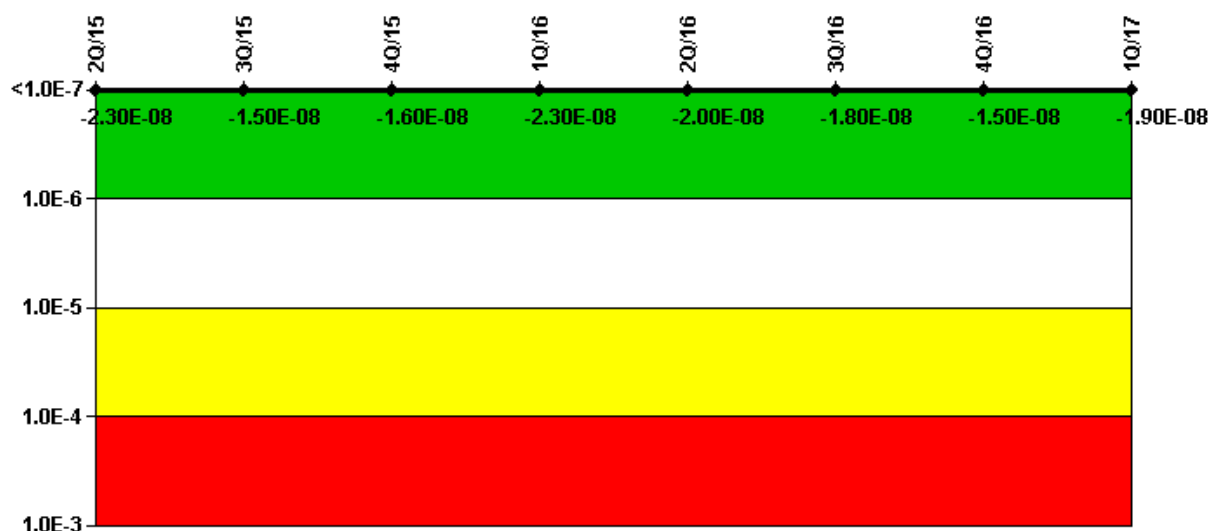
**Mitigating Systems Performance Index, Emergency AC Power System**

	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17
UAI (ΔCDF)	2.47E-08	3.78E-08	2.57E-08	1.68E-08	3.72E-08	3.79E-08	3.96E-08	1.36E-08
URI (ΔCDF)	1.10E-07	1.10E-07	1.11E-07	1.64E-07	1.66E-07	1.66E-07	1.97E-07	1.76E-07
PLE	NO	NO	NO	NO	NO	NO	NO	NO
<b>Indicator value</b>	<b>1.30E-07</b>	<b>1.50E-07</b>	<b>1.40E-07</b>	<b>1.80E-07</b>	<b>2.00E-07</b>	<b>2.00E-07</b>	<b>2.40E-07</b>	<b>1.90E-07</b>

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Licensee Comments: none

### 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**

	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17
UAI (ΔCDF)	-2.97E-09	5.48E-09	4.15E-09	-3.45E-09	-2.25E-09	-7.87E-10	2.60E-09	-1.32E-09
URI (ΔCDF)	-2.03E-08	-2.03E-08	-2.00E-08	-1.95E-08	-1.77E-08	-1.68E-08	-1.75E-08	-1.79E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
<b>Indicator value</b>	<b>-2.30E-08</b>	<b>-1.50E-08</b>	<b>-1.60E-08</b>	<b>-2.30E-08</b>	<b>-2.00E-08</b>	<b>-1.80E-08</b>	<b>-1.50E-08</b>	<b>-1.90E-08</b>

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Licensee Comments: none

### Mitigating Systems Performance Index, Heat Removal System



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

**Notes**

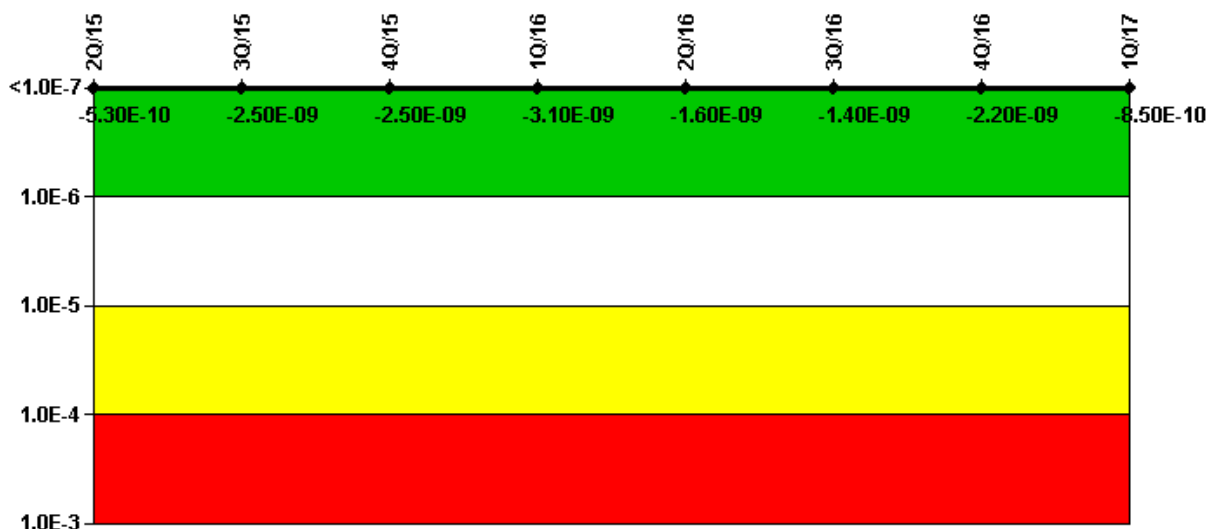
**Mitigating Systems Performance Index, Heat Removal System**

	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17
UAI (ΔCDF)	4.20E-09	9.76E-09	5.10E-09	4.90E-09	3.66E-09	1.03E-08	8.69E-09	1.69E-09
URI (ΔCDF)	-1.52E-08	-1.55E-08	-1.54E-08	-1.52E-08	-1.46E-08	-1.31E-08	-1.25E-08	-1.23E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
<b>Indicator value</b>	<b>-1.10E-08</b>	<b>-5.80E-09</b>	<b>-1.00E-08</b>	<b>-1.00E-08</b>	<b>-1.10E-08</b>	<b>-2.90E-09</b>	<b>-3.80E-09</b>	<b>-1.10E-08</b>

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Licensee Comments: none

### 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**

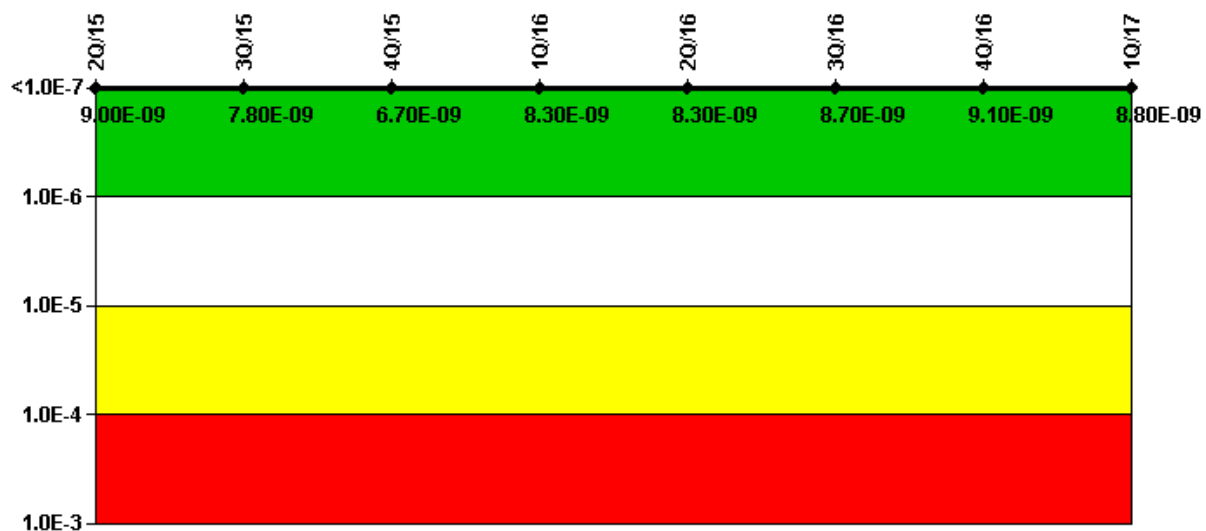
	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17
UAI ( $\Delta$ CDF)	3.31E-09	1.60E-09	1.75E-09	9.94E-10	2.36E-09	2.61E-09	1.83E-09	3.32E-09
URI ( $\Delta$ CDF)	-3.84E-09	-4.10E-09	-4.26E-09	-4.14E-09	-3.92E-09	-4.00E-09	-4.01E-09	-4.17E-09
PLE	NO	NO	NO	NO	NO	NO	NO	NO
<b>Indicator value</b>	<b>-5.30E-10</b>	<b>-2.50E-09</b>	<b>-2.50E-09</b>	<b>-3.10E-09</b>	<b>-1.60E-09</b>	<b>-1.40E-09</b>	<b>-2.20E-09</b>	<b>-8.50E-10</b>

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Licensee Comments: none



### Mitigating Systems Performance Index, Cooling Water Systems



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

#### Notes

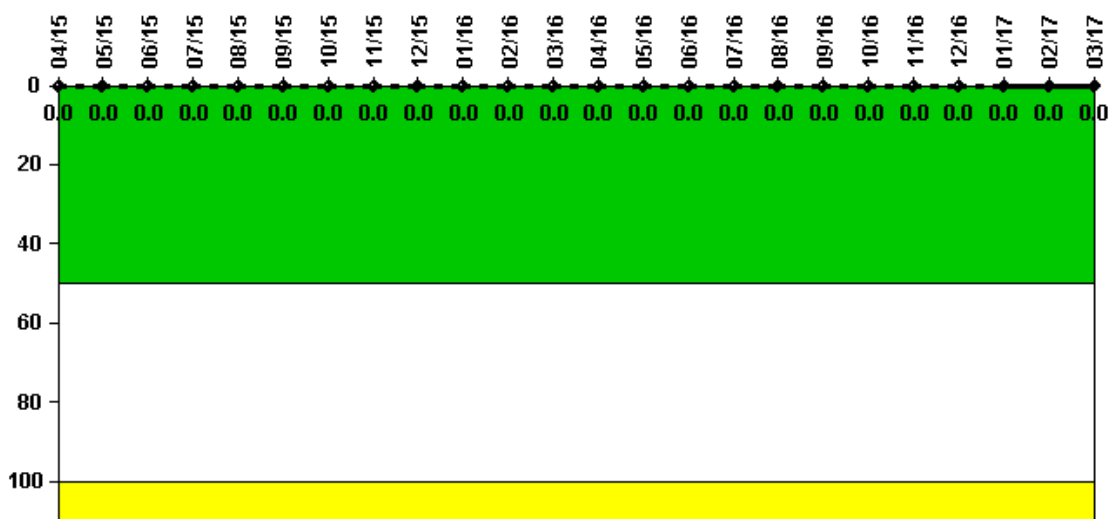
#### Mitigating Systems Performance Index, Cooling Water Systems

	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17
UAI (ΔCDF)	8.64E-09	7.42E-09	7.68E-09	9.24E-09	9.10E-09	9.52E-09	9.98E-09	9.69E-09
URI (ΔCDF)	3.67E-10	3.48E-10	-9.67E-10	-9.74E-10	-8.46E-10	-8.38E-10	-8.44E-10	-8.47E-10
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	9.00E-09	7.80E-09	6.70E-09	8.30E-09	8.30E-09	8.70E-09	9.10E-09	8.80E-09

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Licensee Comments: none

### Reactor Coolant System Activity



Thresholds: White > 50.0 Yellow > 100.0

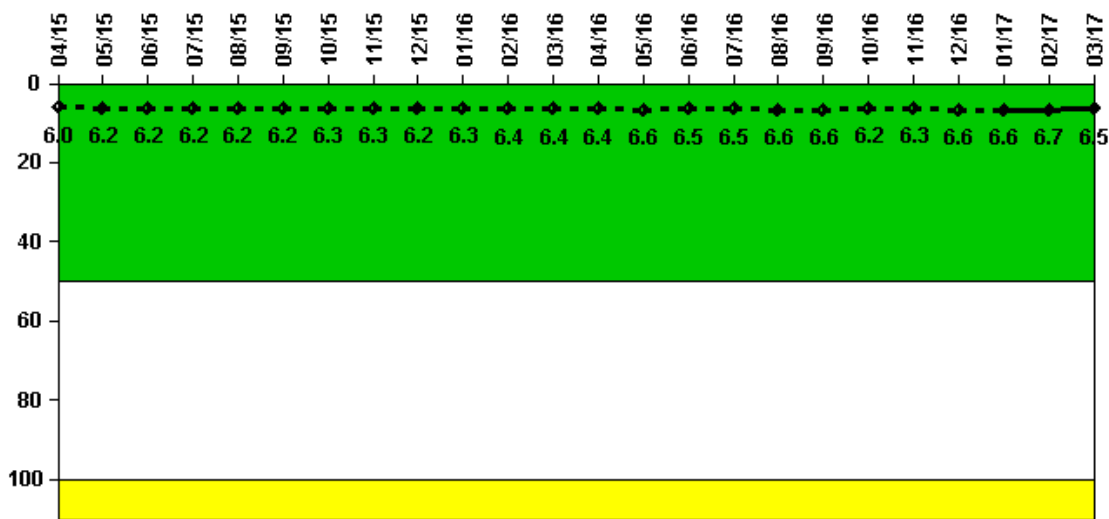
**Notes**

Reactor Coolant System Activity	4/15	5/15	6/15	7/15	8/15	9/15	10/15	11/15	12/15	1/16	2/16	3/16
Maximum activity	0.000062	0.000002	0.000076	0.000067	0.000067	0.000117	0.000133	0.000096	0.000091	0.000122	0.000118	0.000113
Technical specification limit	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Indicator value	0	0	0	0	0	0	0	0	0	0	0	0
Reactor Coolant System Activity	4/16	5/16	6/16	7/16	8/16	9/16	10/16	11/16	12/16	1/17	2/17	3/17
Maximum activity	0.000111	0.000162	0.000143	0.000151	0.000198	0.000214	0.000137	0.000171	0.000174	0.000185	0.000240	0.000143
Technical specification limit	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Indicator value	0	0	0	0	0	0	0	0	0	0	0	0

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Licensee Comments: none

### Reactor Coolant System Leakage



Thresholds: White > 50.0 Yellow > 100.0

**Notes**

Reactor Coolant System Leakage	4/15	5/15	6/15	7/15	8/15	9/15	10/15	11/15	12/15	1/16	2/16	3/16
Maximum leakage	1.490	1.550	1.560	1.550	1.540	1.560	1.580	1.570	1.550	1.570	1.590	1.590
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

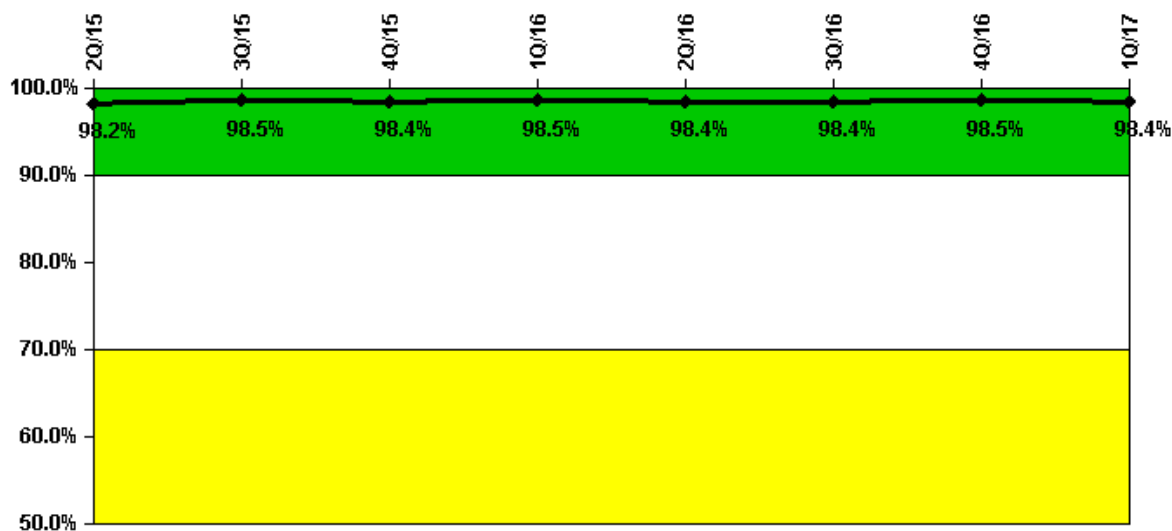
<b>Indicator value</b>	<b>6.0</b>	<b>6.2</b>	<b>6.2</b>	<b>6.2</b>	<b>6.2</b>	<b>6.2</b>	<b>6.3</b>	<b>6.3</b>	<b>6.2</b>	<b>6.3</b>	<b>6.4</b>	<b>6.4</b>
Reactor Coolant System Leakage	4/16	5/16	6/16	7/16	8/16	9/16	10/16	11/16	12/16	1/17	2/17	3/17
Maximum leakage	1.600	1.650	1.630	1.620	1.660	1.660	1.550	1.580	1.650	1.640	1.670	1.620
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>6.4</b>	<b>6.6</b>	<b>6.5</b>	<b>6.5</b>	<b>6.6</b>	<b>6.6</b>	<b>6.2</b>	<b>6.3</b>	<b>6.6</b>	<b>6.6</b>	<b>6.7</b>	<b>6.5</b>
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Licensee Comments: none

### Drill/Exercise Performance



Thresholds: White < 90.0% Yellow < 70.0%

#### Notes

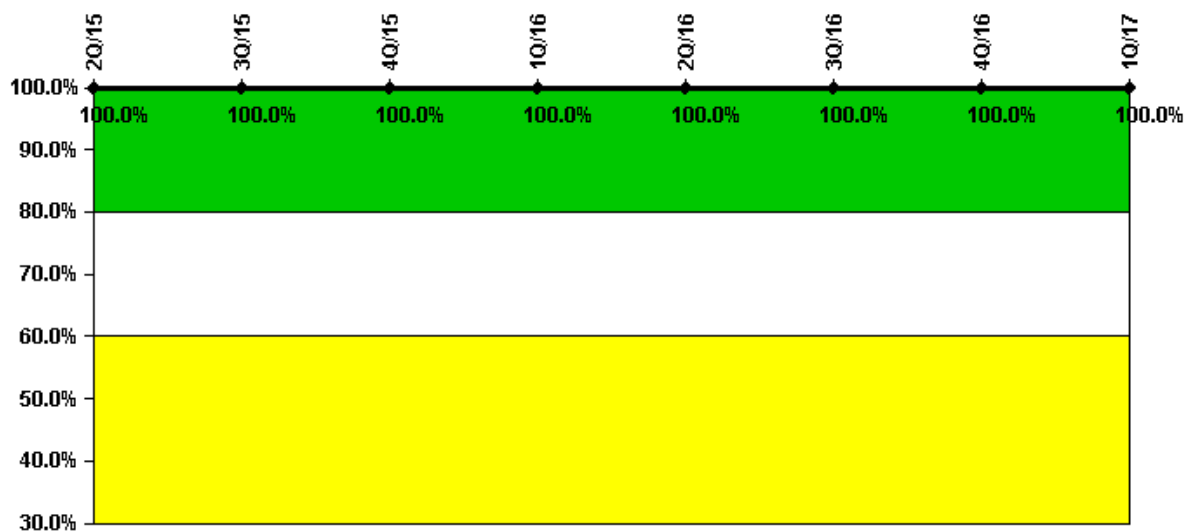
Drill/Exercise Performance	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17
Successful opportunities	48.0	122.0	35.0	22.0	40.0	46.0	38.0	21.0
Total opportunities	49.0	122.0	36.0	22.0	41.0	48.0	39.0	21.0

**Indicator value**                    98.2% 98.5% 98.4% 98.5% 98.4% 98.4% 98.5% 98.4%

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Licensee Comments: none

### ERO Drill Participation



Thresholds: White < 80.0% Yellow < 60.0%

**Notes**

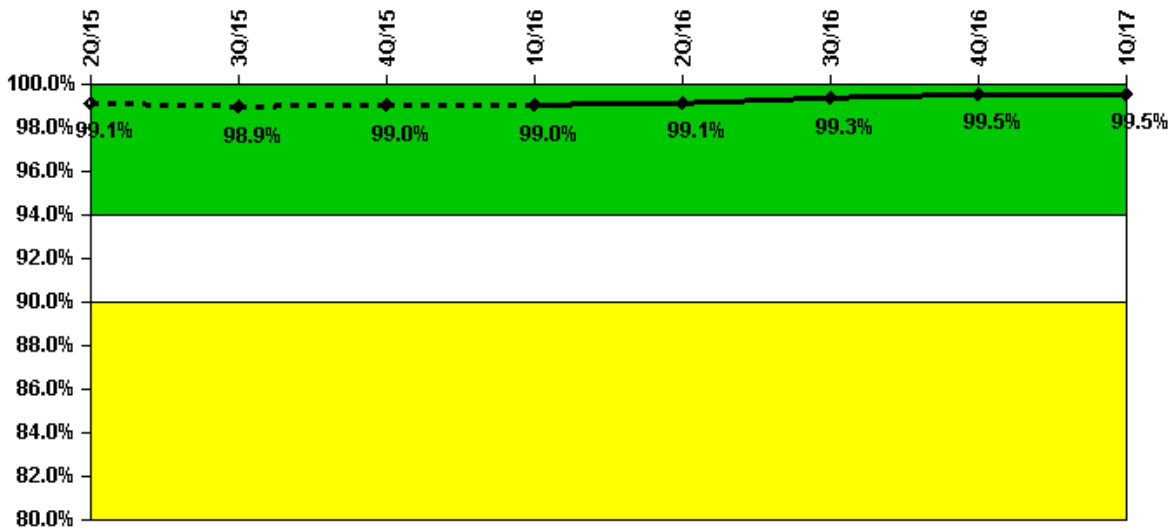
ERO Drill Participation	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17
Participating Key personnel	77.0	83.0	80.0	74.0	77.0	77.0	78.0	78.0
Total Key personnel	77.0	83.0	80.0	74.0	77.0	77.0	78.0	78.0

**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**

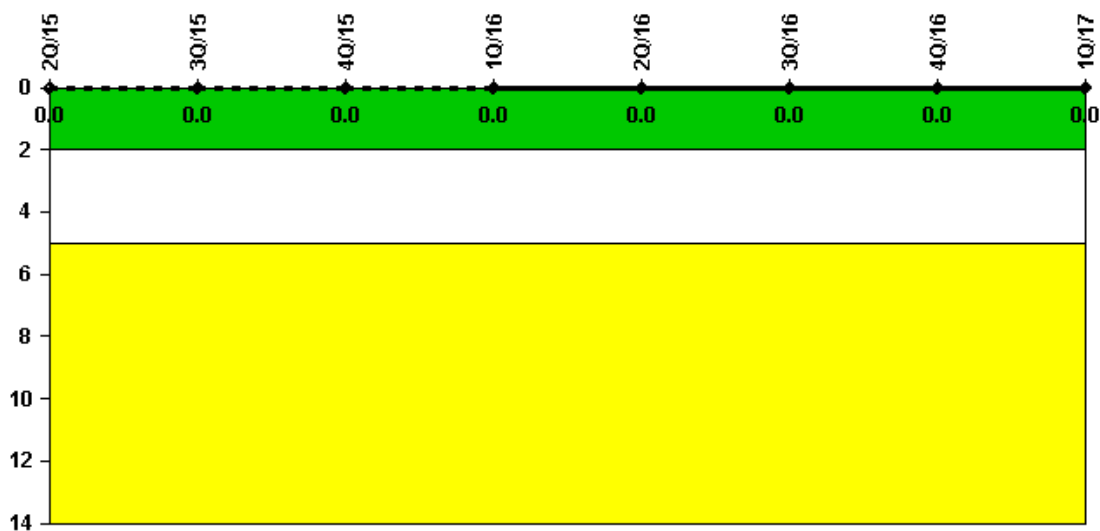
Alert & Notification System	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17
Successful siren-tests	335	335	449	336	336	337	452	337
Total sirens-tests	339	339	452	339	339	339	452	339

**Indicator value**                    99.1% 98.9% 99.0% 99.0% 99.1% 99.3% 99.5% 99.5%

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Licensee Comments: none

### Occupational Exposure Control Effectiveness



Thresholds: White > 2.0 Yellow > 5.0

**Notes**

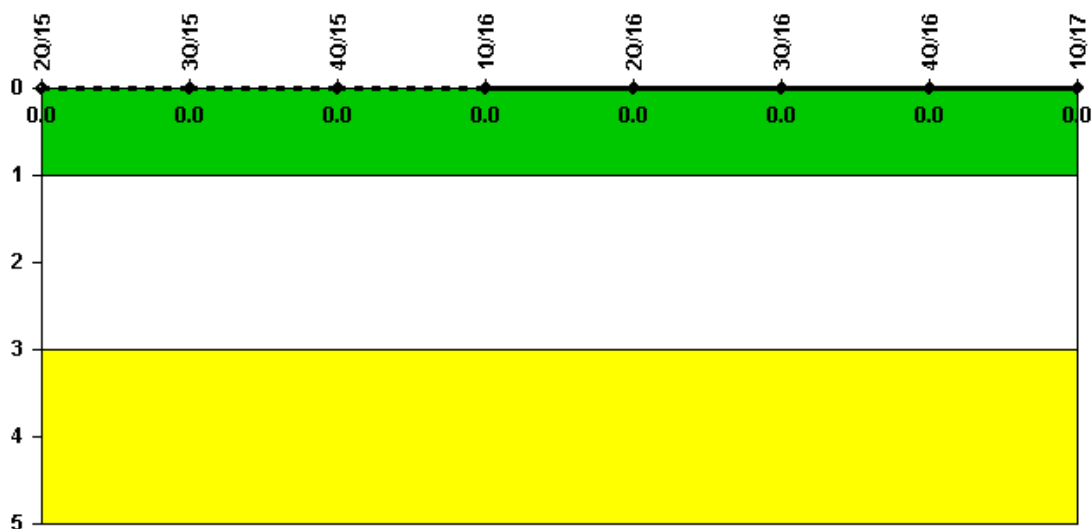
**Occupational Exposure Control Effectiveness** 2Q/15 3Q/15 4Q/15 1Q/16 2Q/16 3Q/16 4Q/16 1Q/17

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 2Q/15 3Q/15 4Q/15 1Q/16 2Q/16 3Q/16 4Q/16 1Q/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: May 5, 2017

Page Last Reviewed/Updated Wednesday, June 07, 2017