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## **Summer – Quarterly Performance Indicators**

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

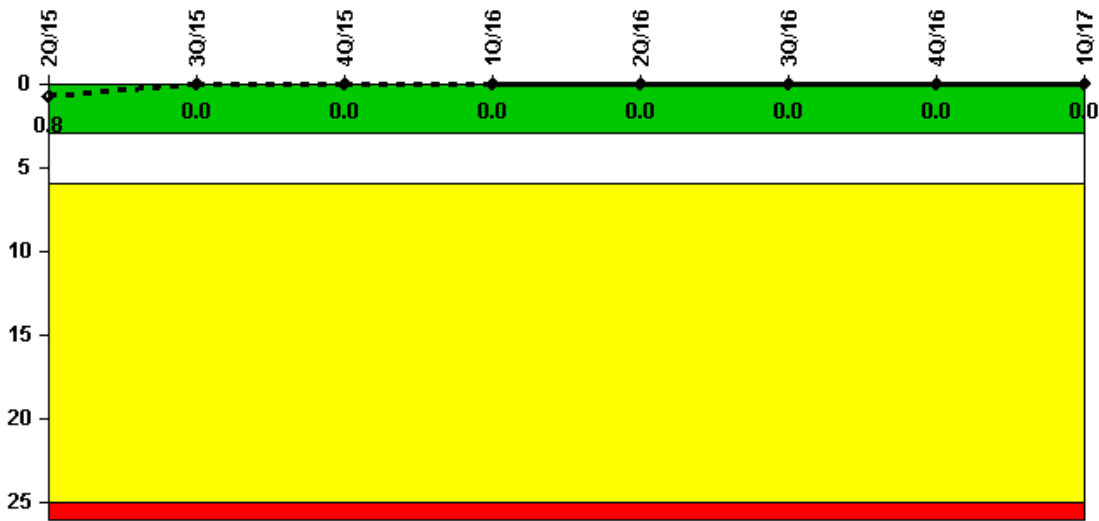
The solid trend line represents the current reporting period.

Licensee's General Comments: The plant operated at full power for the first quarter 2017

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)
- Residual Heat Removal Systems (MS09)
- Cooling Water Systems (MS10)
- Reactor Coolant System Activity (BI01)
- Reactor Coolant System Leakage (BI02)
- Drill/Exercise Performance (EP01)
- Emergency Response Organization Drill Participation (EP02)
- Alert and Notification System Reliability (EP03)
- 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

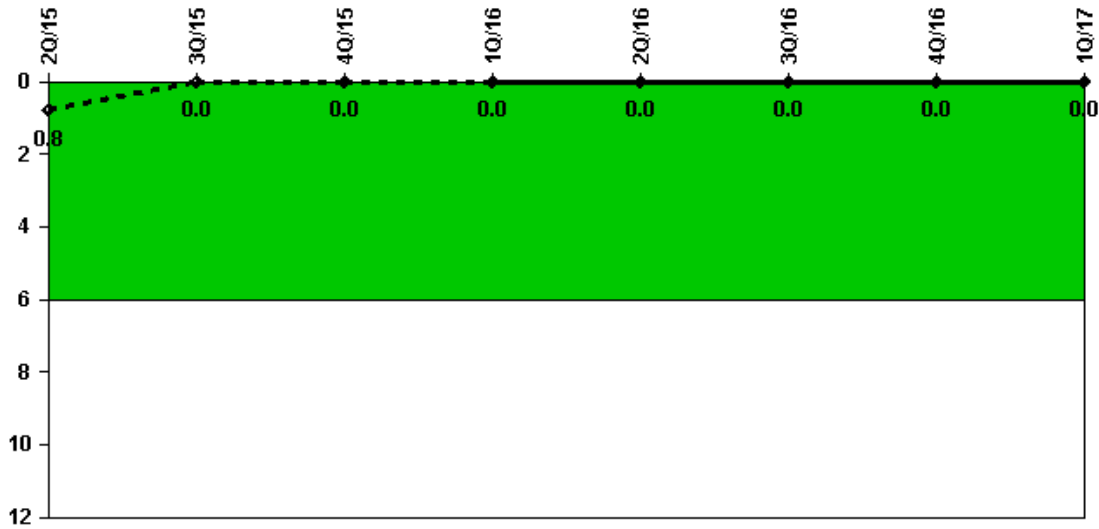
Unplanned Scrams per 7000 Critical Hrs	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17
Unplanned scrams	0	0	0	0	0	0	0	0
Critical hours	2184.0	2208.0	786.4	2183.0	2184.0	2208.0	2209.0	2159.0

Indicator value	0.8	0	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**

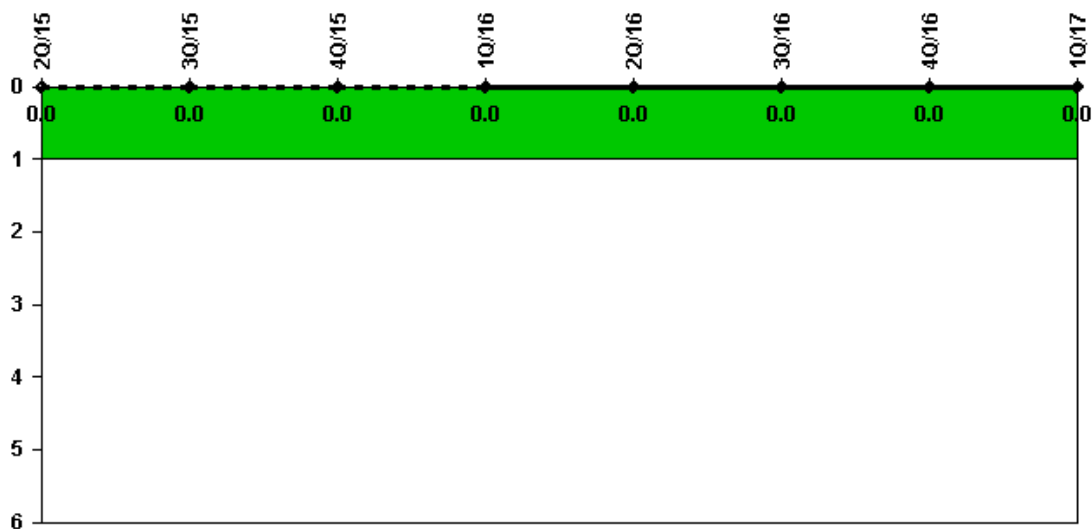
Unplanned Power Changes per 7000 Critical Hrs	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17
Unplanned power changes	0	0	0	0	0	0	0	0
Critical hours	2184.0	2208.0	786.4	2183.0	2184.0	2208.0	2209.0	2159.0

**Indicator value** 0.8 0 0 0 0 0 0 0

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Licensee Comments: none

**Unplanned Scrams with Complications**



Thresholds: White > 1.0

**Notes**

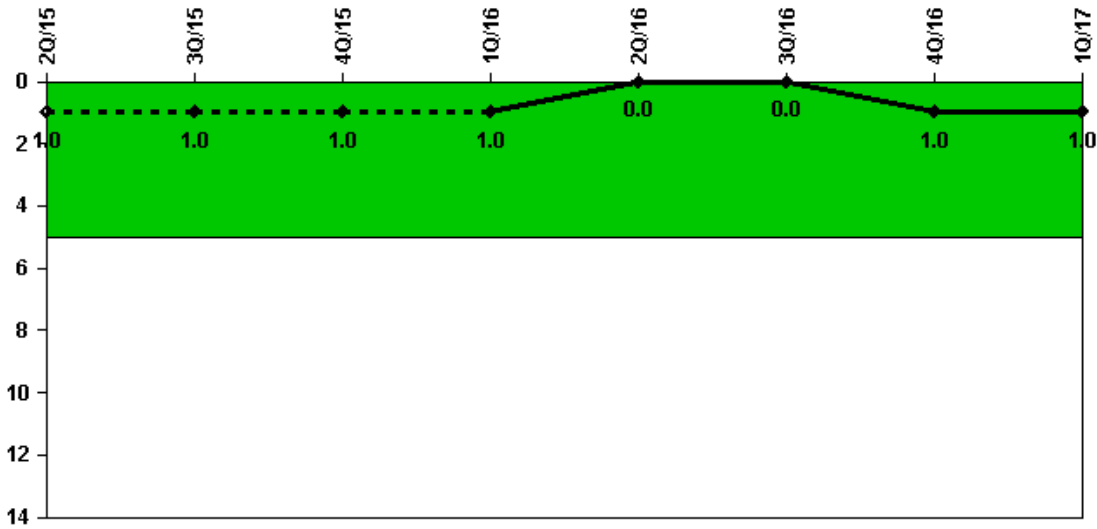
Unplanned Scrams with Complications	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17
Scrams with complications	0	0	0	0	0	0	0	0

**Indicator value** 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

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Licensee Comments: none

### Safety System Functional Failures (PWR)



Thresholds: White > 5.0

**Notes**

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

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

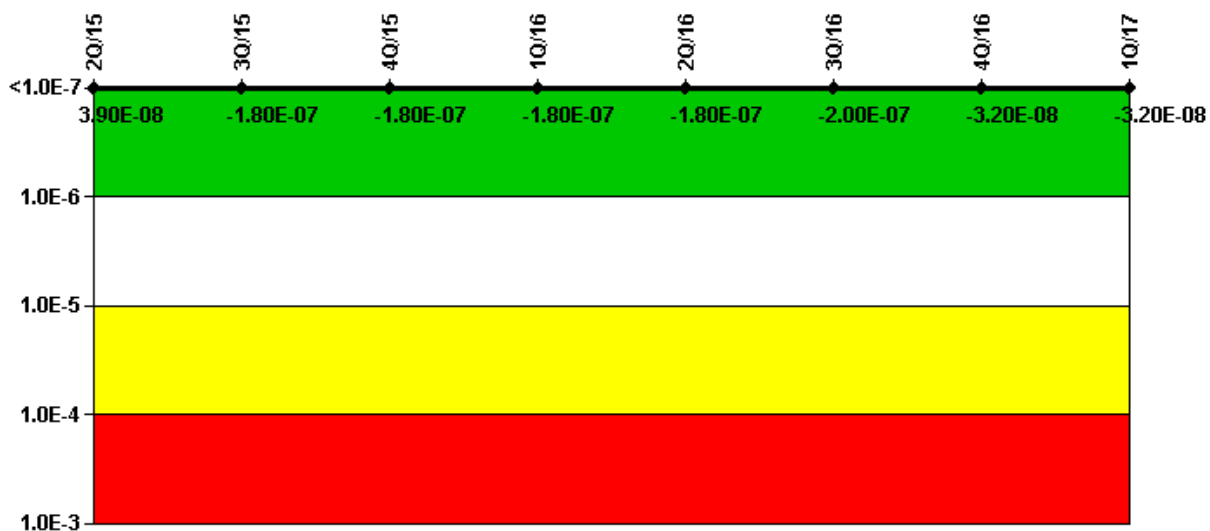
Indicator value 1 1 1 1 0 0 1 1

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Licensee Comments:

4Q/16: LER 2016-003, Steam Propagation Door Discovered Propped Open.

### 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)	4.30E-08	-2.14E-09	-2.03E-09	-2.22E-09	6.67E-10	-1.75E-08	-2.76E-09	-2.76E-09
URI (ΔCDF)	-4.44E-09	-1.78E-07	-1.78E-07	-1.78E-07	-1.78E-07	-1.78E-07	-2.93E-08	-2.93E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
<b>Indicator value</b>	<b>3.90E-08</b>	<b>-1.80E-07</b>	<b>-1.80E-07</b>	<b>-1.80E-07</b>	<b>-1.80E-07</b>	<b>-2.00E-07</b>	<b>-3.20E-08</b>	<b>-3.20E-08</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**

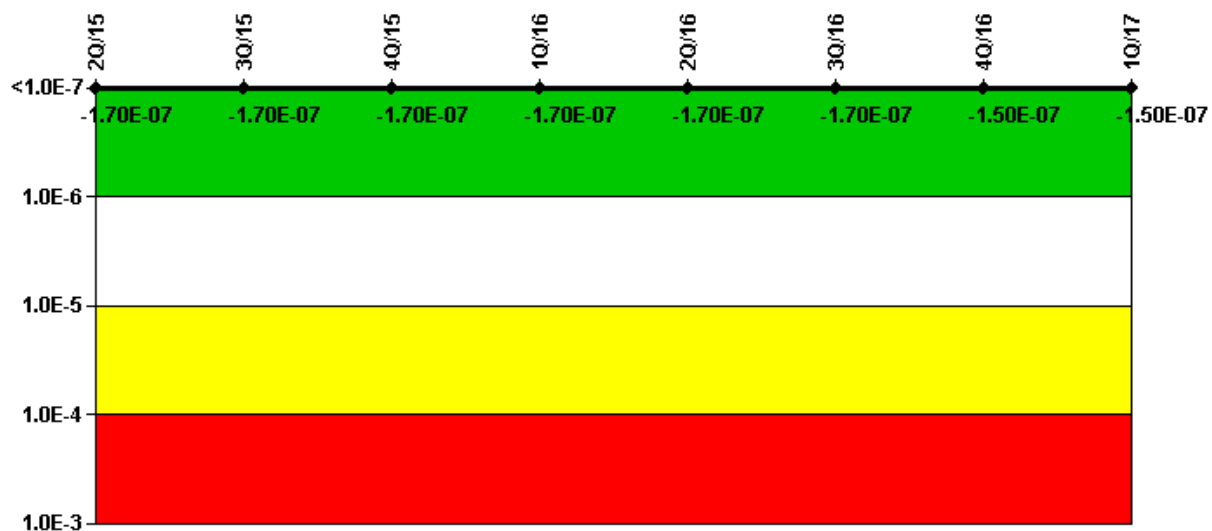
**Mitigating Systems Performance Index, High Pressure Injection System**

	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17
UAI (ΔCDF)	-2.41E-09	-2.41E-09	-2.41E-09	-2.41E-09	-2.41E-09	-2.41E-09	-1.38E-09	-1.38E-09
URI (ΔCDF)	-1.43E-08	-1.43E-08	-1.43E-08	-1.43E-08	-1.43E-08	-1.43E-08	-5.97E-09	-5.97E-09
PLE	NO	NO	NO	NO	NO	NO	NO	NO
<b>Indicator value</b>	<b>-1.70E-08</b>	<b>-1.70E-08</b>	<b>-1.70E-08</b>	<b>-1.70E-08</b>	<b>-1.70E-08</b>	<b>-1.70E-08</b>	<b>-7.30E-09</b>	<b>-7.30E-09</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**

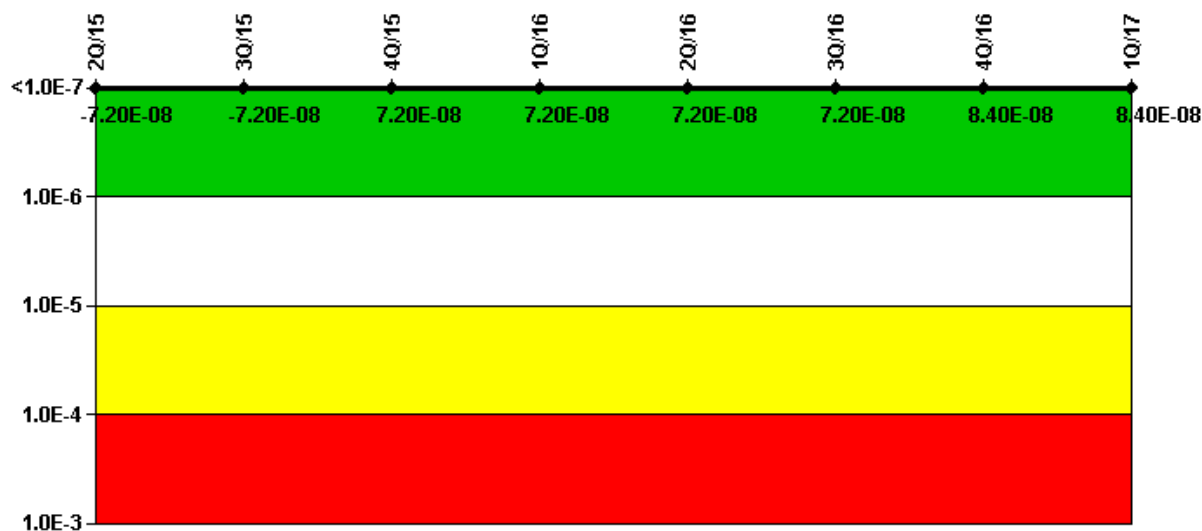
**Mitigating Systems Performance Index, Heat Removal System**

	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17
UAI ( $\Delta$ CDF)	-1.65E-08	-1.55E-08	-1.79E-08	-1.77E-08	-1.84E-08	-1.85E-08	-1.64E-08	-1.64E-08
URI ( $\Delta$ CDF)	-1.56E-07	-1.56E-07	-1.56E-07	-1.56E-07	-1.56E-07	-1.56E-07	-1.30E-07	-1.30E-07
PLE	NO	NO	NO	NO	NO	NO	NO	NO
<b>Indicator value</b>	<b>-1.70E-07</b>	<b>-1.70E-07</b>	<b>-1.70E-07</b>	<b>-1.70E-07</b>	<b>-1.70E-07</b>	<b>-1.70E-07</b>	<b>-1.50E-07</b>	<b>-1.50E-07</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**

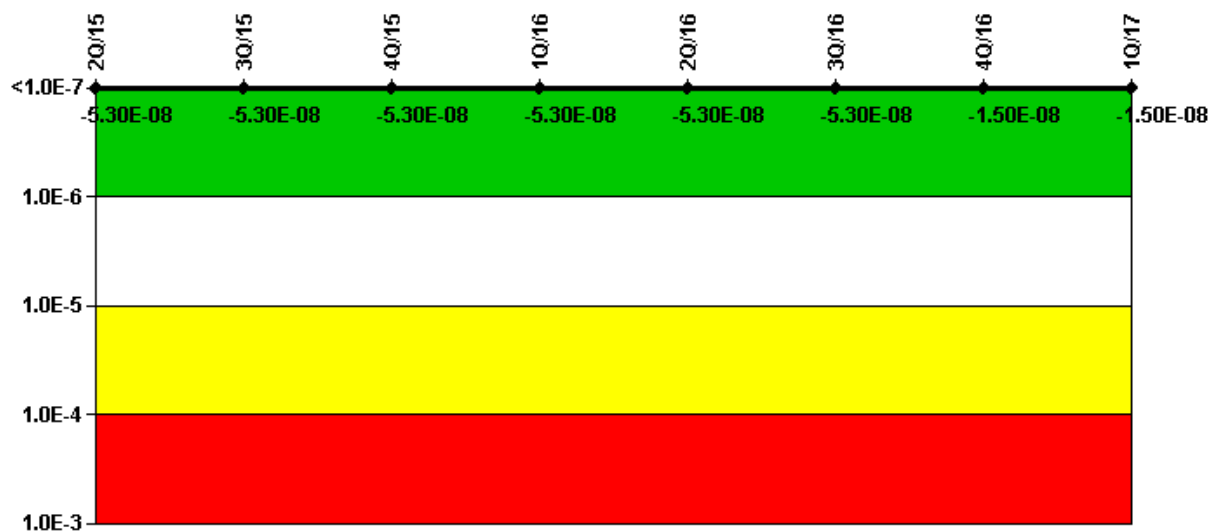
	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17
UAI ( $\Delta$ CDF)	-7.82E-09	-7.82E-09	-7.82E-09	-7.82E-09	-7.82E-09	-7.82E-09	-5.63E-09	-5.63E-09
URI ( $\Delta$ CDF)	-6.37E-08	-6.37E-08	7.95E-08	7.95E-08	7.95E-08	7.95E-08	9.01E-08	9.01E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
<b>Indicator value</b>	<b>-7.20E-08</b>	<b>-7.20E-08</b>	<b>7.20E-08</b>	<b>7.20E-08</b>	<b>7.20E-08</b>	<b>7.20E-08</b>	<b>8.40E-08</b>	<b>8.40E-08</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**

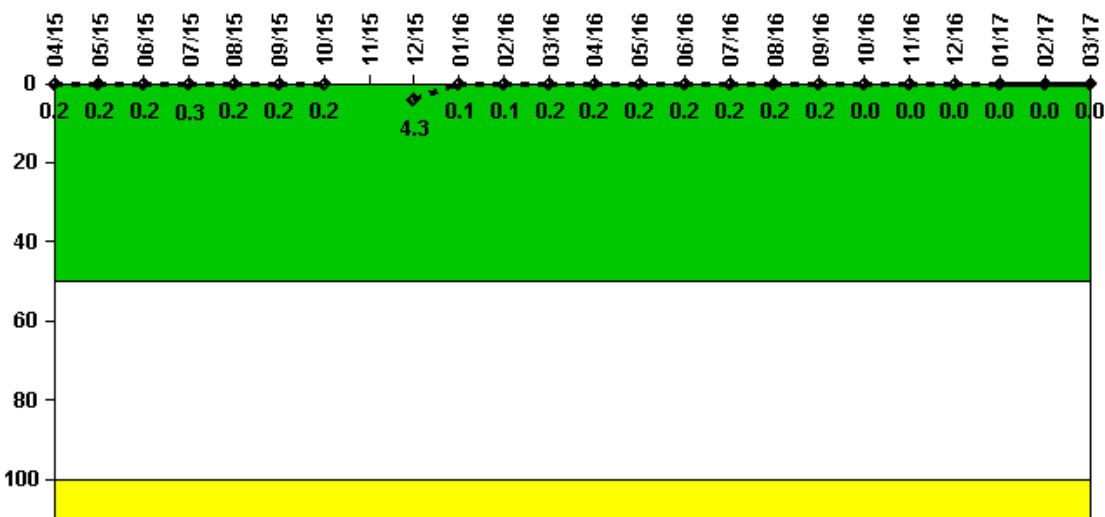
**Mitigating Systems Performance Index, Cooling Water Systems**

	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17
UAI (ΔCDF)	-6.95E-09	-6.95E-09	-6.95E-09	-6.95E-09	-6.95E-09	-6.95E-09	-2.34E-09	-2.34E-09
URI (ΔCDF)	-4.57E-08	-4.57E-08	-4.57E-08	-4.57E-08	-4.57E-08	-4.57E-08	-1.28E-08	-1.28E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
<b>Indicator value</b>	<b>-5.30E-08</b>	<b>-5.30E-08</b>	<b>-5.30E-08</b>	<b>-5.30E-08</b>	<b>-5.30E-08</b>	<b>-5.30E-08</b>	<b>-1.50E-08</b>	<b>-1.50E-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**

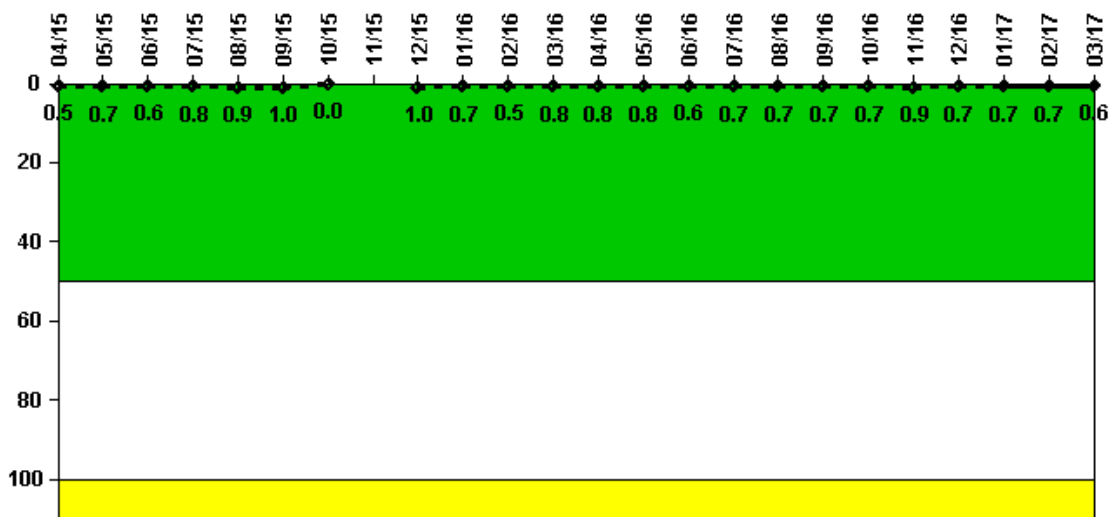
	4/15	5/15	6/15	7/15	8/15	9/15	10/15	11/15	12/15	1/16	2/16	3/16
Maximum activity	0.000110	0.000109	0.000113	0.000164	0.000122	0.000130	0.000104	N/A	0.002512	0.000083	0.000082	0.000147
Technical specification limit	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
<b>Indicator value</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.3</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>N/A</b>	<b>4.3</b>	<b>0.1</b>	<b>0.1</b>	<b>0.2</b>

	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	0.000092	0.000089	0.000091	0.000103	0.000101	0.000102	0.000105	0.000106	0.000102	0.000102	0.000109	0.000114
Technical specification limit	0.1	0.1	0.1	0.1	0.1	0.1	1.0	1.0	1.0	1.0	1.0	1.0
<b>Indicator value</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</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	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	0.050	0.070	0.060	0.080	0.090	0.100	0	N/A	0.100	0.070	0.050	0.080
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

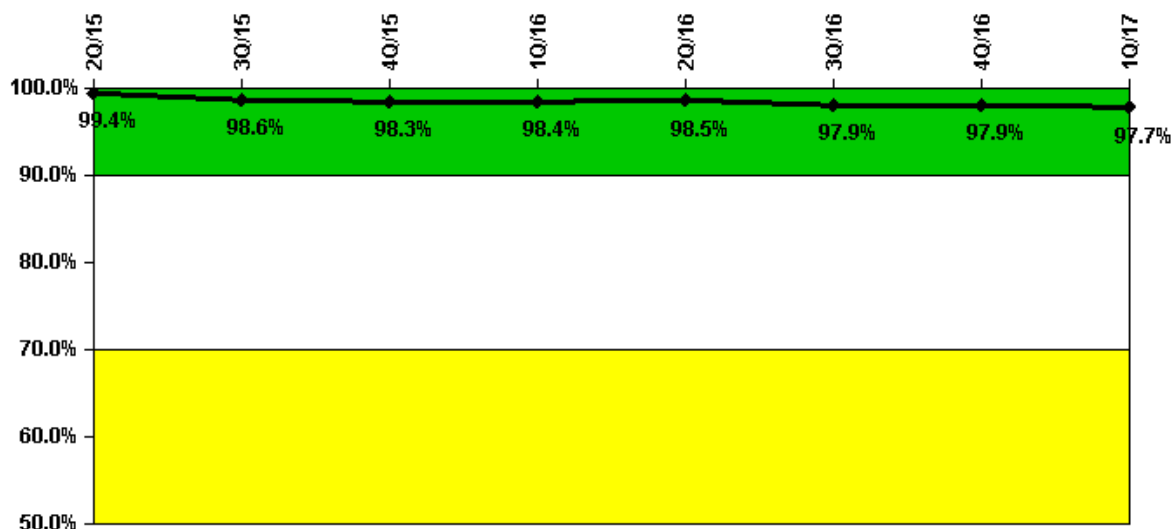
Indicator value	0.5	0.7	0.6	0.8	0.9	1.0	0	N/A	1.0	0.7	0.5	0.8
Reactor Coolant System Leakage	4/16	5/16	6/16	7/16	8/16	9/16	10/16	11/16	12/16	1/17	2/17	3/17
Maximum leakage	0.080	0.080	0.060	0.070	0.070	0.070	0.070	0.090	0.070	0.070	0.070	0.060
Technical specification limit	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0

Indicator value	0.8	0.8	0.6	0.7	0.7	0.7	0.7	0.9	0.7	0.7	0.7	0.6
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Licensee Comments: none

**Drill/Exercise Performance**



Thresholds: White < 90.0% Yellow < 70.0%

**Notes**

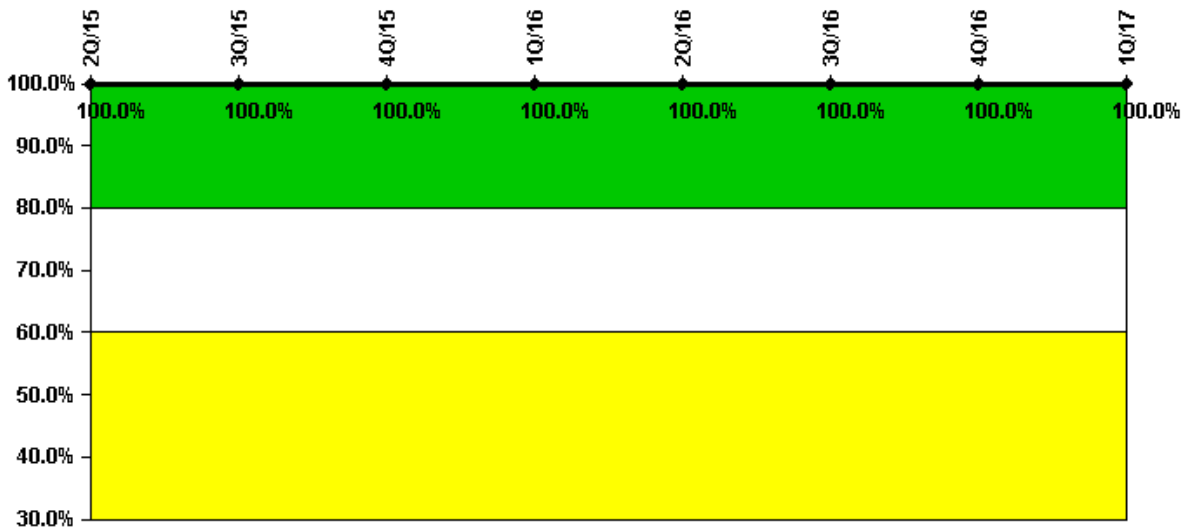
Drill/Exercise Performance	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17
Successful opportunities	20.0	69.0	0	43.0	30.0	82.0	39.0	58.0
Total opportunities	20.0	73.0	0	43.0	30.0	84.0	40.0	59.0

**Indicator value**                    99.4% 98.6% 98.3% 98.4% 98.5% 97.9% 97.9% 97.7%

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Licensee Comments: none

**ERO Drill Participation**



Thresholds: White < 80.0% Yellow < 60.0%

**Notes**

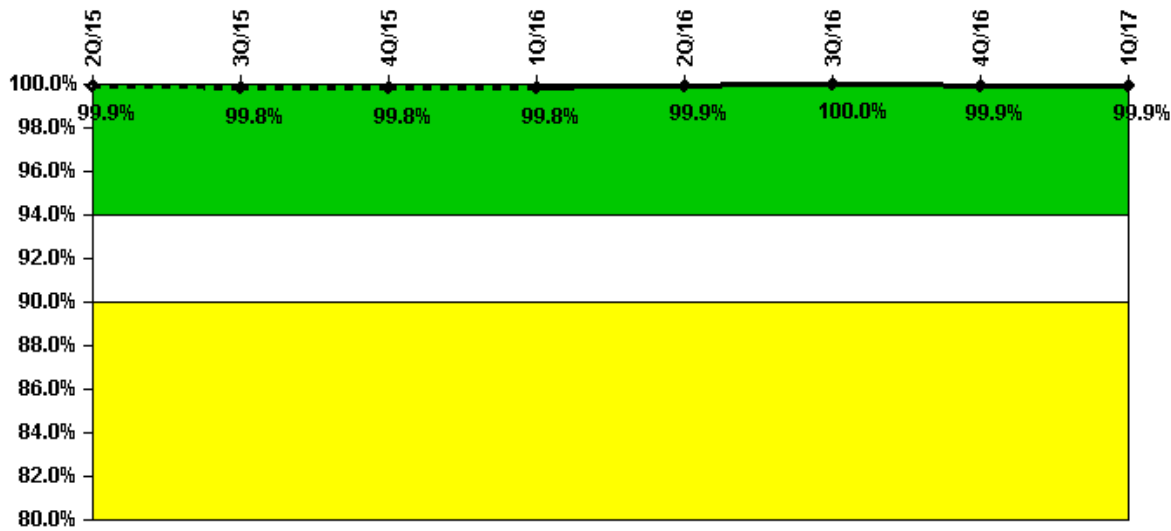
ERO Drill Participation	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17
Participating Key personnel	80.0	82.0	83.0	85.0	93.0	94.0	94.0	102.0
Total Key personnel	80.0	82.0	83.0	85.0	93.0	94.0	94.0	102.0

**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**

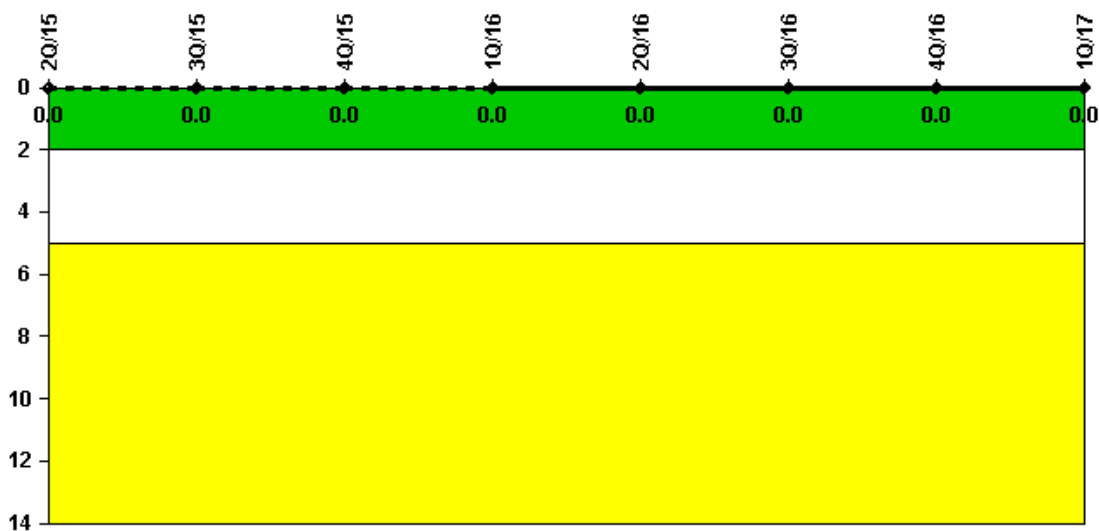
Alert & Notification System	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17
Successful siren-tests	740	845	862	763	872	763	761	762
Total sirens-tests	742	848	863	763	872	763	763	763

**Indicator value**                    99.9% 99.8% 99.8% 99.8% 99.9% 100.0% 99.9% 99.9%

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Licensee Comments: none

### Occupational Exposure Control Effectiveness



Thresholds: White > 2.0 Yellow > 5.0

#### Notes

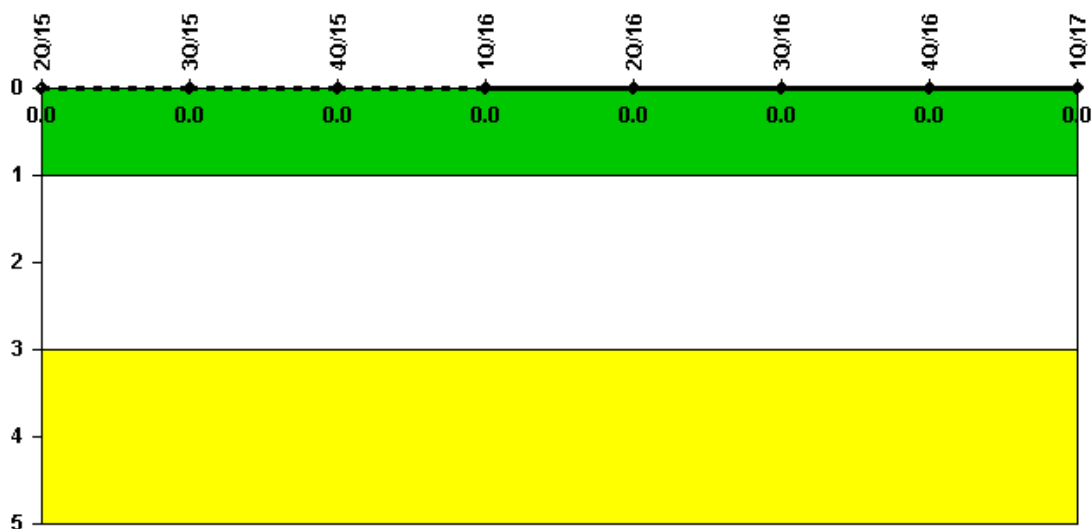
#### Occupational Exposure Control Effectiveness 2Q/15 3Q/15 4Q/15 1Q/16 2Q/16 3Q/16 4Q/16 1Q/17

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