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## **Sequoyah 1 – Quarterly Performance Indicators**

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

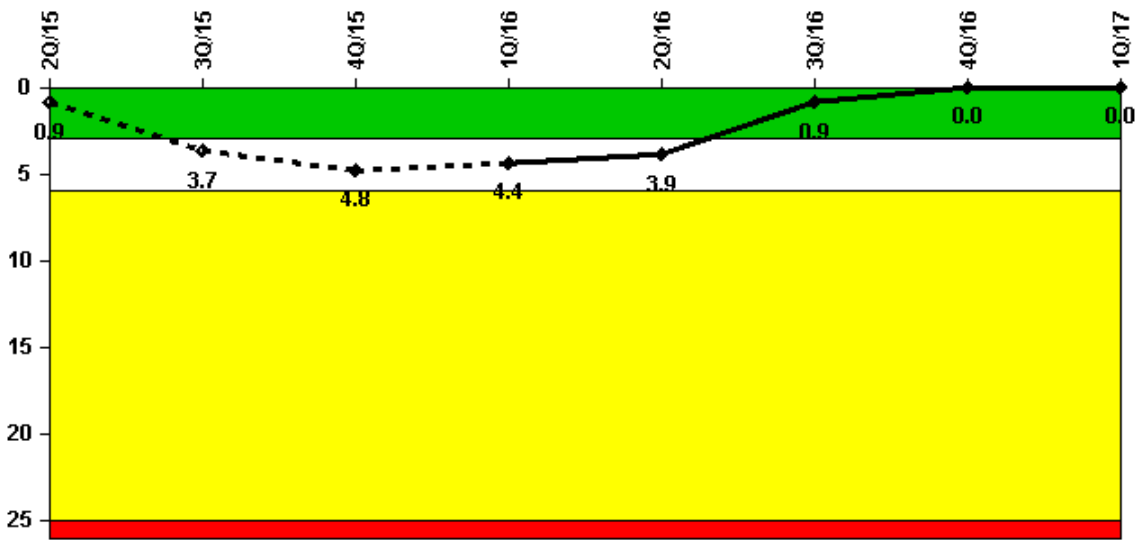
The solid trend line represents the current reporting period.

Licensee's General Comments: none

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- Unplanned Scrams (IE01)
- 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)
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- Cooling Water Systems (MS10)
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### Unplanned Scrams per 7000 Critical Hrs



Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

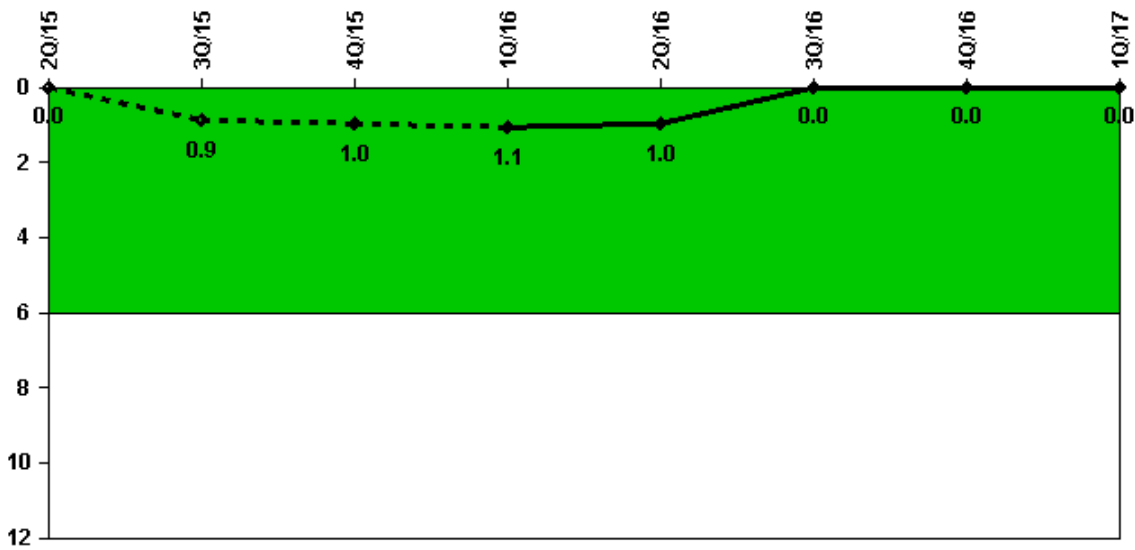
**Notes**

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	3.0	1.0	0	0	0	0	0
Critical hours	1357.5	1821.5	2041.5	1121.2	2184.0	2208.0	1345.4	2159.0
<b>Indicator value</b>	<b>0.9</b>	<b>3.7</b>	<b>4.8</b>	<b>4.4</b>	<b>3.9</b>	<b>0.9</b>	<b>0</b>	<b>0</b>

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Licensee Comments: none

### Unplanned Power Changes per 7000 Critical Hrs



Thresholds: White > 6.0

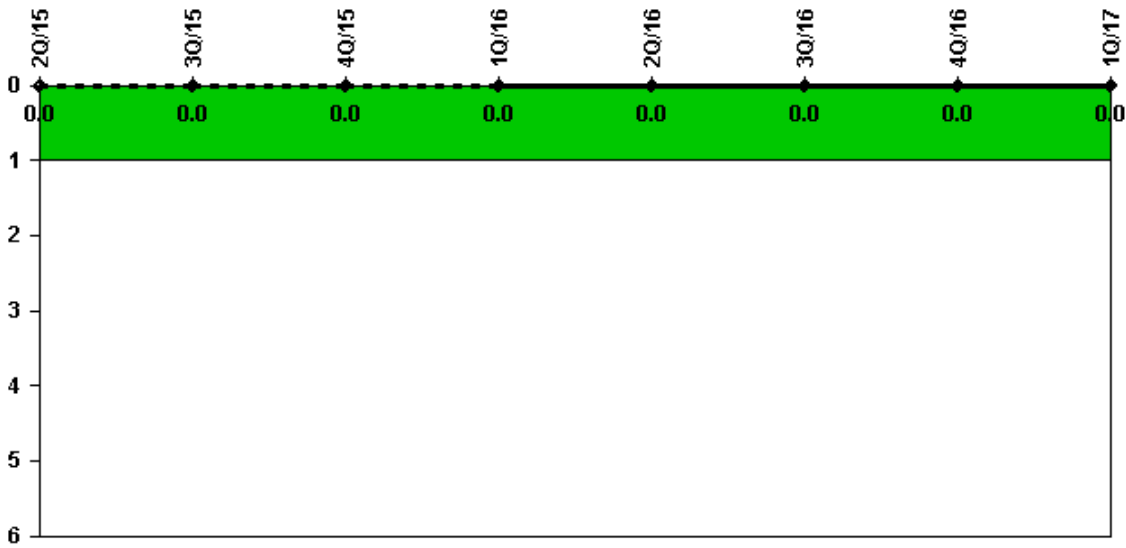
#### Notes

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	1.0	0	0	0	0	0	0
Critical hours	1357.5	1821.5	2041.5	1121.2	2184.0	2208.0	1345.4	2159.0
<b>Indicator value</b>	<b>0</b>	<b>0.9</b>	<b>1.0</b>	<b>1.1</b>	<b>1.0</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

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

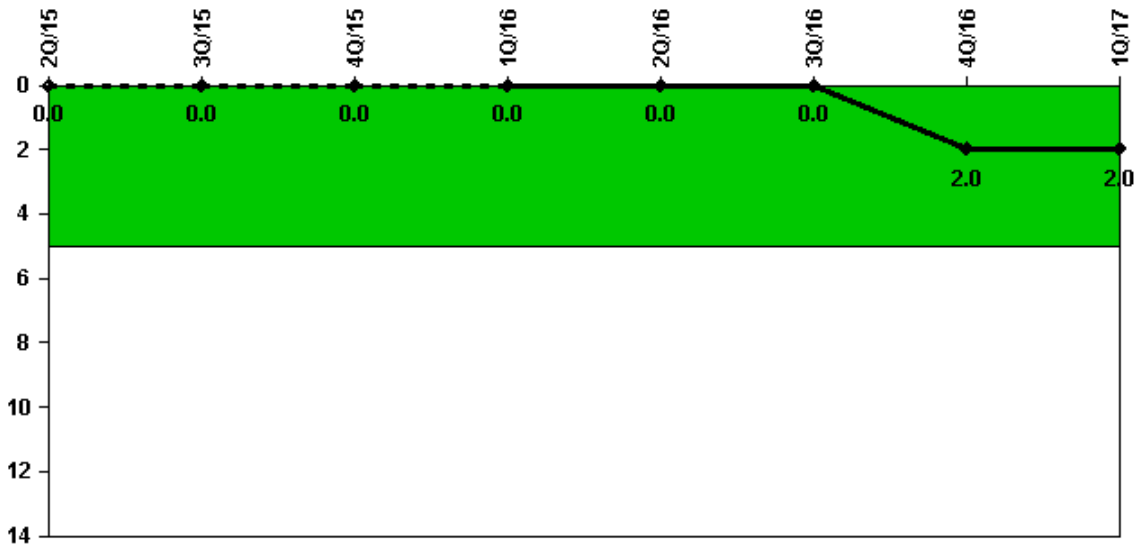
Scrams with complications 0 0 0 0 0 0 0 0

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 0 0 0 0 0 0 0 2 0

Indicator value 0 0 0 0 0 0 0 2 2

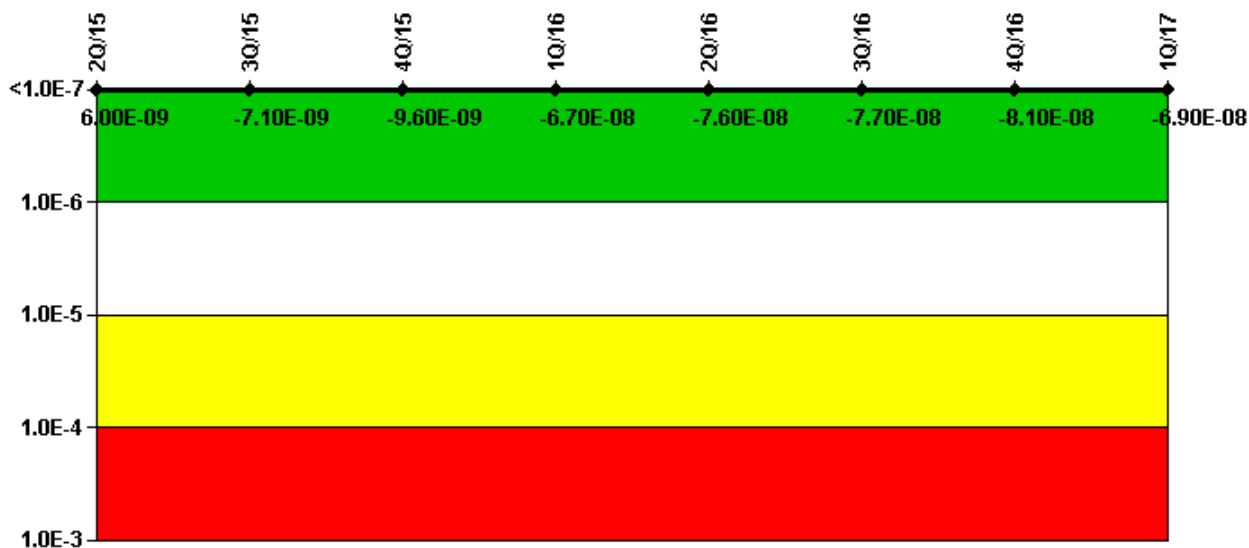
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Licensee Comments:

4Q/16: LER 327/2016-007 Unanalyzed Condition Due to Emergency Gas Treatment System not Meeting Single Failure Criteria.

LER 327/2016-008 Closed Fire Damper Renders Both Trains of the Control Room Emergency Ventilation System Inoperable

### 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)	1.86E-08	1.35E-08	1.17E-08	5.91E-09	-1.63E-09	-4.40E-09	-3.95E-09	7.46E-09
URI (ΔCDF)	-1.26E-08	-2.06E-08	-2.13E-08	-7.28E-08	-7.41E-08	-7.25E-08	-7.67E-08	-7.64E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	6.00E-09	-7.10E-09	-9.60E-09	-6.70E-08	-7.60E-08	-7.70E-08	-8.10E-08	-6.90E-08

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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

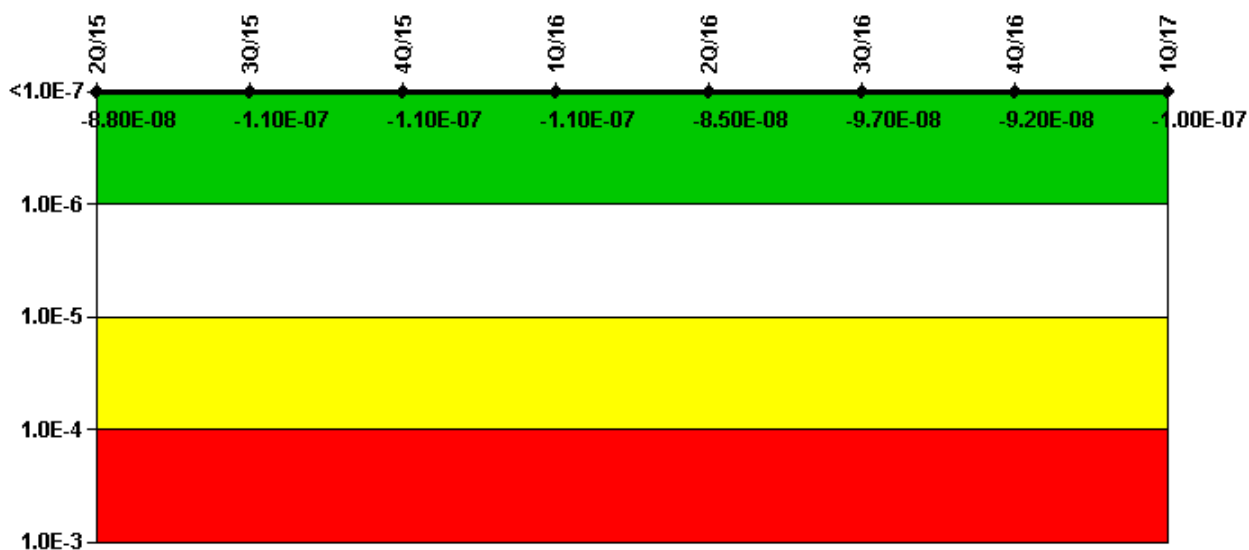
#### Mitigating Systems Performance Index, High Pressure Injection System

	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17
UAI ( $\Delta$ CDF)	3.21E-08	3.24E-08	4.05E-08	3.63E-08	3.14E-08	3.28E-08	2.92E-08	2.86E-08
URI ( $\Delta$ CDF)	7.22E-09	7.22E-09	1.67E-08	1.66E-08	1.66E-08	1.66E-08	1.66E-08	1.66E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
<b>Indicator value</b>	<b>3.90E-08</b>	<b>4.00E-08</b>	<b>5.70E-08</b>	<b>5.30E-08</b>	<b>4.80E-08</b>	<b>4.90E-08</b>	<b>4.60E-08</b>	<b>4.50E-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**

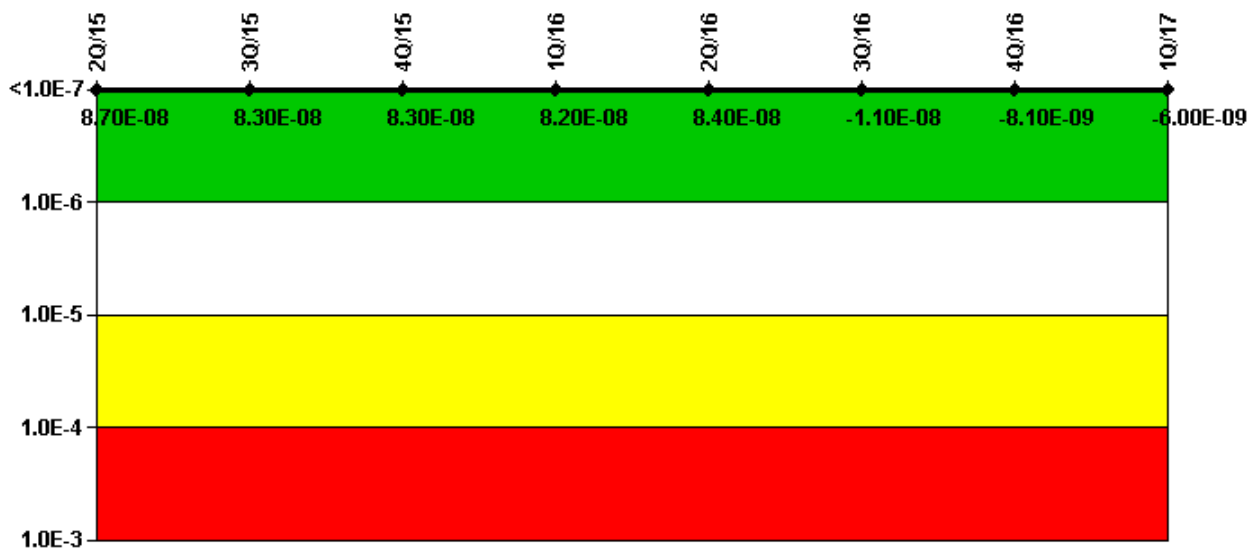
	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17
UAI ( $\Delta$ CDF)	4.45E-09	-1.07E-08	-1.13E-08	-5.57E-09	1.64E-08	4.68E-09	1.03E-08	2.99E-09
URI ( $\Delta$ CDF)	-9.20E-08	-9.95E-08	-1.01E-07	-1.02E-07	-1.02E-07	-1.02E-07	-1.03E-07	-1.03E-07
PLE	NO	NO	NO	NO	NO	NO	NO	NO
<b>Indicator value</b>	<b>-8.80E-08</b>	<b>-1.10E-07</b>	<b>-1.10E-07</b>	<b>-1.10E-07</b>	<b>-8.50E-08</b>	<b>-9.70E-08</b>	<b>-9.20E-08</b>	<b>-1.00E-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**

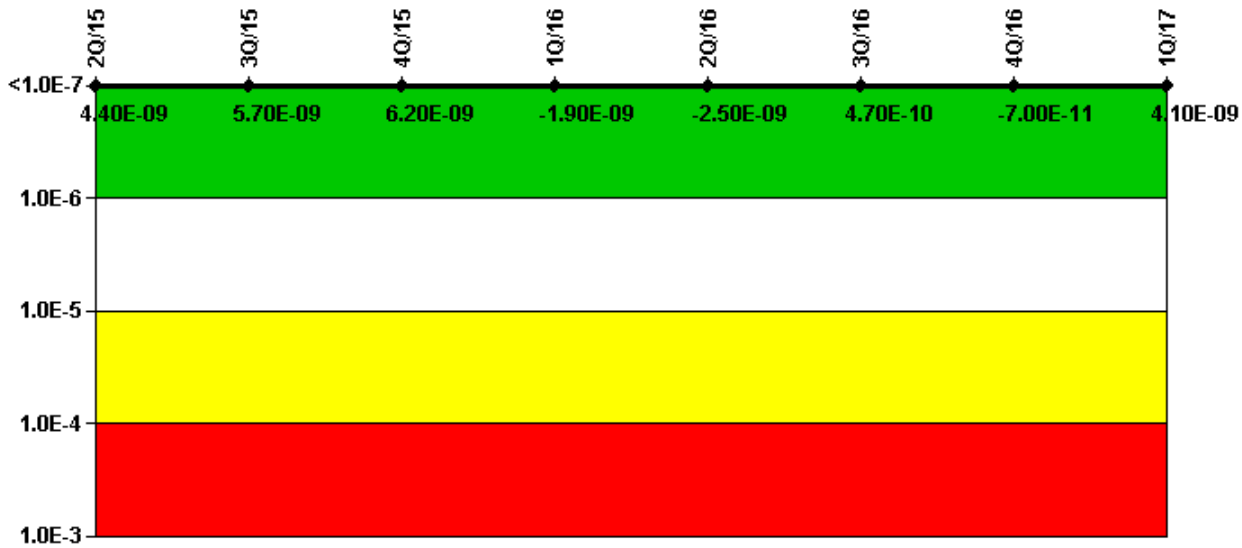
**Mitigating Systems Performance Index, Residual Heat Removal System**

	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17
UAI ( $\Delta$ CDF)	2.12E-08	1.85E-08	1.82E-08	1.78E-08	1.91E-08	1.17E-08	1.47E-08	1.69E-08
URI ( $\Delta$ CDF)	6.61E-08	6.48E-08	6.48E-08	6.45E-08	6.45E-08	-2.28E-08	-2.28E-08	-2.28E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
<b>Indicator value</b>	<b>8.70E-08</b>	<b>8.30E-08</b>	<b>8.30E-08</b>	<b>8.20E-08</b>	<b>8.40E-08</b>	<b>-1.10E-08</b>	<b>-8.10E-09</b>	<b>-6.00E-09</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**

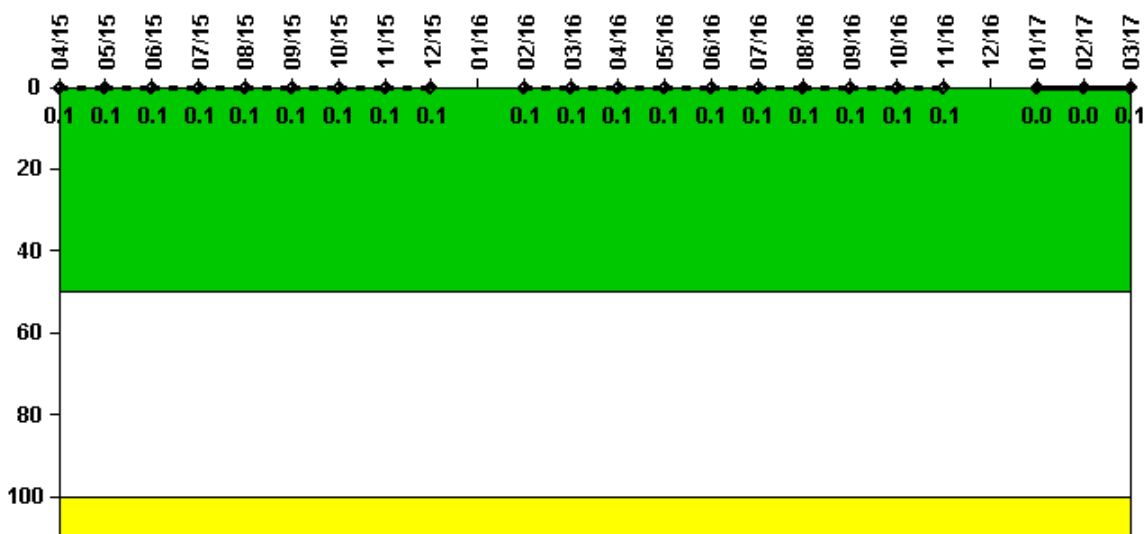
**Mitigating Systems Performance Index, Cooling Water Systems**

	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17
UAI ( $\Delta$ CDF)	1.21E-08	1.34E-08	1.39E-08	5.76E-09	5.23E-09	8.15E-09	7.61E-09	1.18E-08
URI ( $\Delta$ CDF)	-7.68E-09	-7.68E-09	-7.68E-09	-7.68E-09	-7.68E-09	-7.68E-09	-7.68E-09	-7.68E-09
PLE	NO	NO	NO	NO	NO	NO	NO	NO
<b>Indicator value</b>	<b>4.40E-09</b>	<b>5.70E-09</b>	<b>6.20E-09</b>	<b>-1.90E-09</b>	<b>-2.50E-09</b>	<b>4.70E-10</b>	<b>-7.00E-11</b>	<b>4.10E-09</b>

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Licensee Comments: none

### Reactor Coolant System Activity



Thresholds: White > 50.0 Yellow > 100.0

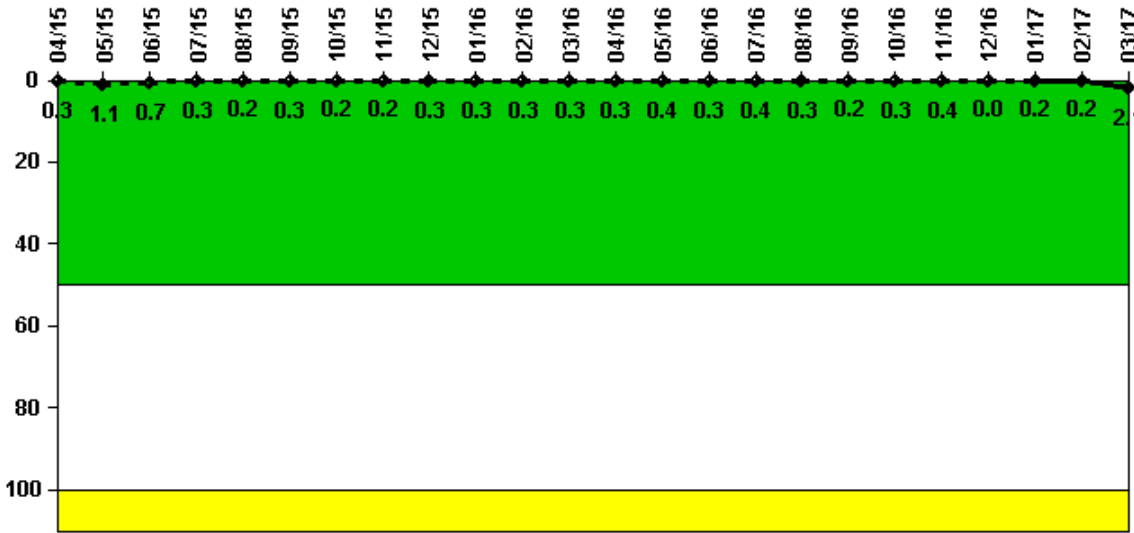
#### Notes

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	0.000331	0.000181	0.000193	0.000189	0.000221	0.000229	0.000241	0.000263	0.000267	N/A	0.000319	0.000321
Technical specification limit	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
<b>Indicator value</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>N/A</b>	<b>0.1</b>	<b>0.1</b>
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	0.000380	0.000351	0.000400	0.000423	0.000395	0.000372	0.000412	0.000438	N/A	0.000155	0.000170	0.000212
Technical specification limit	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
<b>Indicator value</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>N/A</b>	<b>0</b>	<b>0</b>	<b>0.1</b>

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Licensee Comments: none

### Reactor Coolant System Leakage



Thresholds: White > 50.0 Yellow > 100.0

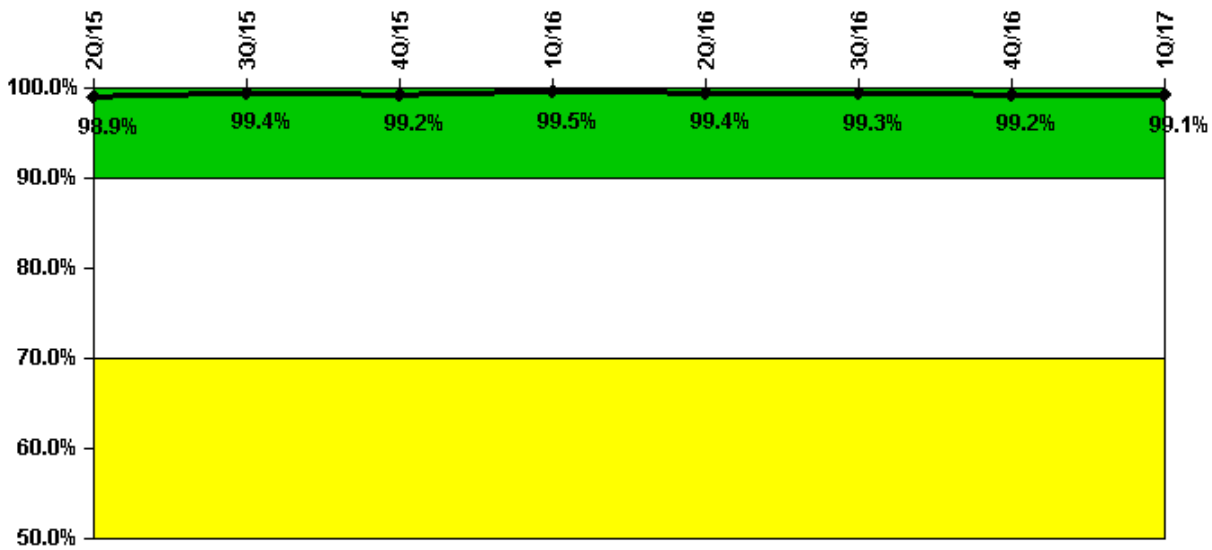
**Notes**

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	0.030	0.110	0.070	0.030	0.020	0.030	0.020	0.020	0.030	0.030	0.030	0.030
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
<b>Indicator value</b>	<b>0.3</b>	<b>1.1</b>	<b>0.7</b>	<b>0.3</b>	<b>0.2</b>	<b>0.3</b>	<b>0.2</b>	<b>0.2</b>	<b>0.3</b>	<b>0.3</b>	<b>0.3</b>	<b>0.3</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	0.030	0.040	0.030	0.040	0.030	0.020	0.030	0.040	0	0.020	0.020	0.210
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
<b>Indicator value</b>	<b>0.3</b>	<b>0.4</b>	<b>0.3</b>	<b>0.4</b>	<b>0.3</b>	<b>0.2</b>	<b>0.3</b>	<b>0.4</b>	<b>0</b>	<b>0.2</b>	<b>0.2</b>	<b>2.1</b>

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Licensee Comments: none

### Drill/Exercise Performance



Thresholds: White < 90.0% Yellow < 70.0%

#### Notes

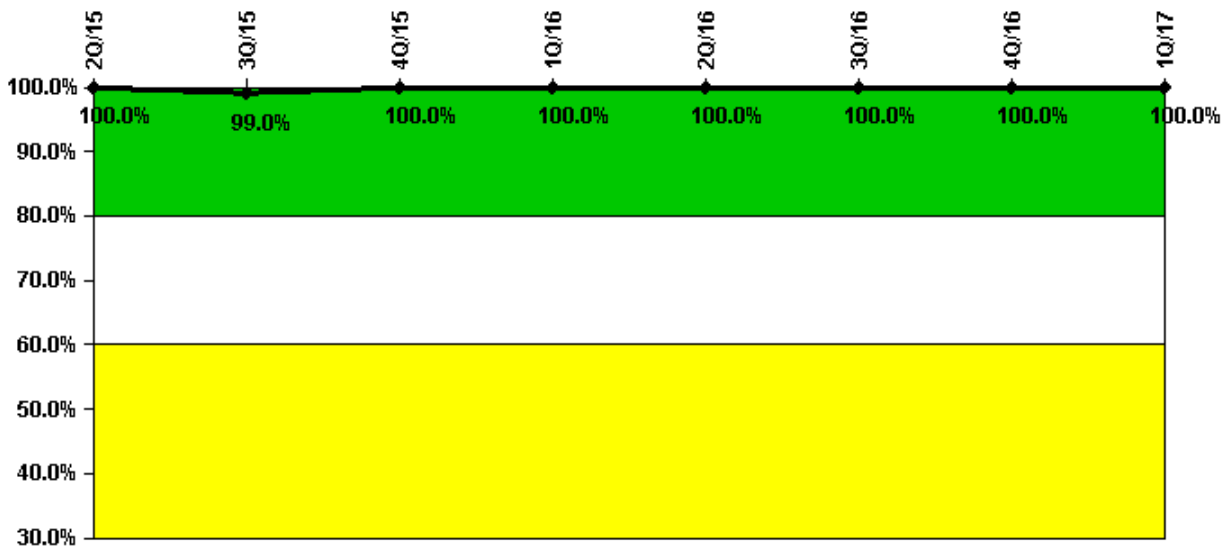
Drill/Exercise Performance	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17
Successful opportunities	10.0	58.0	63.0	84.0	74.0	107.0	20.0	28.0
Total opportunities	10.0	58.0	64.0	84.0	75.0	108.0	21.0	28.0

Indicator value                    98.9% 99.4% 99.2% 99.5% 99.4% 99.3% 99.2% 99.1%

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Licensee Comments: none

### ERO Drill Participation



Thresholds: White < 80.0% Yellow < 60.0%

#### Notes

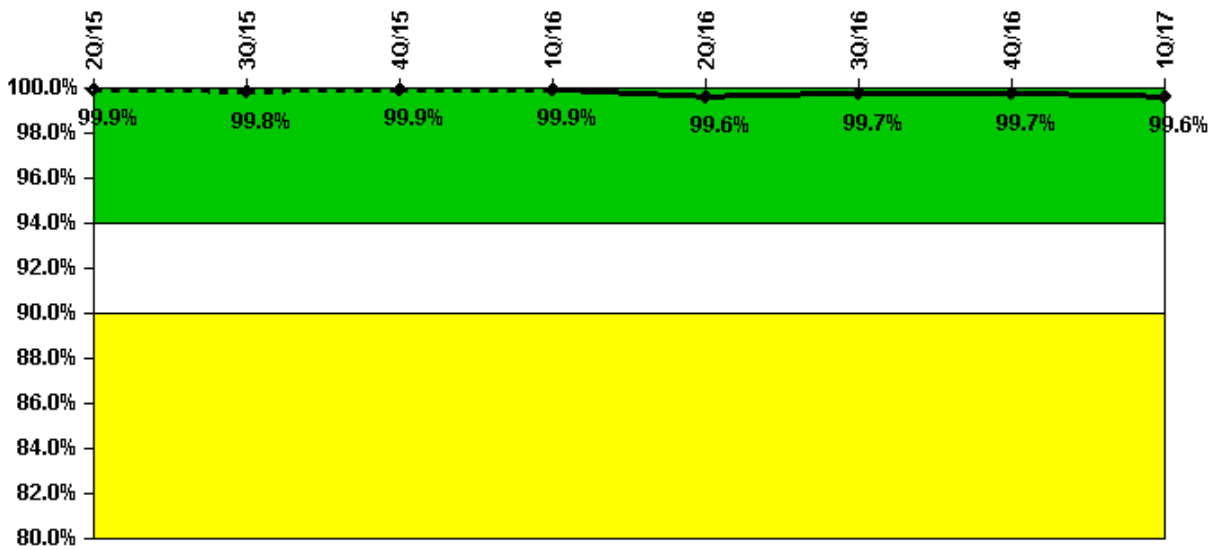
ERO Drill Participation	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17
Participating Key personnel	96.0	95.0	99.0	96.0	97.0	99.0	97.0	82.0
Total Key personnel	96.0	96.0	99.0	96.0	97.0	99.0	97.0	82.0

**Indicator value**                    **100.0% 99.0% 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

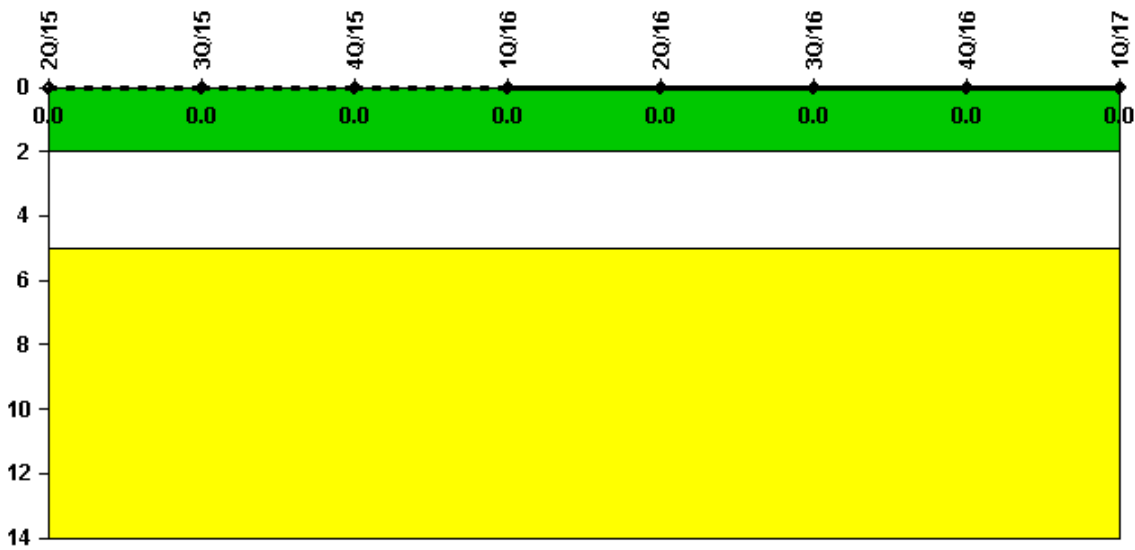
Alert & Notification System	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17
Successful siren-tests	791	1012	791	1017	780	903	904	1016
Total sirens-tests	791	1017	791	1017	791	904	904	1017

Indicator value                    99.9% 99.8% 99.9% 99.9% 99.6% 99.7% 99.7% 99.6%

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Licensee Comments: none

### Occupational Exposure Control Effectiveness



Thresholds: White > 2.0 Yellow > 5.0

**Notes**

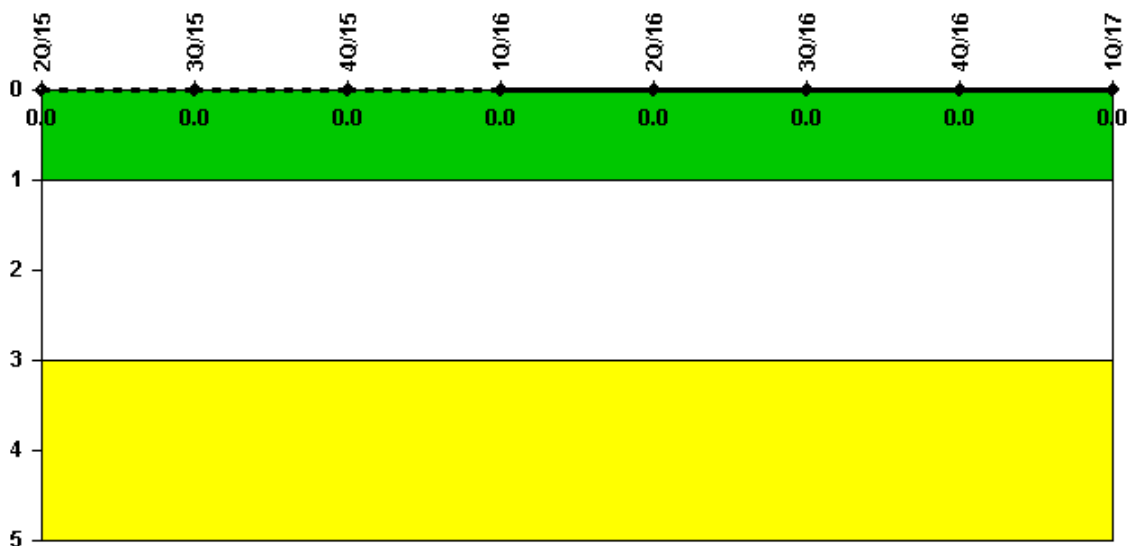
Occupational Exposure Control Effectiveness	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17
High radiation area occurrences	0	0	0	0	0	0	0	0
Very high radiation area occurrences	0	0	0	0	0	0	0	0
Unintended exposure occurrences	0	0	0	0	0	0	0	0
<b>Indicator value</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<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