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## Saint Lucie 1 – Quarterly Performance Indicators

### 3Q/2017 Performance Indicators

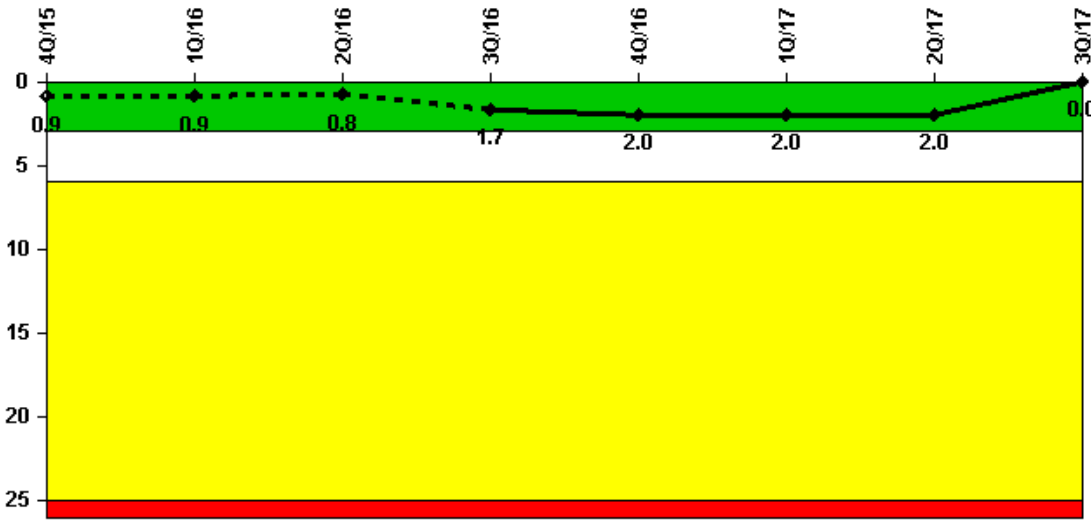
The solid trend line represents the current reporting period.

Licensee's General Comments: none

On this page:

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- Unplanned Power Changes per 7000 Critical Hours (IE03)
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### Unplanned Scrams per 7000 Critical Hrs



Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

#### Notes

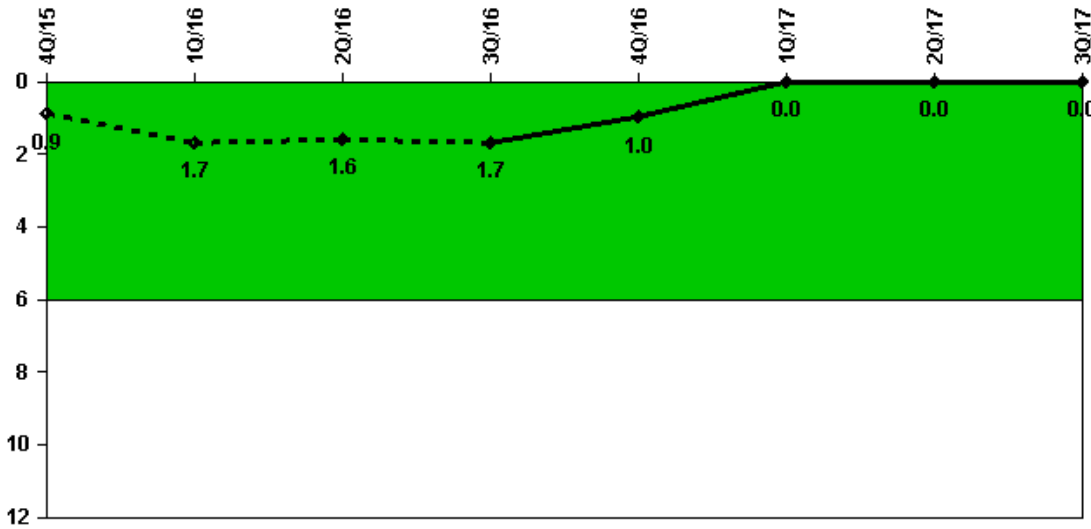
Unplanned Scrams per 7000 Critical Hrs	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17
Unplanned scrams	0	0	0	2.0	0	0	0	0
Critical hours	2209.0	2183.0	2184.0	1511.8	1291.1	1989.9	2184.0	2181.0

Indicator value	0.9	0.9	0.8	1.7	2.0	2.0	2.0	0
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Licensee Comments: none

### Unplanned Power Changes per 7000 Critical Hrs



Thresholds: White > 6.0

**Notes**

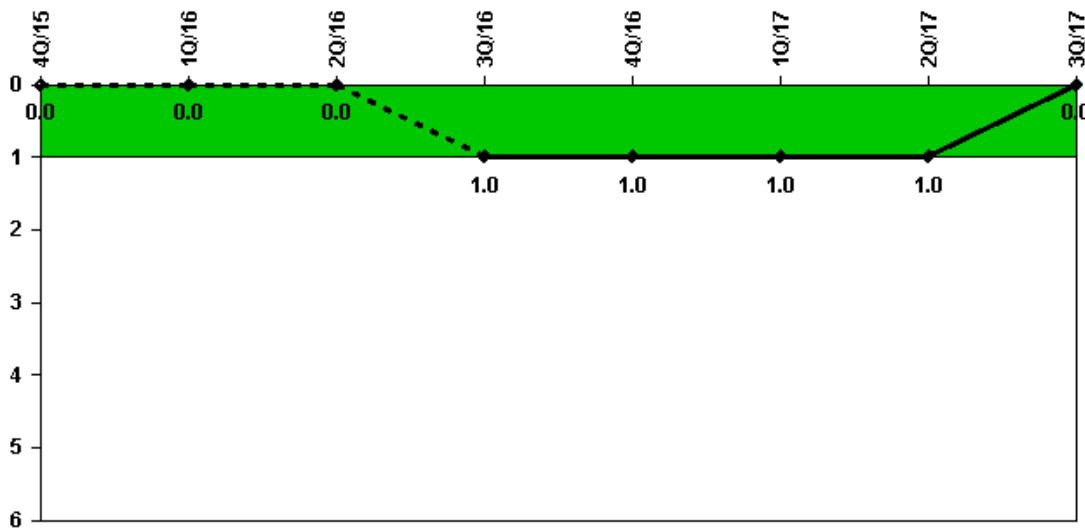
Unplanned Power Changes per 7000 Critical Hrs	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17
Unplanned power changes	1.0	1.0	0	0	0	0	0	0
Critical hours	2209.0	2183.0	2184.0	1511.8	1291.1	1989.9	2184.0	2181.0

<b>Indicator value</b>	<b>0.9</b>	<b>1.7</b>	<b>1.6</b>	<b>1.7</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**

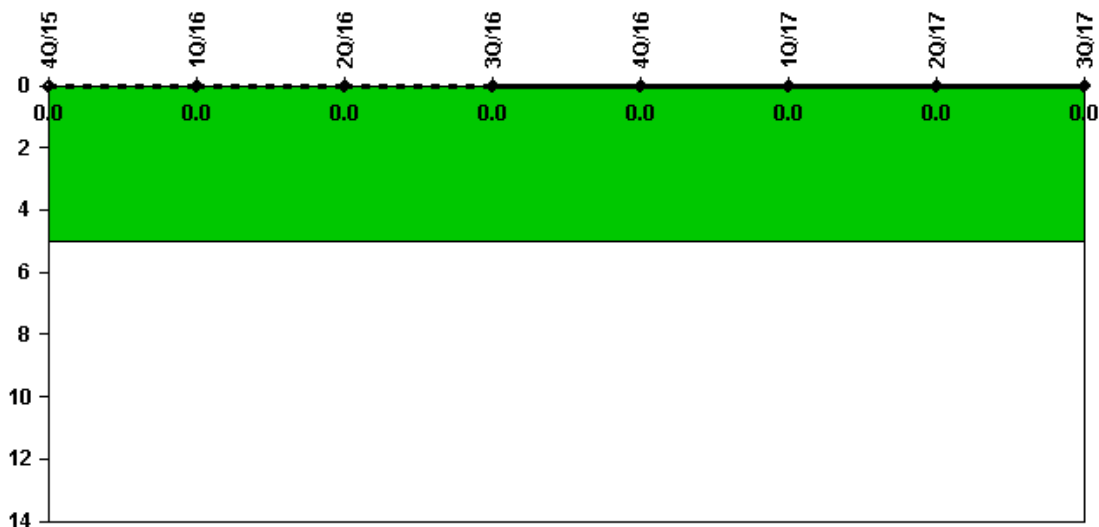
Unplanned Scrams with Complications	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17
Scrams with complications	0	0	0	1.0	0	0	0	0

<b>Indicator value</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>1.0</b>	<b>1.0</b>	<b>1.0</b>	<b>1.0</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) 4Q/15 1Q/16 2Q/16 3Q/16 4Q/16 1Q/17 2Q/17 3Q/17

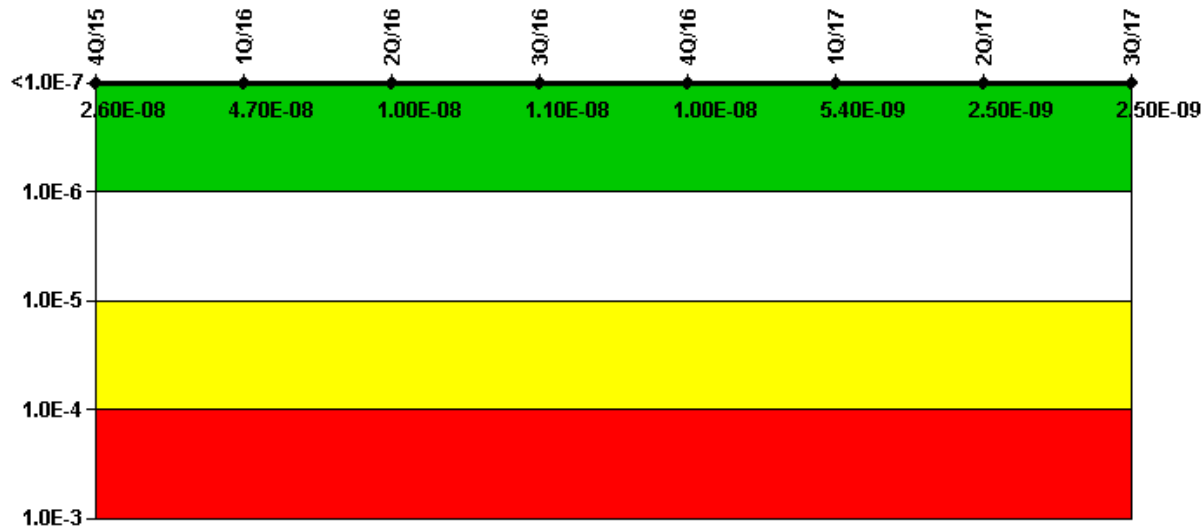
Safety System Functional Failures 0 0 0 0 0 0 0 0

Indicator value 0 0 0 0 0 0 0 0

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Licensee Comments: none

### 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 (ΔCDF)	3.80E-08	5.86E-08	1.94E-08	1.99E-08	1.96E-08	1.45E-08	1.16E-08	1.15E-08
URI (ΔCDF)	-1.19E-08	-1.19E-08	-8.88E-09	-9.17E-09	-9.07E-09	-9.07E-09	-9.07E-09	-9.07E-09
PLE	NO	NO	NO	NO	NO	NO	NO	NO
<b>Indicator value</b>	<b>2.60E-08</b>	<b>4.70E-08</b>	<b>1.00E-08</b>	<b>1.10E-08</b>	<b>1.00E-08</b>	<b>5.40E-09</b>	<b>2.50E-09</b>	<b>2.50E-09</b>

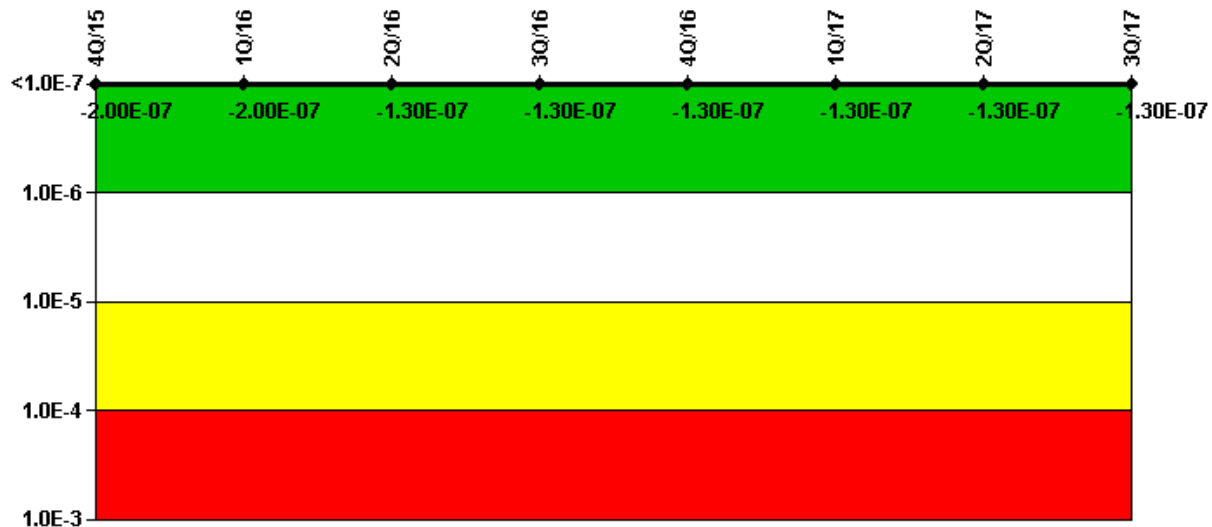
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Licensee Comments:

3Q/16: Changed PRA Parameter(s).

2Q/16: Changed PRA Parameter(s). PRA coefficients and CDF were changed due to updated PRA model

**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 (ΔCDF)	-3.36E-08	-3.36E-08	-3.00E-08	-3.00E-08	-3.00E-08	-3.00E-08	-3.00E-08	-3.00E-08
URI (ΔCDF)	-1.63E-07	-1.63E-07	-9.53E-08	-9.53E-08	-9.53E-08	-9.53E-08	-9.53E-08	-9.53E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
<b>Indicator value</b>	<b>-2.00E-07</b>	<b>-2.00E-07</b>	<b>-1.30E-07</b>	<b>-1.30E-07</b>	<b>-1.30E-07</b>	<b>-1.30E-07</b>	<b>-1.30E-07</b>	<b>-1.30E-07</b>

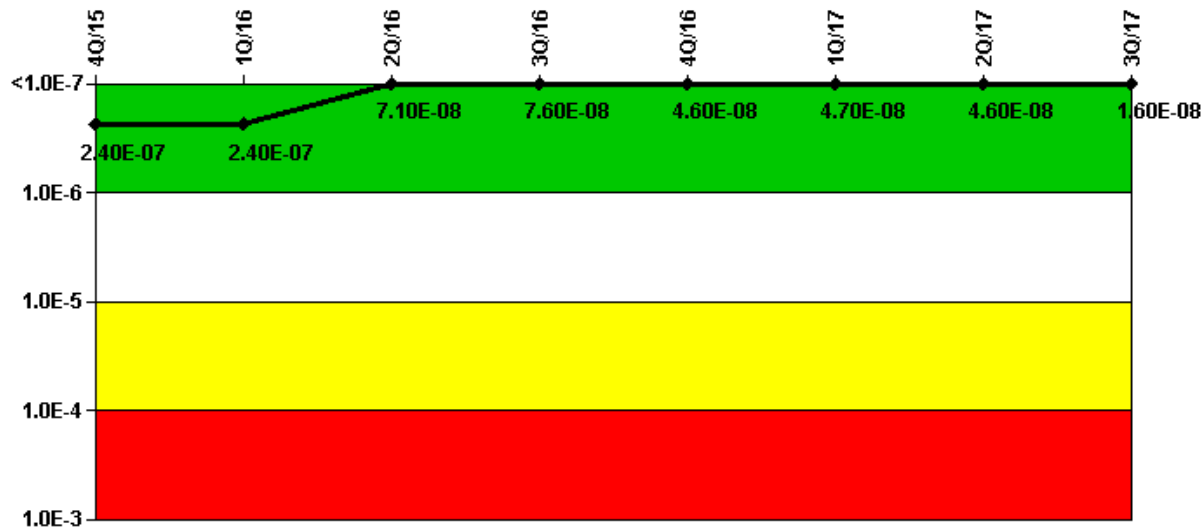
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Licensee Comments:

3Q/16: Changed PRA Parameter(s).

2Q/16: Changed PRA Parameter(s). PRA coefficients and CDF were changed due to updated PRA model

### 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 (ΔCDF)	1.08E-08	1.13E-08	1.56E-08	2.16E-08	1.58E-08	1.74E-08	1.77E-08	1.05E-08
URI (ΔCDF)	2.25E-07	2.25E-07	5.56E-08	5.39E-08	3.00E-08	2.91E-08	2.83E-08	5.84E-09
PLE	NO	NO	NO	NO	NO	NO	NO	NO
<b>Indicator value</b>	<b>2.40E-07</b>	<b>2.40E-07</b>	<b>7.10E-08</b>	<b>7.60E-08</b>	<b>4.60E-08</b>	<b>4.70E-08</b>	<b>4.60E-08</b>	<b>1.60E-08</b>

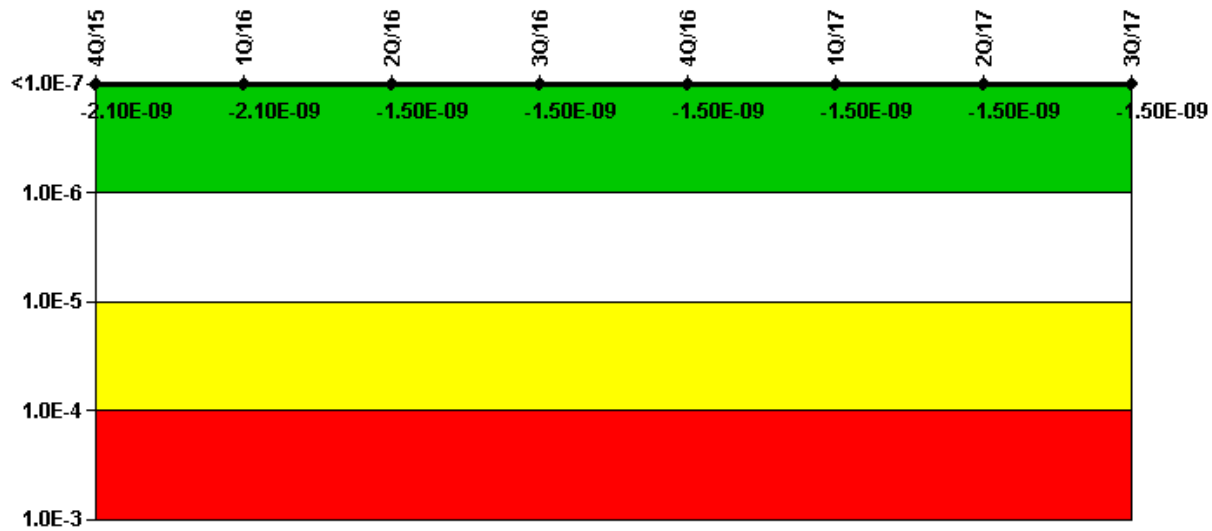
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Licensee Comments:

3Q/16: Changed PRA Parameter(s).

2Q/16: Changed PRA Parameter(s). PRA coefficients and CDF were changed due to updated PRA model

### 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)	-1.41E-10	-1.41E-10	-8.27E-11	-6.63E-11	-6.64E-11	-6.63E-11	-6.63E-11	-6.49E-11
URI ( $\Delta$ CDF)	-1.96E-09	-1.96E-09	-1.40E-09	-1.40E-09	-1.40E-09	-1.40E-09	-1.40E-09	-1.40E-09
PLE	NO	NO	NO	NO	NO	NO	NO	NO
<b>Indicator value</b>	<b>-2.10E-09</b>	<b>-2.10E-09</b>	<b>-1.50E-09</b>	<b>-1.50E-09</b>	<b>-1.50E-09</b>	<b>-1.50E-09</b>	<b>-1.50E-09</b>	<b>-1.50E-09</b>

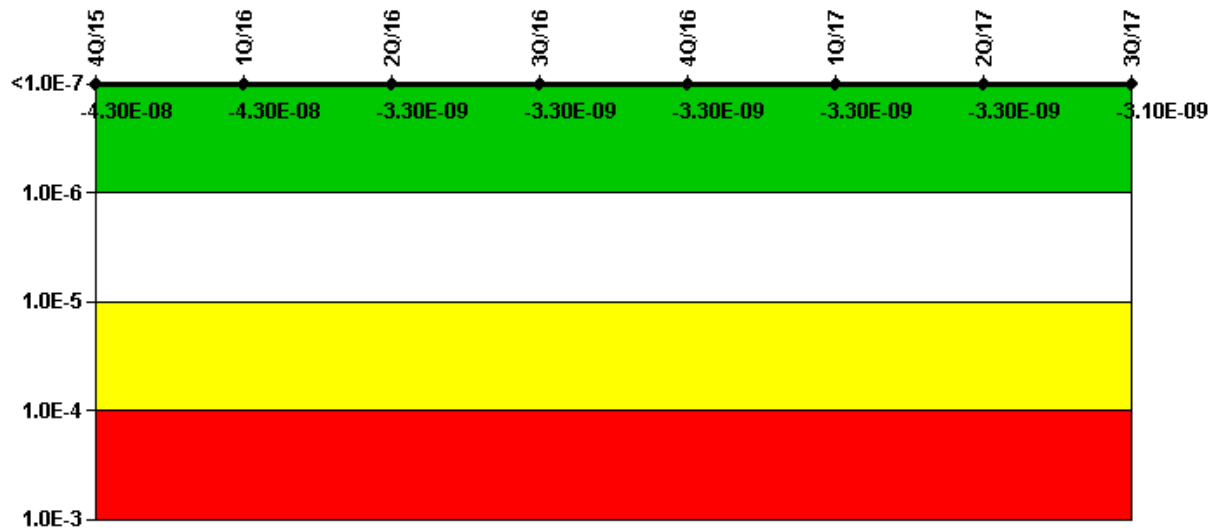
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Licensee Comments:

3Q/16: Changed PRA Parameter(s).

2Q/16: Changed PRA Parameter(s). PRA coefficients and CDF were changed due to updated PRA model

### 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 ( $\Delta$ CDF)	-3.11E-08	-3.11E-08	-2.93E-09	-2.92E-09	-2.92E-09	-2.92E-09	-2.92E-09	-2.74E-09
URI ( $\Delta$ CDF)	-1.20E-08	-1.20E-08	-3.38E-10	-3.38E-10	-3.38E-10	-3.38E-10	-3.38E-10	-3.38E-10
PLE	NO	NO	NO	NO	NO	NO	NO	NO
<b>Indicator value</b>	<b>-4.30E-08</b>	<b>-4.30E-08</b>	<b>-3.30E-09</b>	<b>-3.30E-09</b>	<b>-3.30E-09</b>	<b>-3.30E-09</b>	<b>-3.30E-09</b>	<b>-3.10E-09</b>

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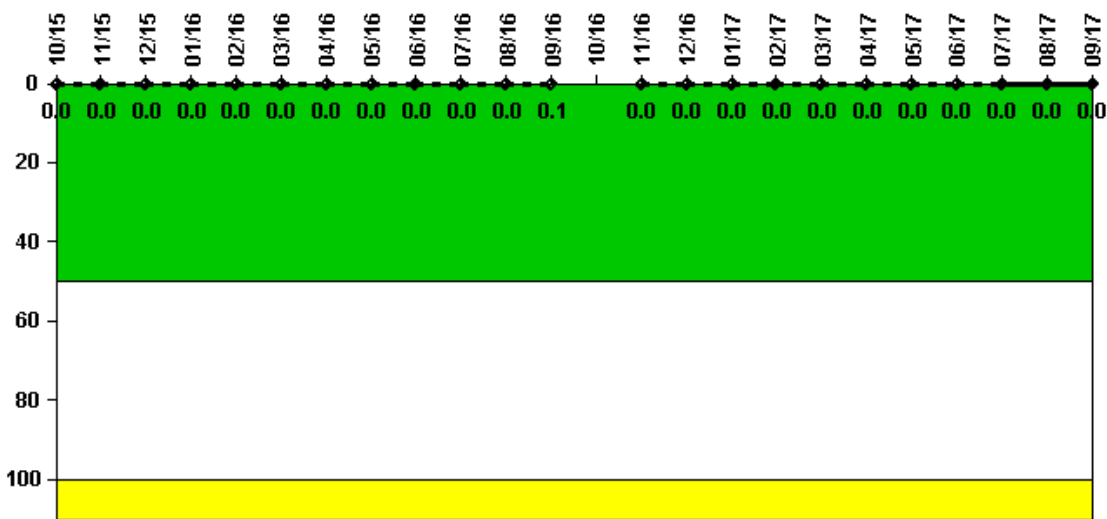
Licensee Comments:

3Q/16: Changed PRA Parameter(s).

2Q/16: Changed PRA Parameter(s). PRA coefficients and CDF were changed due to updated PRA model



### Reactor Coolant System Activity



Thresholds: White > 50.0 Yellow > 100.0

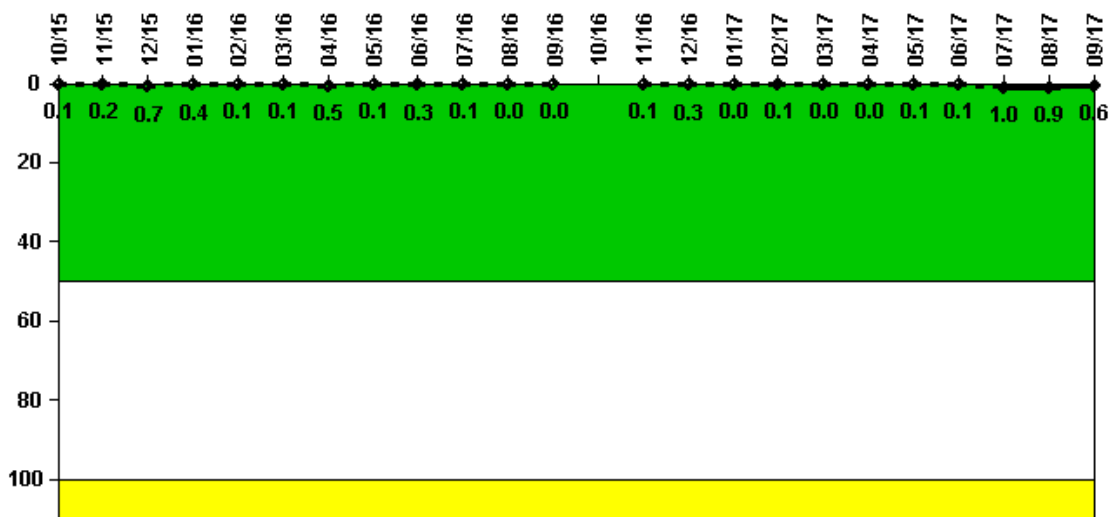
**Notes**

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	0.000351	0.000319	0.000354	0.000357	0.000360	0.000373	0.000364	0.000390	0.000381	0.000420	0.000357	0.000529
Technical specification limit	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Indicator value	0	0	0	0	0	0	0	0	0	0	0	0.1
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	N/A	0.000214	0.000228	0.000248	0.000258	0.000258	0.000277	0.000374	0.000291	0.000287	0.000283	0.000305
Technical specification limit	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Indicator value	N/A	0	0	0	0	0	0	0	0	0	0	0

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Licensee Comments:  
6/16: U1 April 2016 data corrected.

### Reactor Coolant System Leakage



Thresholds: White > 50.0 Yellow > 100.0

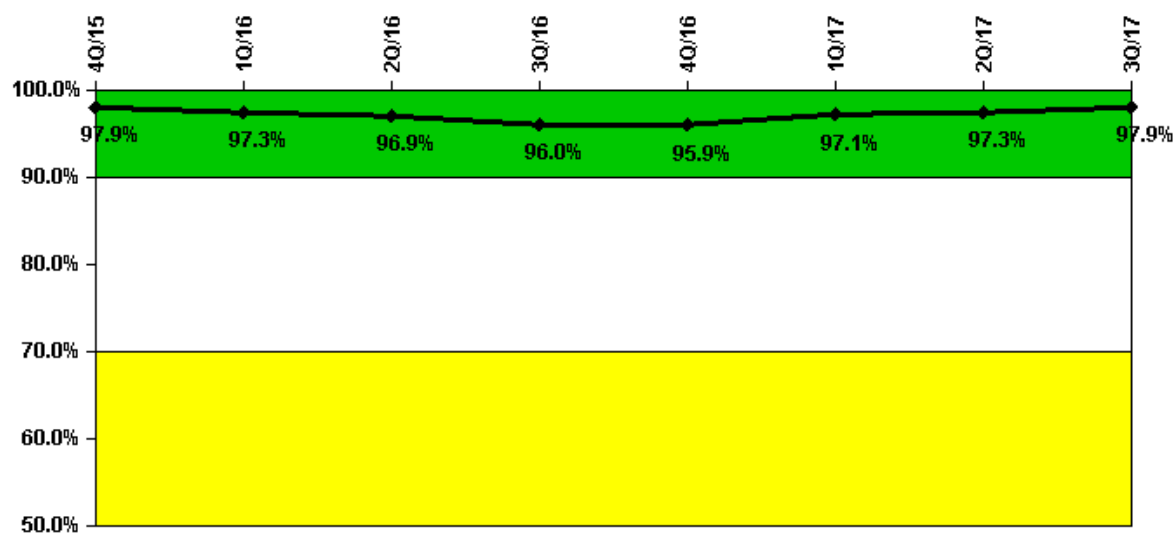
#### Notes

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	0.011	0.022	0.068	0.036	0.013	0.011	0.050	0.009	0.029	0.011	0.001	0.002
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>0.1</b>	<b>0.2</b>	<b>0.7</b>	<b>0.4</b>	<b>0.1</b>	<b>0.1</b>	<b>0.5</b>	<b>0.1</b>	<b>0.3</b>	<b>0.1</b>	<b>0</b>	<b>0</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	N/A	0.005	0.027	0.004	0.005	0.002	0	0.005	0.005	0.095	0.086	0.063
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>N/A</b>	<b>0.1</b>	<b>0.3</b>	<b>0</b>	<b>0.1</b>	<b>0</b>	<b>0</b>	<b>0.1</b>	<b>0.1</b>	<b>1.0</b>	<b>0.9</b>	<b>0.6</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	24.0	17.0	17.0	25.0	24.0	44.0	46.0	36.0
Total opportunities	25.0	18.0	17.0	27.0	24.0	44.0	46.0	37.0

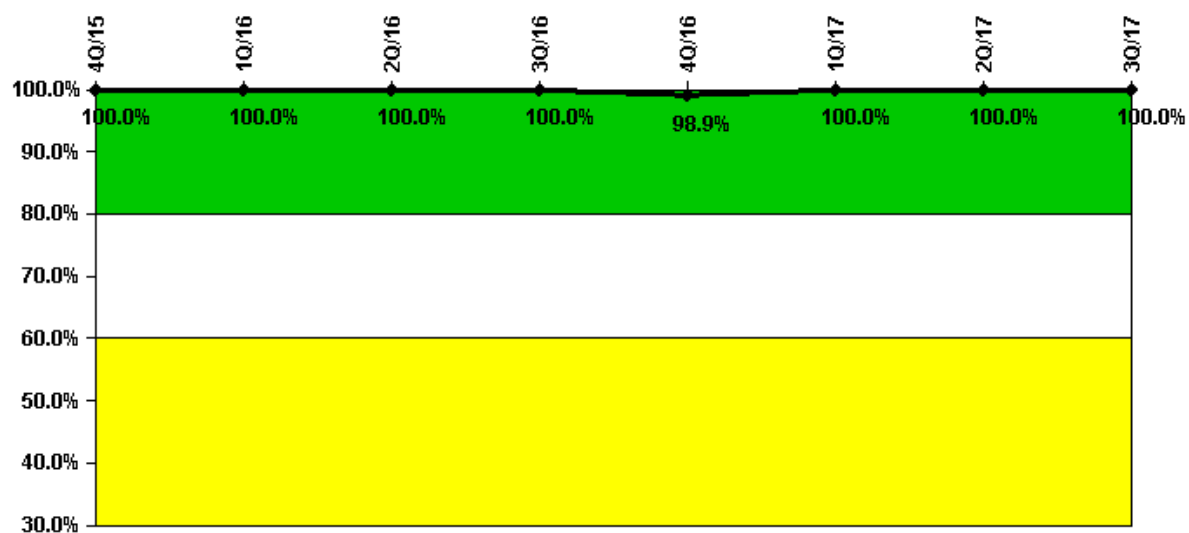
Indicator value                    97.9% 97.3% 96.9% 96.0% 95.9% 97.1% 97.3% 97.9%

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#### Licensee Comments:

3Q/16: One drill/exercise opportunity currently under evaluation but conservatively reported as a failed opportunity. Pending final resolution this PI may change.

### ERO Drill Participation



Thresholds: White < 80.0% Yellow < 60.0%

#### Notes

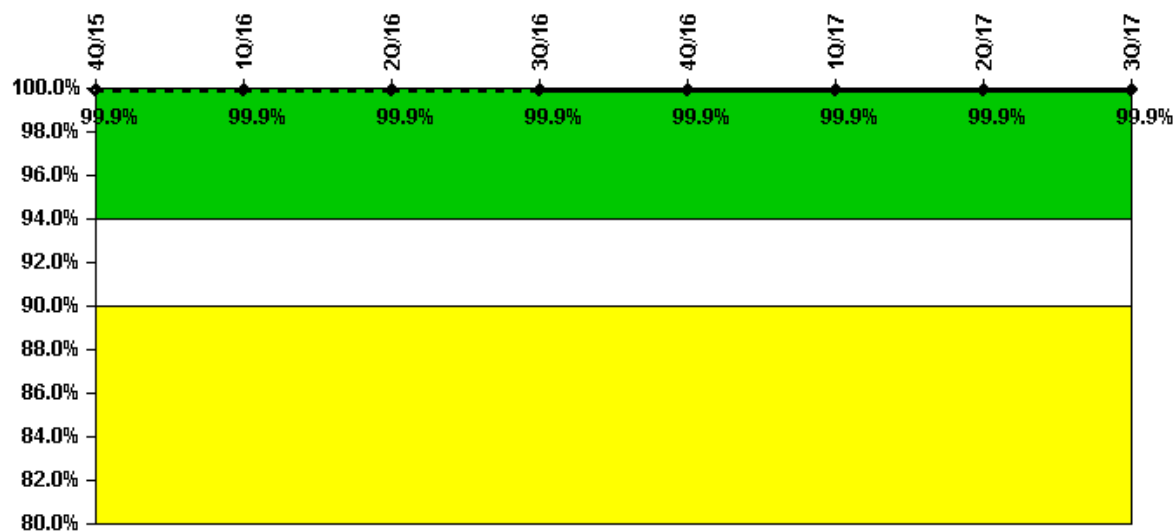
ERO Drill Participation	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17
Participating Key personnel	76.0	83.0	83.0	79.0	86.0	86.0	84.0	76.0
Total Key personnel	76.0	83.0	83.0	79.0	87.0	86.0	84.0	76.0

**Indicator value**                    **100.0% 100.0% 100.0% 100.0% 98.9% 100.0% 100.0% 100.0%**

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Licensee Comments: none

### Alert & Notification System



Thresholds: White < 94.0% Yellow < 90.0%

#### Notes

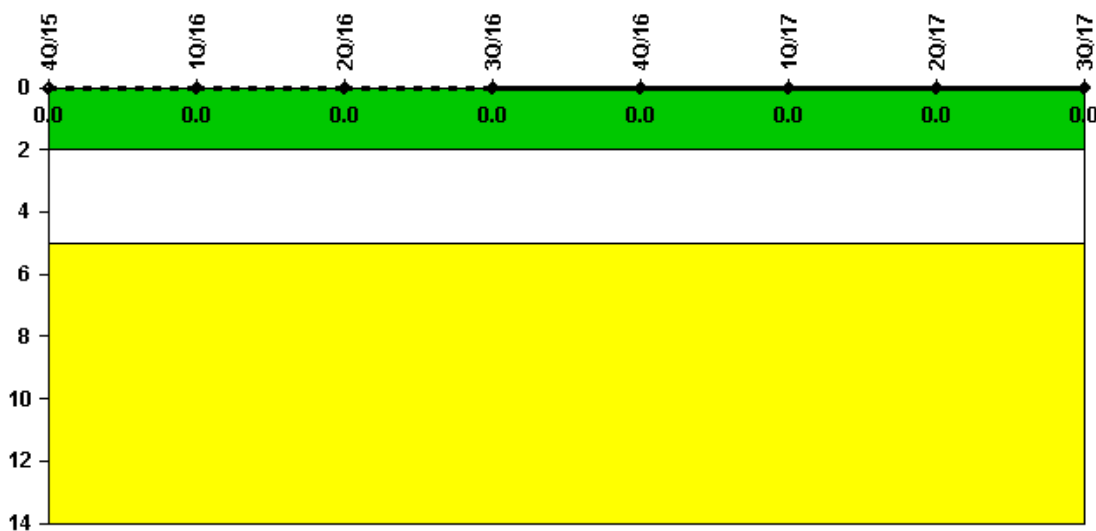
Alert & Notification System	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17
Successful siren-tests	629	630	629	720	629	629	720	540
Total sirens-tests	630	630	630	720	630	630	720	540

Indicator value                    99.9% 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**

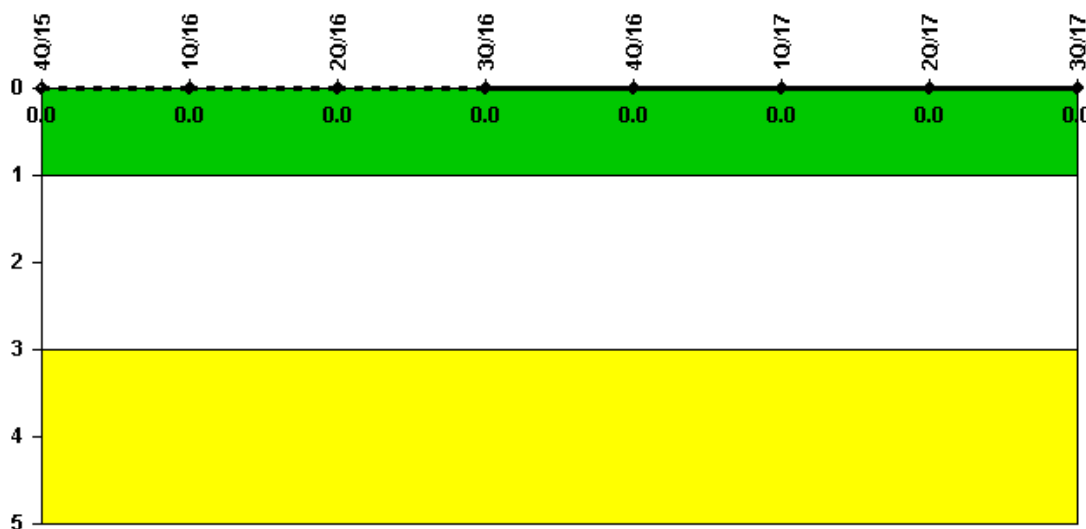
**Occupational Exposure Control Effectiveness** 4Q/15 1Q/16 2Q/16 3Q/16 4Q/16 1Q/17 2Q/17 3Q/17

High radiation area occurrences	0	0	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** 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