

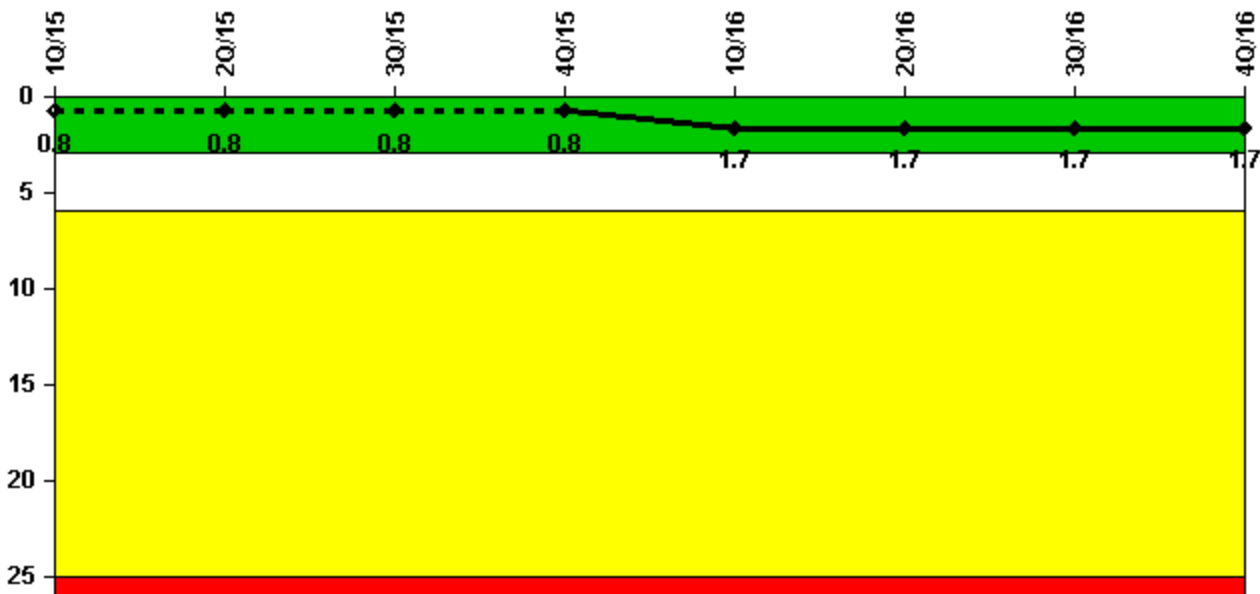
# Calvert Cliffs 1

## 4Q/2016 Performance Indicators

The solid trend line represents the current reporting period.

Licensee's General Comments: none

### Unplanned Scrams per 7000 Critical Hrs



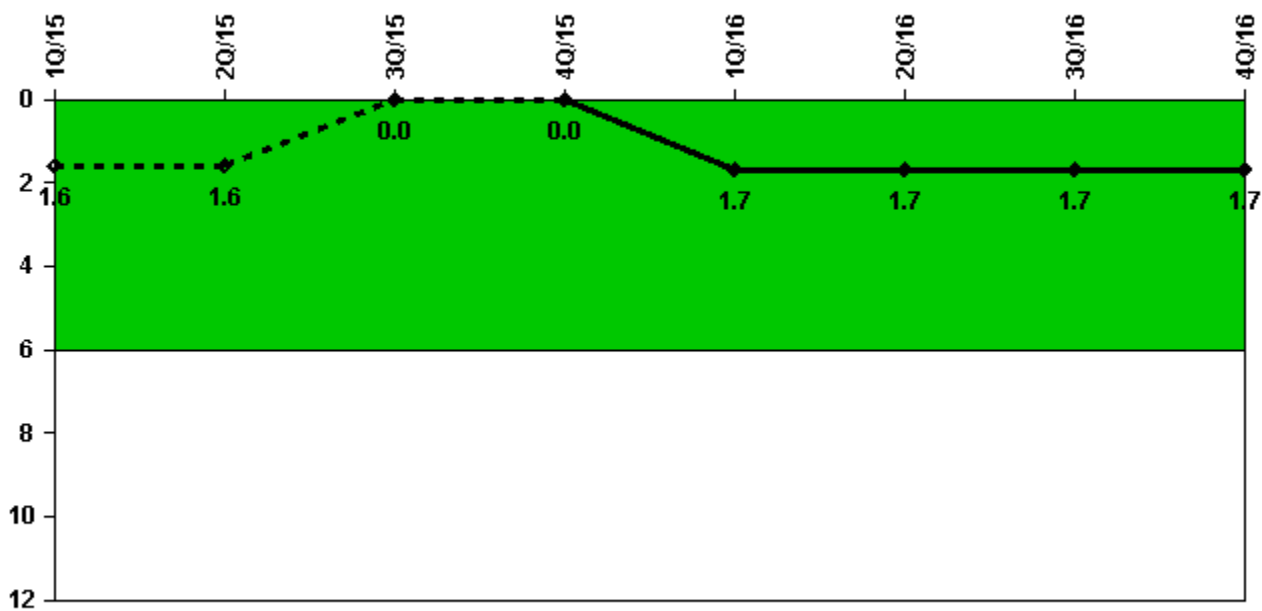
Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

### Notes

Unplanned Scrams per 7000 Critical Hrs	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16
Unplanned scrams	0	1.0	0	0	1.0	1.0	0	0
Critical hours	2159.0	2146.5	2208.0	2209.0	1592.5	2157.6	2208.0	2209.0
Indicator value	0.8	0.8	0.8	0.8	1.7	1.7	1.7	1.7

Licensee Comments: none

### Unplanned Power Changes per 7000 Critical Hrs



Thresholds: White > 6.0

#### Notes

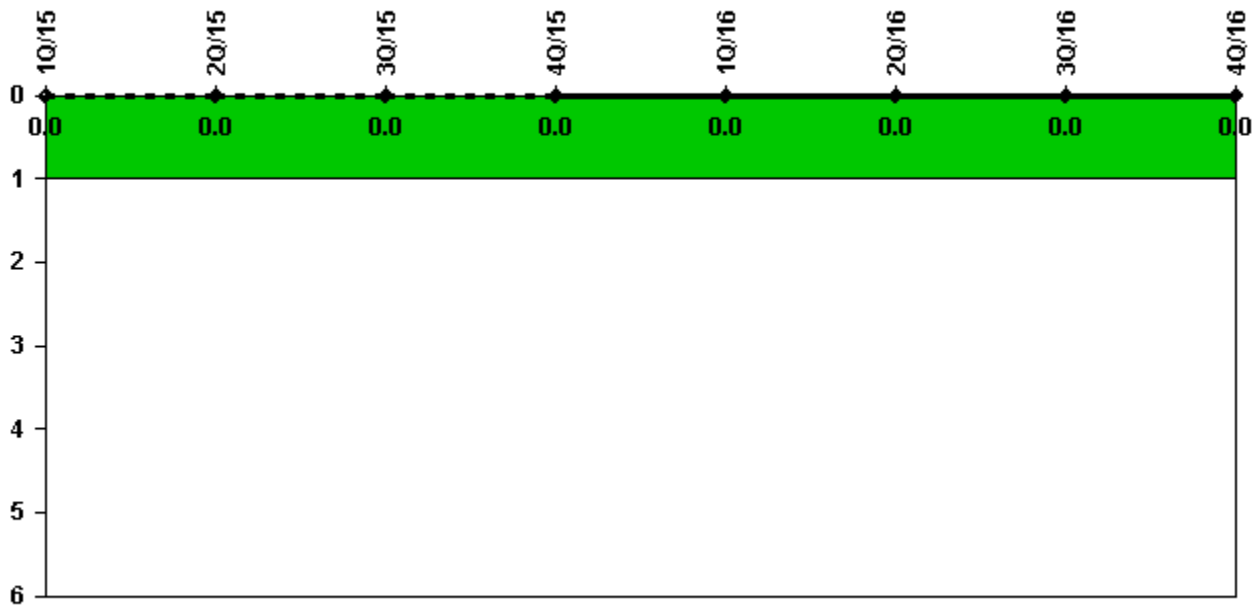
Unplanned Power Changes per 7000 Critical Hrs	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16
Unplanned power changes	0	0	0	0	2.0	0	0	0
Critical hours	2159.0	2146.5	2208.0	2209.0	1592.5	2157.6	2208.0	2209.0
<b>Indicator value</b>	<b>1.6</b>	<b>1.6</b>	<b>0</b>	<b>0</b>	<b>1.7</b>	<b>1.7</b>	<b>1.7</b>	<b>1.7</b>

#### Licensee Comments:

1Q/16: 1/10/17: This is a correction: This should have been counted in March as an unplanned power change per NEI 99-02 but was not counted in error. IR 3953568 documents this issue.

1Q/16: 3/12/2016 MSIV hydraulic leak downpower initially recorded as Unplanned Power Change. Corrected record in June for March, Unit SDs impacting this time period 16-003. IR 2671497/2639325

### Unplanned Scrams with Complications



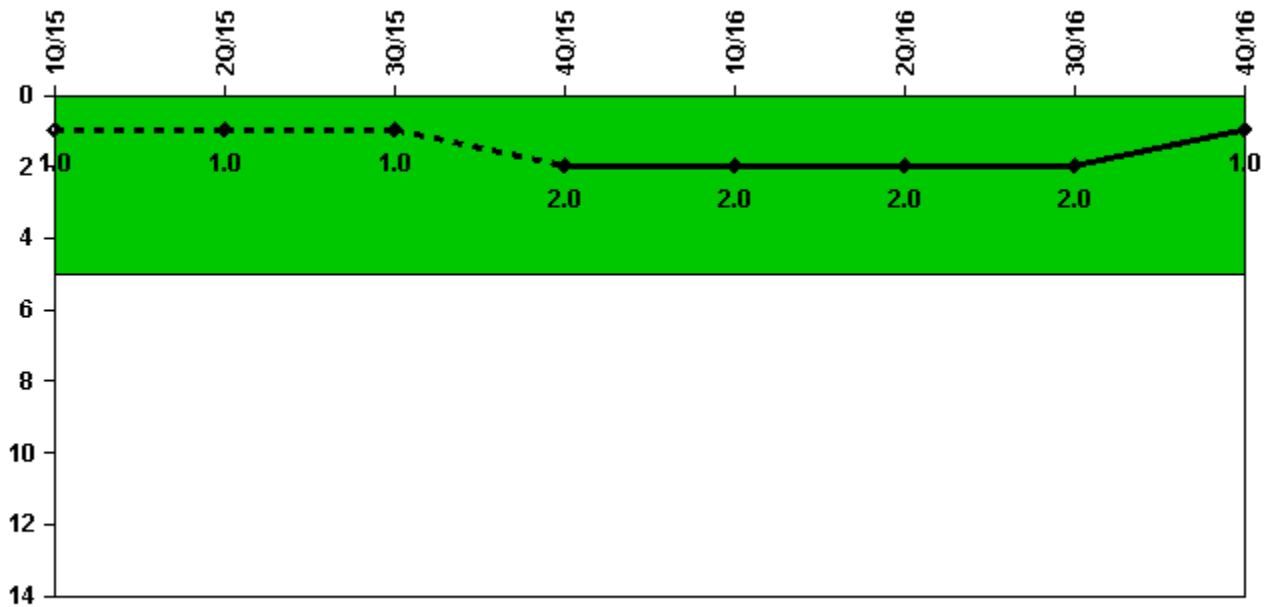
Thresholds: White > 1.0

#### Notes

Unplanned Scrams with Complications	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16
Scrams with complications	0	0	0	0	0	0	0	0
<b>Indicator value</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>	<b>0.0</b>	<b>0.0</b>

Licensee Comments: none

### Safety System Functional Failures (PWR)



Thresholds: White > 5.0

#### Notes

Safety System Functional Failures (PWR)	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16
Safety System Functional Failures	1	0	0	1	1	0	0	0
<b>Indicator value</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>1</b>

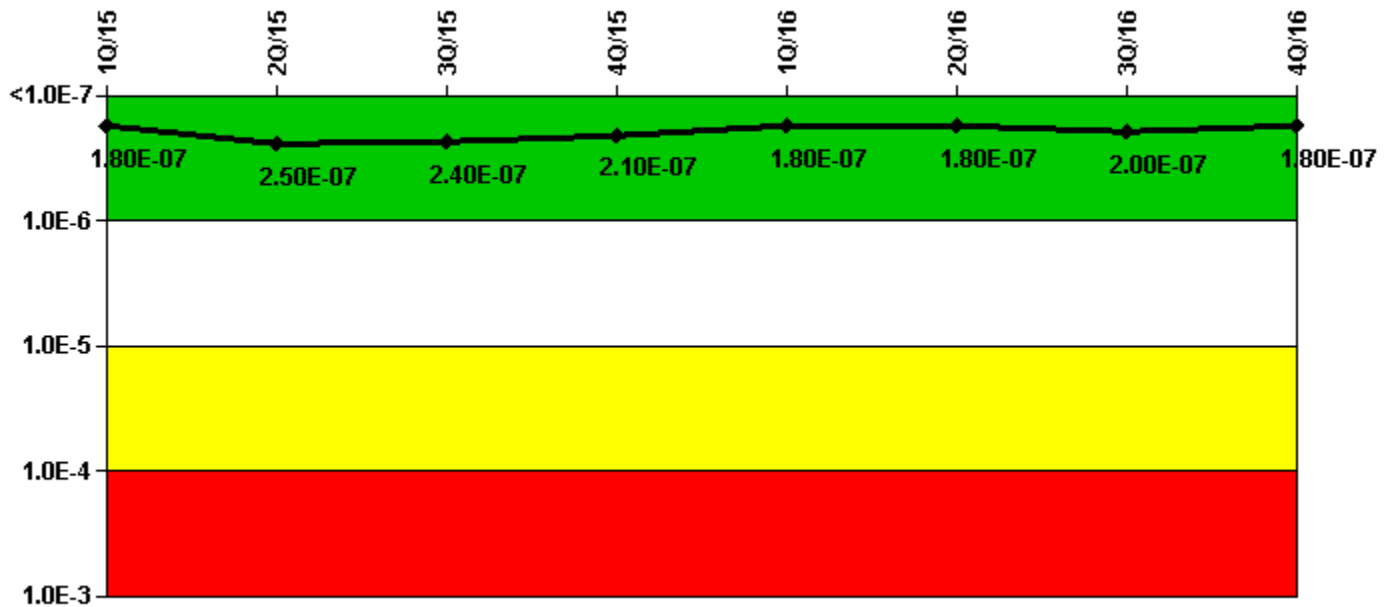
#### Licensee Comments:

2Q/16: 8/2016: Changed CDE June 2016 value 1 to 0 for LER-2016-004. LER was submitted in June 2016 after the 60 report requirement (March) and counted in CDE in June. In August it was determined the SSFF should have been counted in March as that is the original 60 day LER report date.

1Q/16: 8/2016: Changed CDE March 2016 value 0 to 1 for LER-2016-004. LER was submitted in June 2016 after the 60 report requirement (March) and counted in CDE in June. In August it was determined the SSFF should have been counted in March as that is the original 60 day LER report date.

1Q/15: 3/22/2015: LER 2015-001-00 05000317/05000318

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



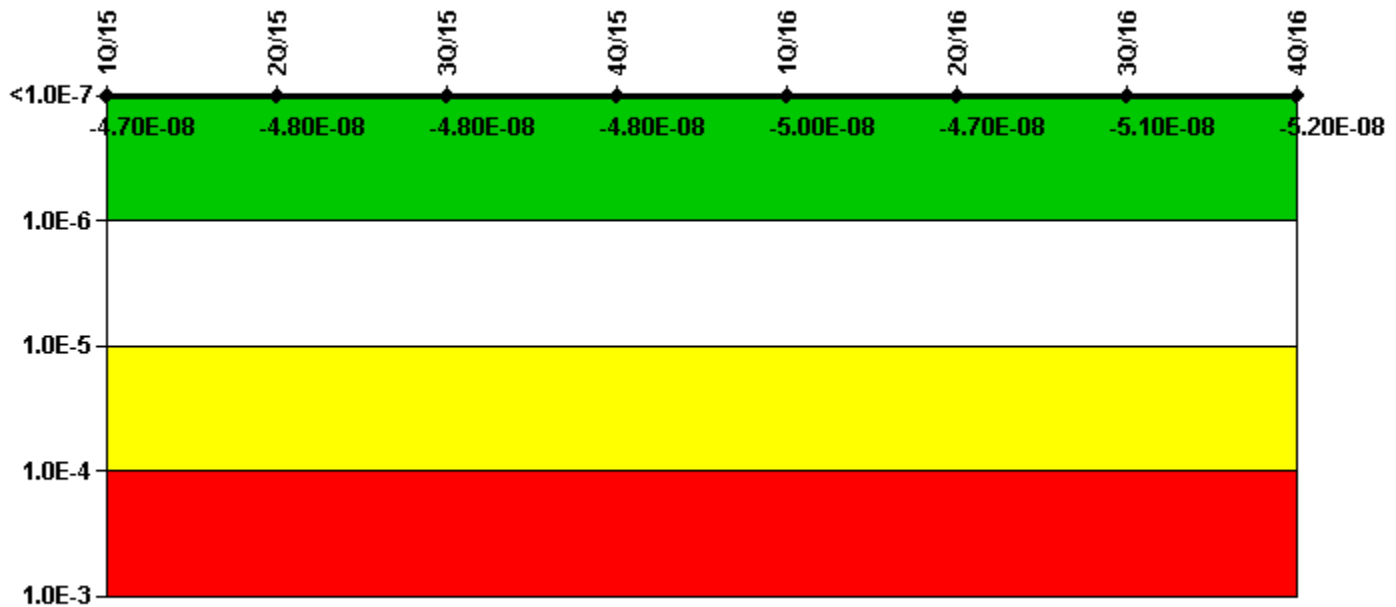
Thresholds: White > 1.00E-6 Yellow > 1.00E-5 Red > 1.00E-4

#### Notes

Mitigating Systems Performance Index, Emergency AC Power System	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16
UAI (ΔCDF)	2.11E-08	3.16E-08	3.04E-08	-1.88E-09	1.55E-08	1.56E-08	3.93E-08	2.27E-08
URI (ΔCDF)	1.62E-07	2.15E-07	2.11E-07	2.10E-07	1.68E-07	1.60E-07	1.58E-07	1.56E-07
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	1.80E-07	2.50E-07	2.40E-07	2.10E-07	1.80E-07	1.80E-07	2.00E-07	1.80E-07

Licensee Comments: none

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



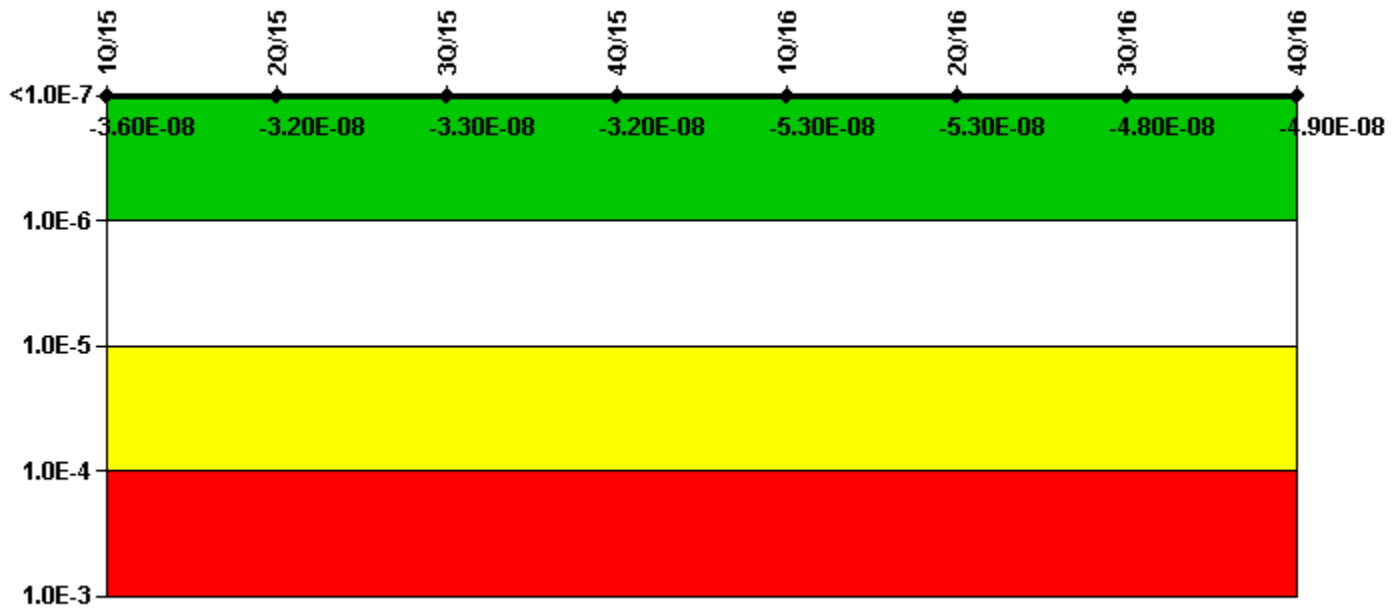
Thresholds: White > 1.00E-6 Yellow > 1.00E-5 Red > 1.00E-4

#### Notes

Mitigating Systems Performance Index, High Pressure Injection System	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16
UAI ( $\Delta$ CDF)	-2.06E-08	-2.11E-08	-2.24E-08	-2.27E-08	-2.52E-08	-2.01E-08	-2.03E-08	-2.03E-08
URI ( $\Delta$ CDF)	-2.69E-08	-2.73E-08	-2.59E-08	-2.54E-08	-2.46E-08	-2.65E-08	-3.03E-08	-3.17E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-4.70E-08	-4.80E-08	-4.80E-08	-4.80E-08	-5.00E-08	-4.70E-08	-5.10E-08	-5.20E-08

Licensee Comments: none

### Mitigating Systems Performance Index, Heat Removal System



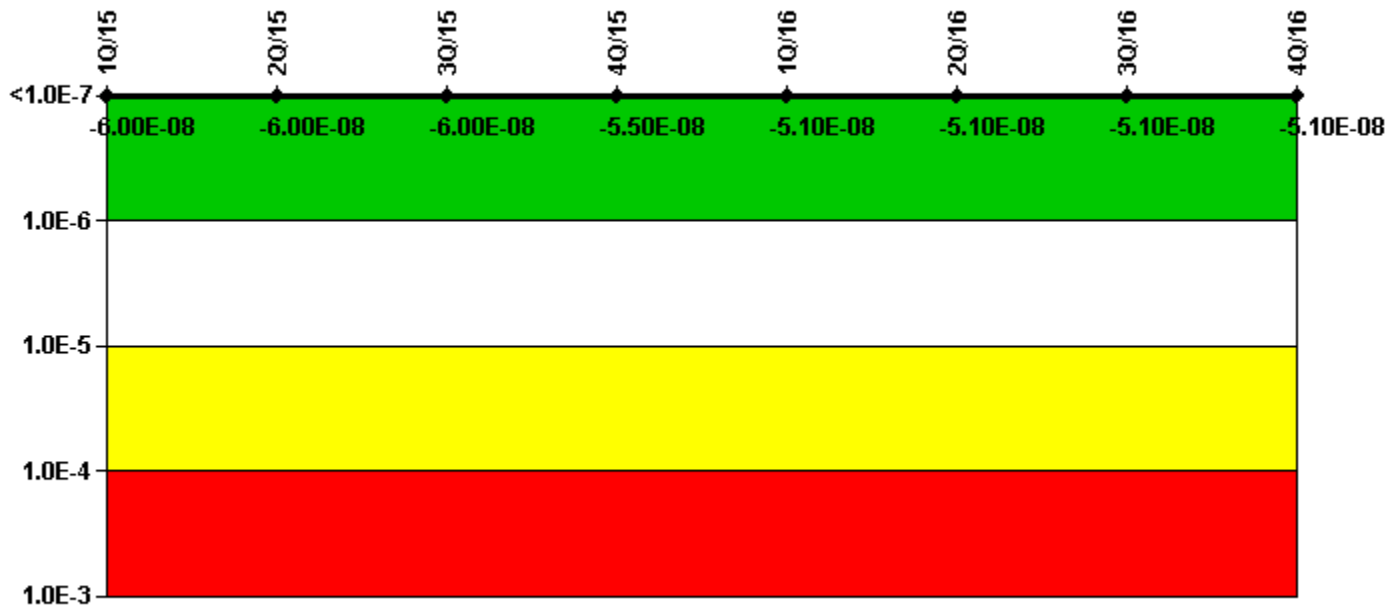
Thresholds: White > 1.00E-6 Yellow > 1.00E-5 Red > 1.00E-4

#### Notes

Mitigating Systems Performance Index, Heat Removal System	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16
UAI ( $\Delta$ CDF)	-3.31E-09	-1.30E-09	-1.36E-09	2.10E-10	-1.06E-08	-1.01E-08	-4.17E-09	-6.06E-09
URI ( $\Delta$ CDF)	-3.28E-08	-3.12E-08	-3.12E-08	-3.23E-08	-4.27E-08	-4.34E-08	-4.39E-08	-4.31E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-3.60E-08	-3.20E-08	-3.30E-08	-3.20E-08	-5.30E-08	-5.30E-08	-4.80E-08	-4.90E-08

Licensee Comments: none

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



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

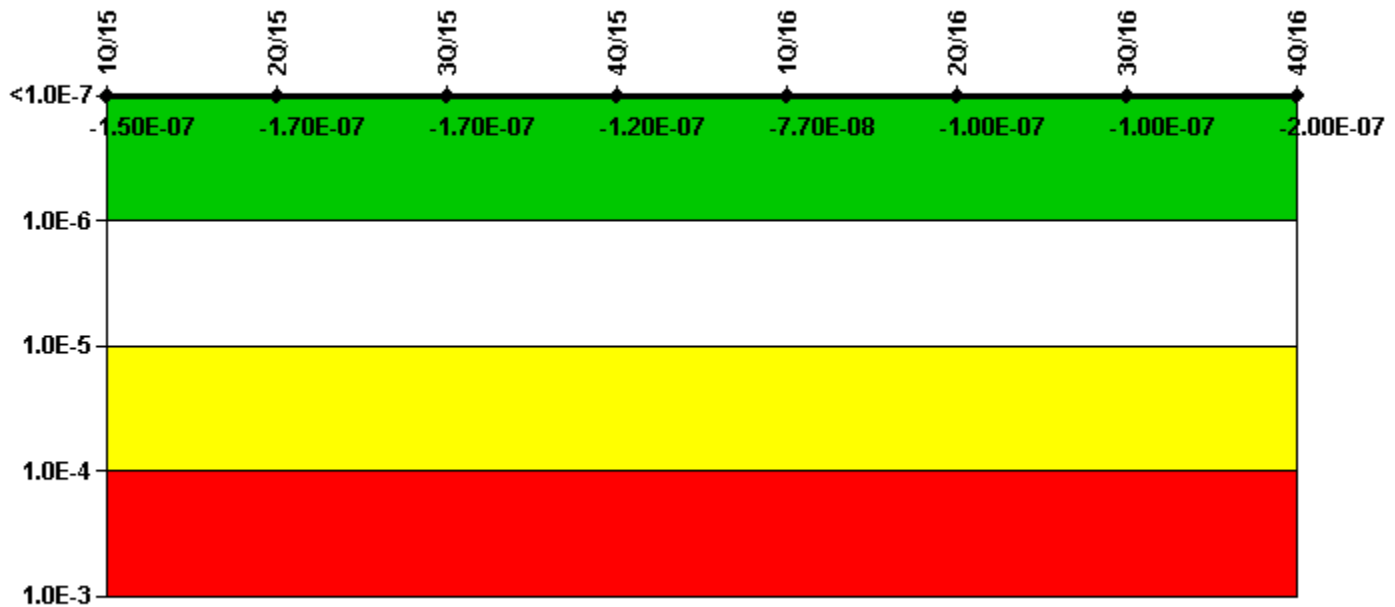
#### Notes

Mitigating Systems Performance Index, Residual Heat Removal System	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16
UAI ( $\Delta$ CDF)	-5.56E-08	-5.56E-08	-5.56E-08	-5.09E-08	-4.54E-08	-4.54E-08	-4.54E-08	-4.54E-08
URI ( $\Delta$ CDF)	-4.26E-09	-4.15E-09	-4.15E-09	-4.15E-09	-5.76E-09	-5.84E-09	-5.82E-09	-5.79E-09
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-6.00E-08	-6.00E-08	-6.00E-08	-5.50E-08	-5.10E-08	-5.10E-08	-5.10E-08	-5.10E-08

Licensee Comments: none



### Mitigating Systems Performance Index, Cooling Water Systems



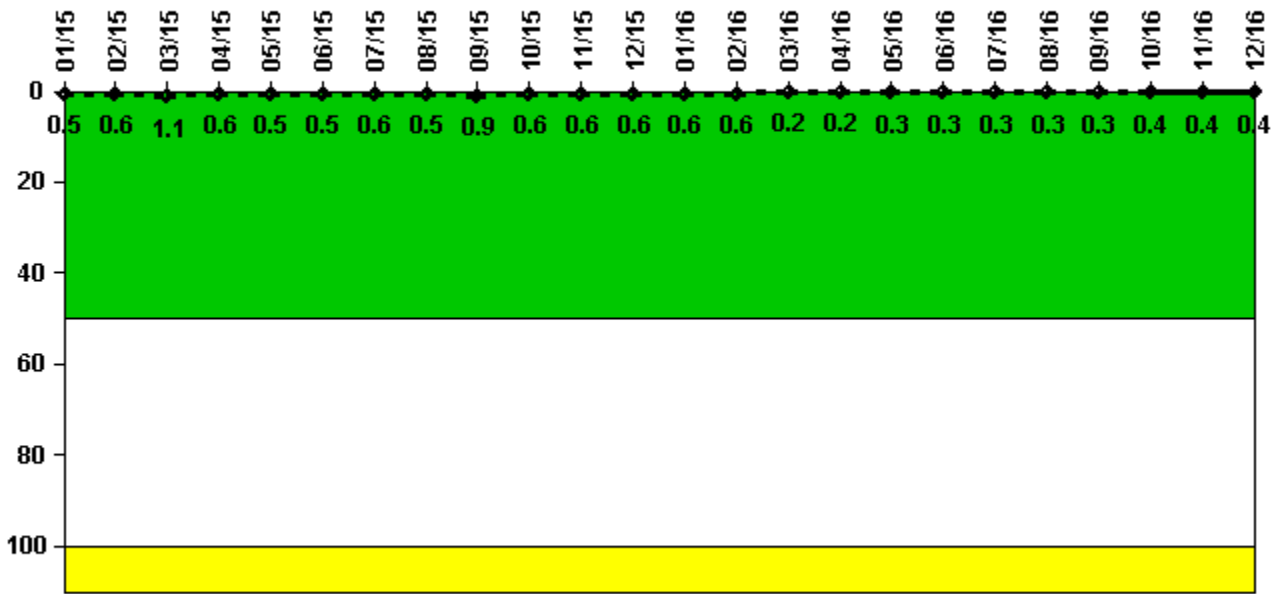
Thresholds: White > 1.00E-6 Yellow > 1.00E-5 Red > 1.00E-4

#### Notes

Mitigating Systems Performance Index, Cooling Water Systems	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16
UAI ( $\Delta$ CDF)	6.01E-08	3.66E-08	3.90E-08	8.12E-08	1.36E-07	1.11E-07	1.11E-07	1.24E-08
URI ( $\Delta$ CDF)	-2.06E-07	-2.06E-07	-2.06E-07	-2.06E-07	-2.13E-07	-2.13E-07	-2.12E-07	-2.12E-07
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-1.50E-07	-1.70E-07	-1.70E-07	-1.20E-07	-7.70E-08	-1.00E-07	-1.00E-07	-2.00E-07

Licensee Comments: none

### Reactor Coolant System Activity



Thresholds: White > 50.0 Yellow > 100.0

#### Notes

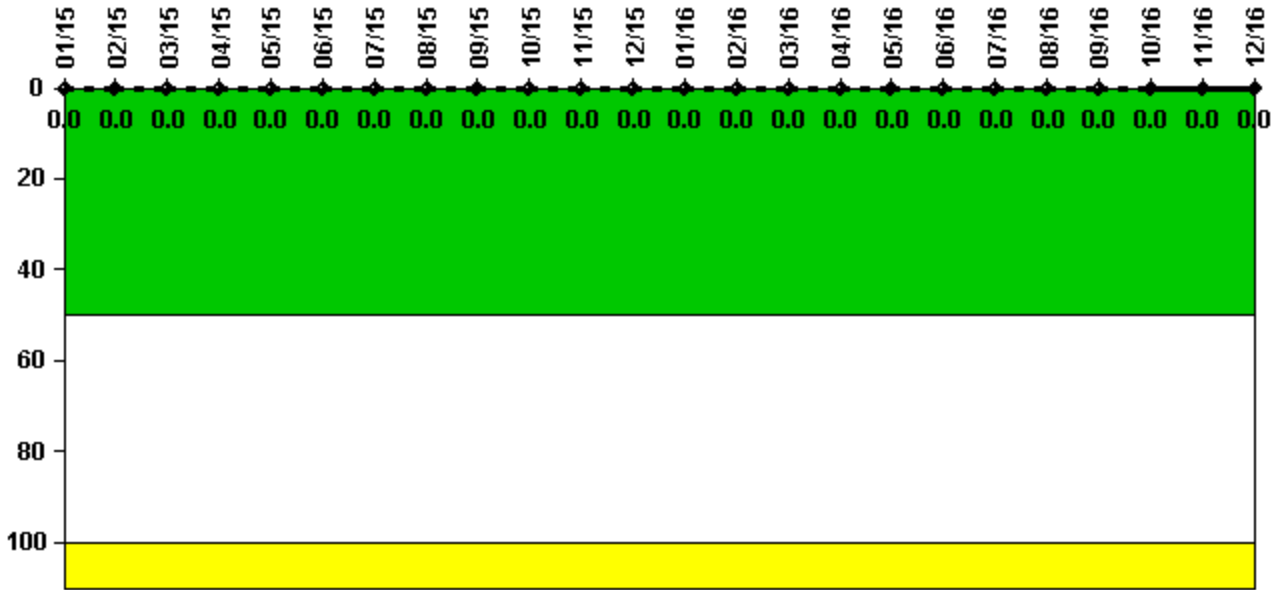
Reactor Coolant System Activity	1/15	2/15	3/15	4/15	5/15	6/15	7/15	8/15	9/15	10/15	11/15	12/15
Maximum activity	0.002480	0.002830	0.005720	0.002880	0.002460	0.002590	0.002850	0.002650	0.004480	0.003010	0.002870	0.003150
Technical specification limit	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Indicator value	0.5	0.6	1.1	0.6	0.5	0.5	0.6	0.5	0.9	0.6	0.6	0.6

Reactor Coolant System Activity	1/16	2/16	3/16	4/16	5/16	6/16	7/16	8/16	9/16	10/16	11/16	12/16
Maximum activity	0.003050	0.002970	0.001070	0.000828	0.001430	0.001450	0.001530	0.001650	0.001700	0.001820	0.001850	0.001920
Technical specification limit	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Indicator value	0.6	0.6	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4

Licensee Comments: none

### Reactor Coolant System Leakage



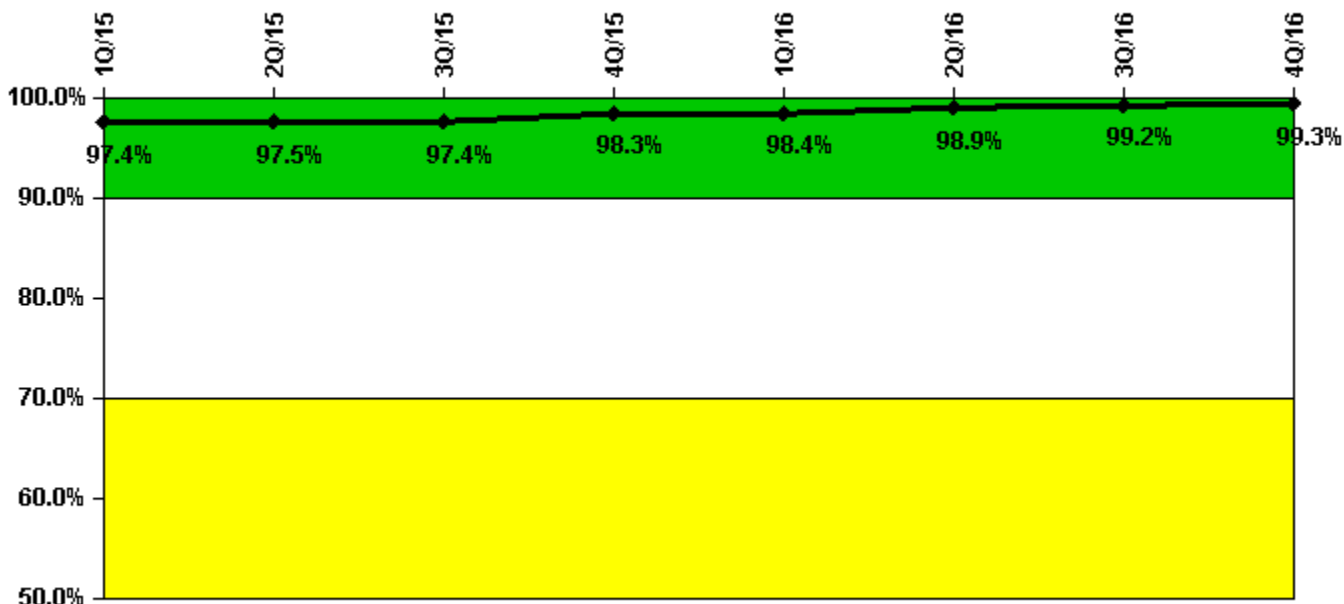
Thresholds: White > 50.0 Yellow > 100.0

#### Notes

Reactor Coolant System Leakage	1/15	2/15	3/15	4/15	5/15	6/15	7/15	8/15	9/15	10/15	11/15	12/15
Maximum leakage	0	0	0	0	0	0	0	0	0	0	0	0
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</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 Leakage	1/16	2/16	3/16	4/16	5/16	6/16	7/16	8/16	9/16	10/16	11/16	12/16
Maximum leakage	0	0	0	0	0	0	0	0	0	0	0	0
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</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>

Licensee Comments: none

### Drill/Exercise Performance



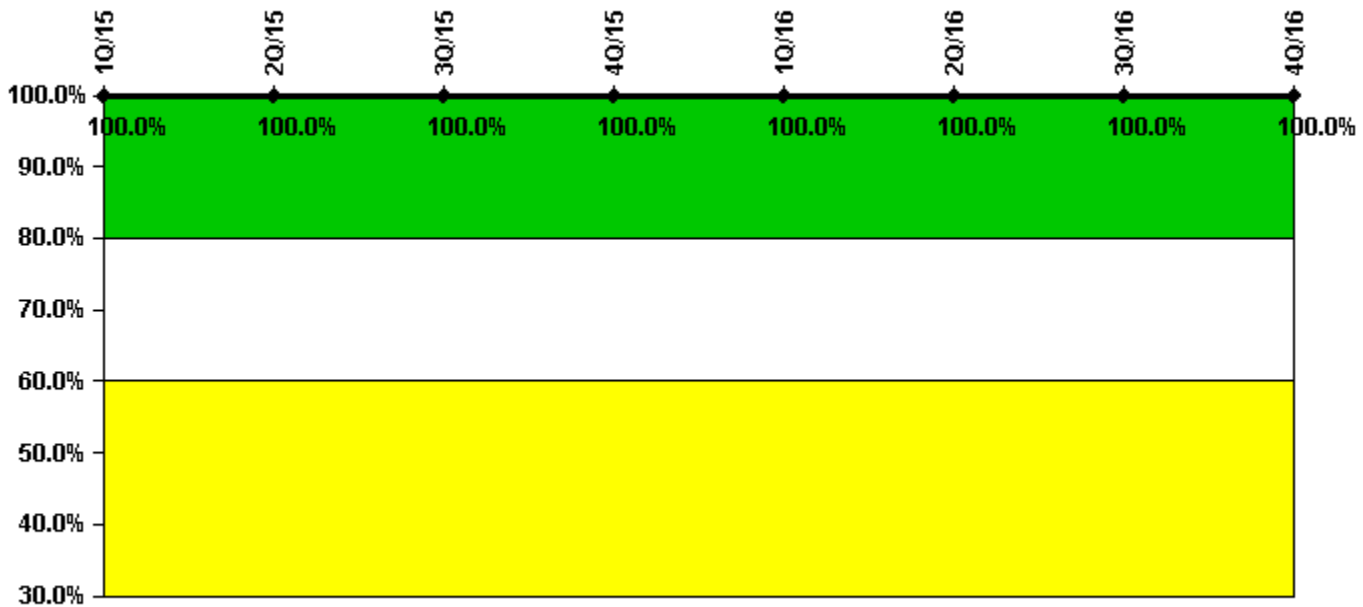
Thresholds: White < 90.0% Yellow < 70.0%

#### Notes

Drill/Exercise Performance	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16
Successful opportunities	9.0	75.0	44.0	60.0	42.0	30.0	74.0	71.0
Total opportunities	9.0	76.0	45.0	60.0	42.0	30.0	74.0	72.0
Indicator value	97.4%	97.5%	97.4%	98.3%	98.4%	98.9%	99.2%	99.3%

Licensee Comments: none

### ERO Drill Participation



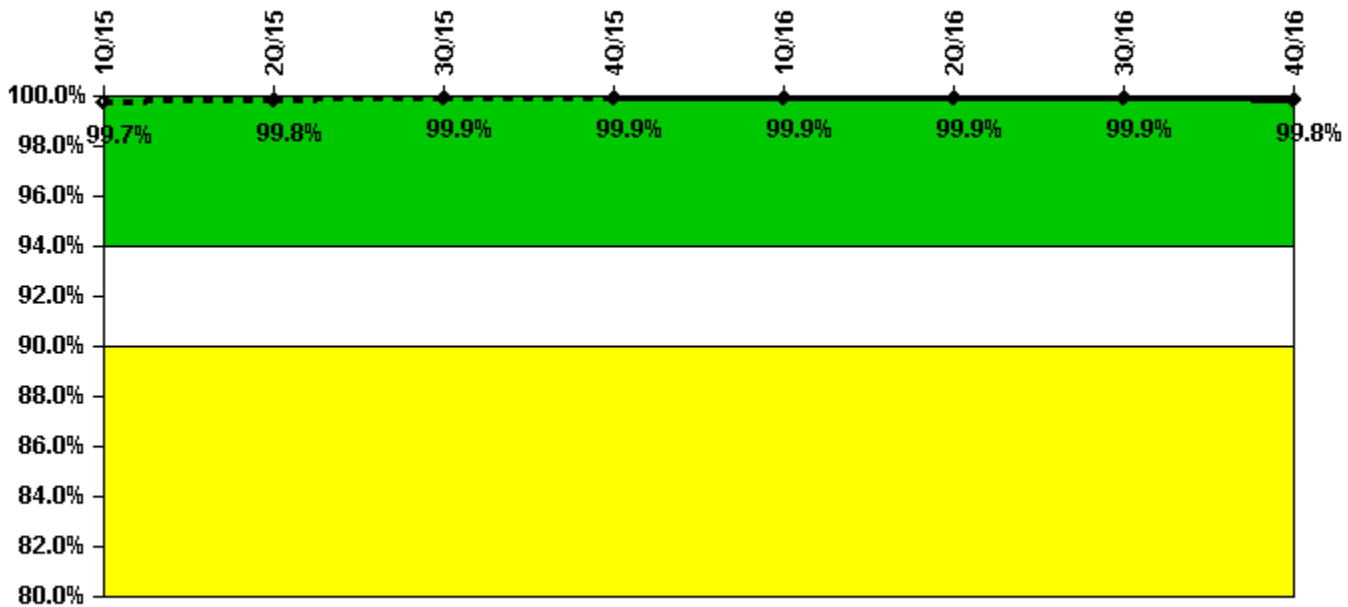
Thresholds: White < 80.0% Yellow < 60.0%

#### Notes

ERO Drill Participation	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16
Participating Key personnel	49.0	46.0	46.0	46.0	52.0	55.0	51.0	52.0
Total Key personnel	49.0	46.0	46.0	46.0	52.0	55.0	51.0	52.0
Indicator value	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Licensee Comments: none

### Alert & Notification System



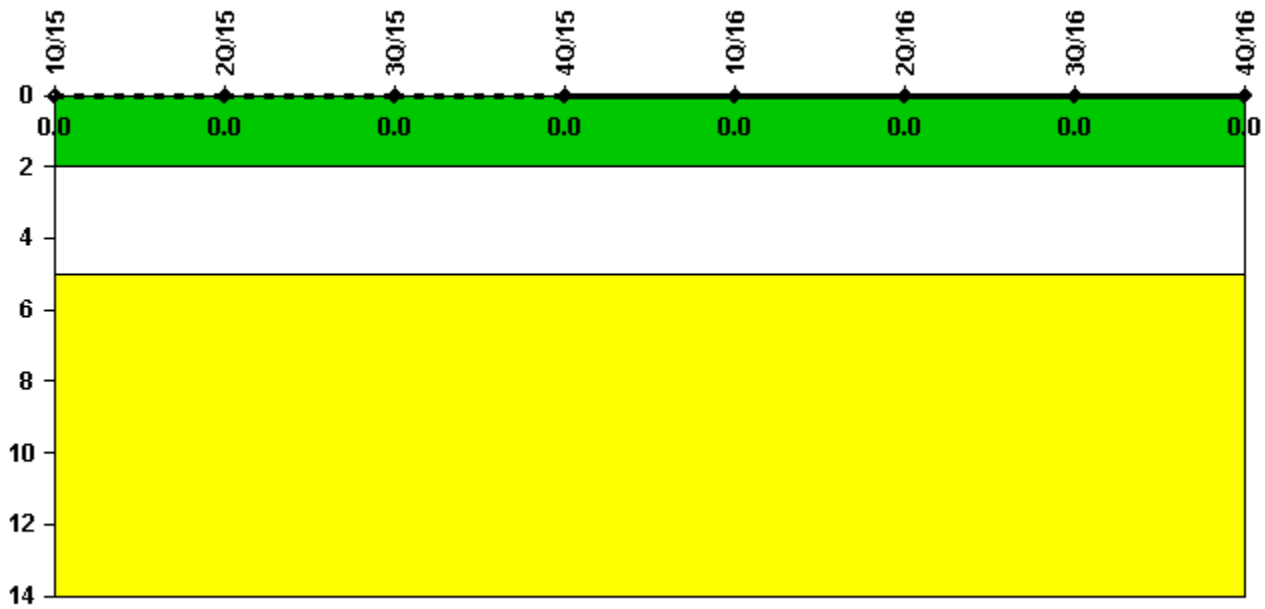
Thresholds: White < 94.0% Yellow < 90.0%

#### Notes

Alert & Notification System	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16
Successful siren-tests	947	948	949	948	949	948	946	945
Total sirens-tests	949	949	949	949	949	949	949	949
Indicator value	99.7%	99.8%	99.9%	99.9%	99.9%	99.9%	99.9%	99.8%

Licensee Comments: none

### Occupational Exposure Control Effectiveness



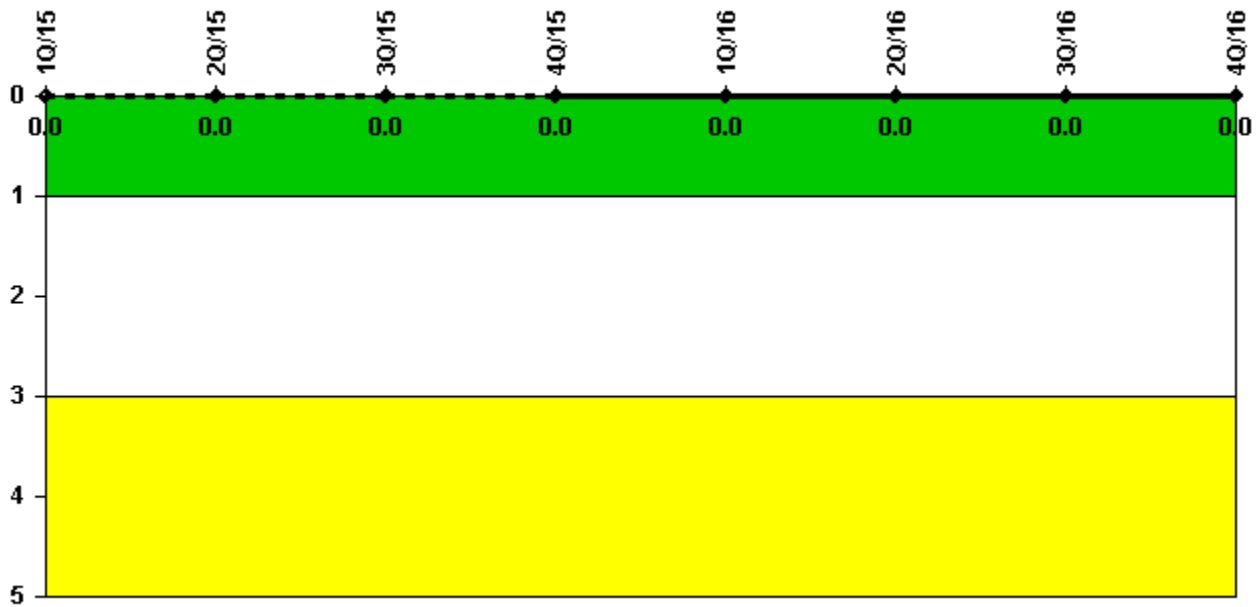
Thresholds: White > 2.0 Yellow > 5.0

#### Notes

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

Licensee Comments: none

### RETS/ODCM Radiological Effluent



Thresholds: White > 1.0 Yellow > 3.0

#### Notes

RETS/ODCM Radiological Effluent	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16
RETS/ODCM occurrences	0	0	0	0	0	0	0	0
Indicator value	0	0	0	0	0	0	0	0

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.



▲ [Action Matrix Summary](#) | [Inspection Findings Summary](#) | [PI Summary](#) | [Reactor Oversight Process](#)

*Last Modified: January 24, 2017*