

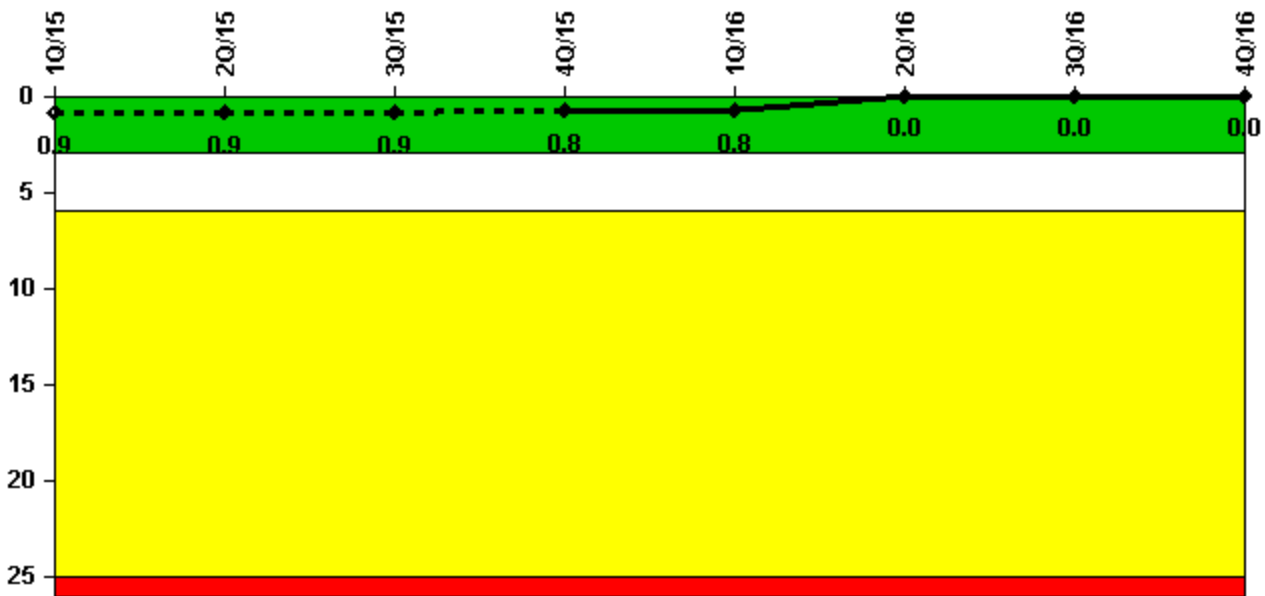
## Turkey Point 4

### 4Q/2016 Performance Indicators

The solid trend line represents the current reporting period.

Licensee's General Comments: none

#### Unplanned Scrams per 7000 Critical Hrs



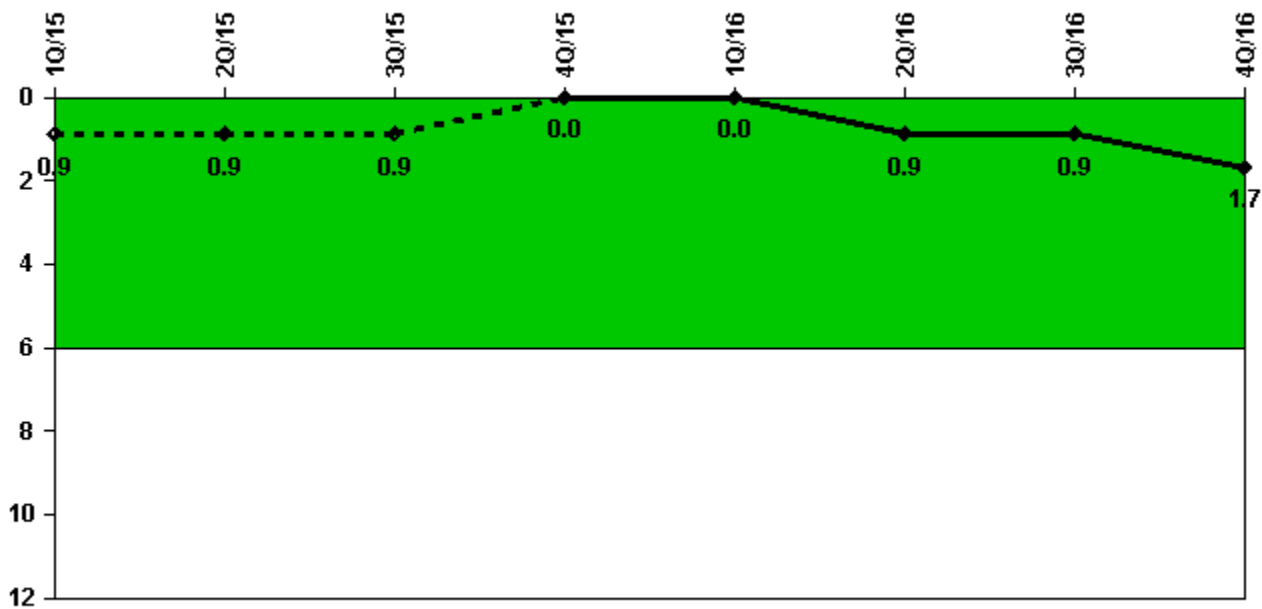
Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

#### 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	0	0	0	0
Critical hours	2159.0	2073.8	2208.0	2209.0	2112.4	1538.1	2208.0	2209.0
Indicator value	<b>0.9</b>	<b>0.9</b>	<b>0.9</b>	<b>0.8</b>	<b>0.8</b>	<b>0</b>	<b>0</b>	<b>0</b>

Licensee Comments: none

### Unplanned Power Changes per 7000 Critical Hrs



Thresholds: White > 6.0

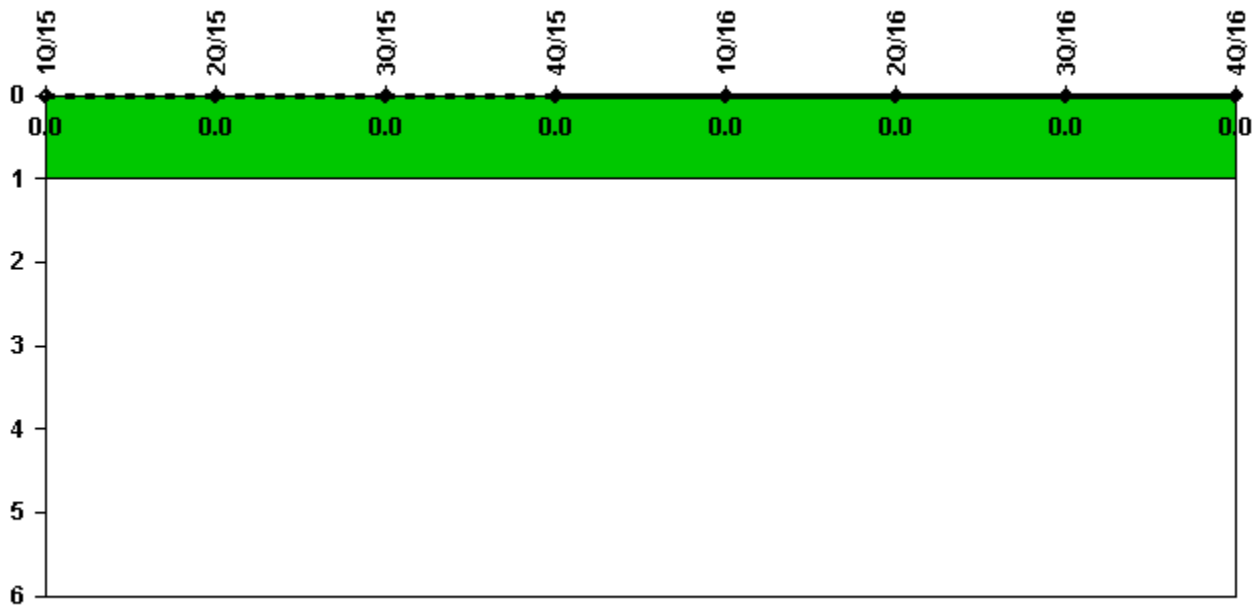
#### Notes

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	0	1.0	0	1.0
Critical hours	2159.0	2073.8	2208.0	2209.0	2112.4	1538.1	2208.0	2209.0
<b>Indicator value</b>	<b>0.9</b>	<b>0.9</b>	<b>0.9</b>	<b>0</b>	<b>0</b>	<b>0.9</b>	<b>0.9</b>	<b>1.7</b>

Licensee Comments:

2Q/16: Turkey Point Unit 4 performed an unplanned downpower on 5/19/2016 due to a EHC leak on the 4C MSR. Unit 4 returned to full power on 5/20/2016

### Unplanned Scrams with Complications



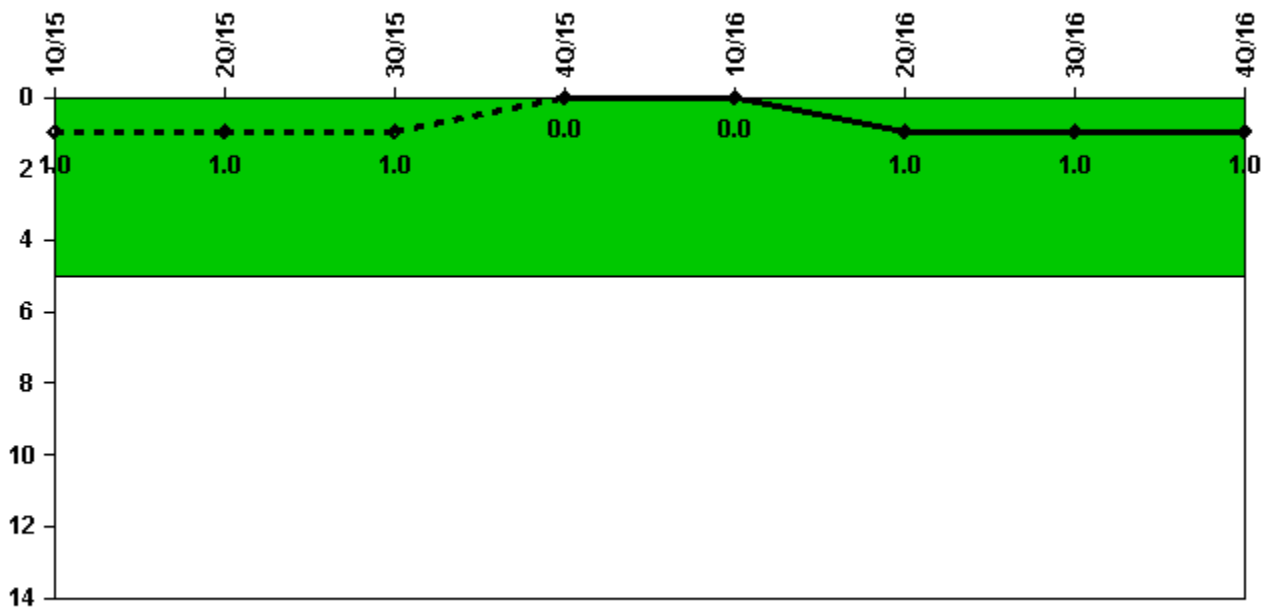
Thresholds: White > 1.0

#### 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

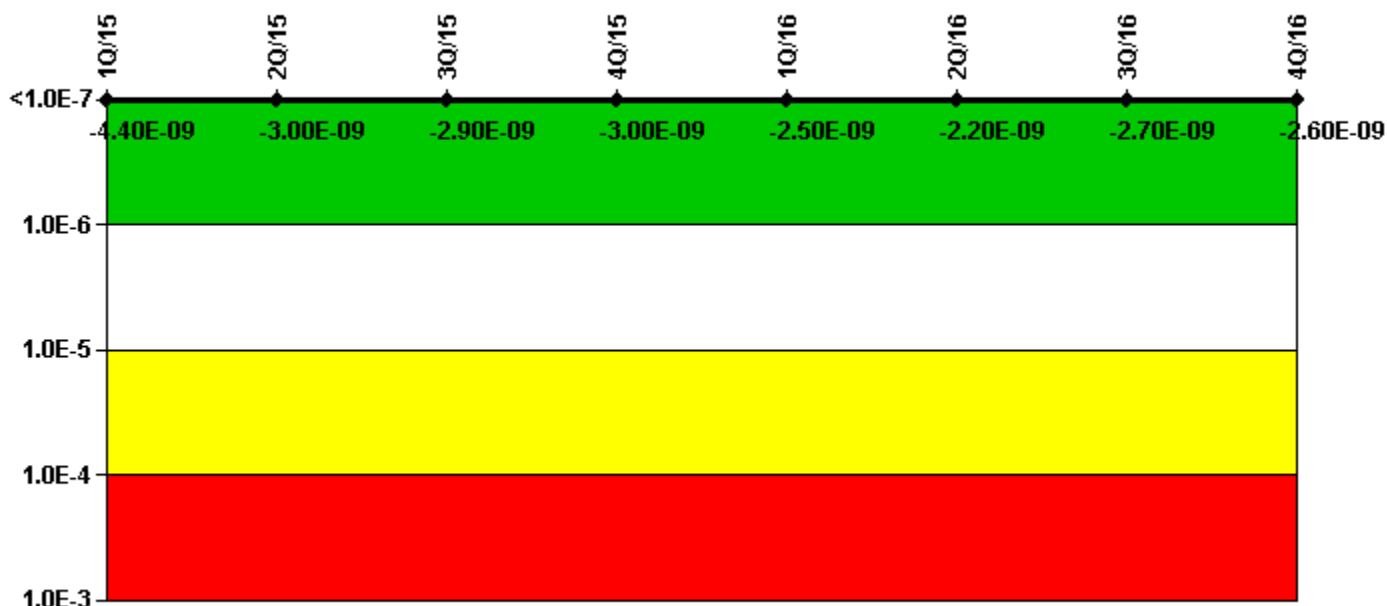
#### Notes

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	0	0	0	0	0	1	0	0
<b>Indicator value</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>

Licensee Comments:

2Q/16: Licensee Event Report, LER 2016-01-00, reports that Turkey Point Unit 4 during the five day period that the reactor protection system OTDT/OPDT Channel III was inoperable, the single failure criteria was not met, and as such, the specified safety function was lost, when more than one channel was inoperable (for approximately 4 hours).

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



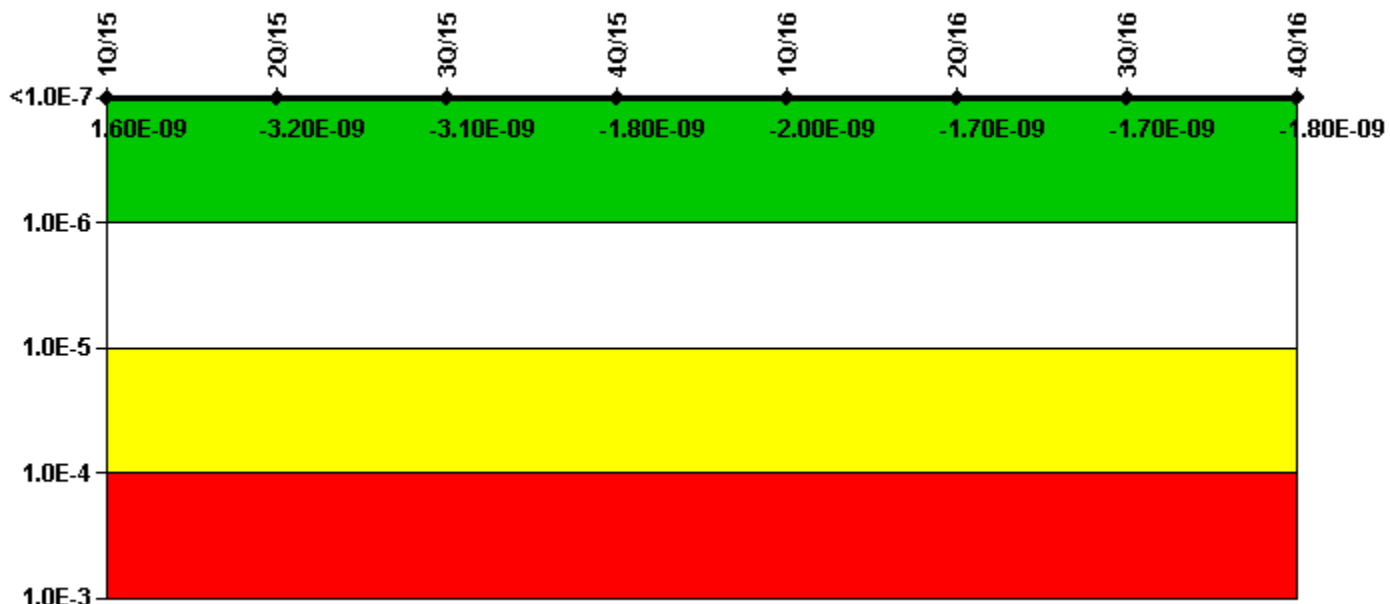
Thresholds: White > 1.00E-6 Yellow > 1.00E-5 Red > 1.00E-4

#### 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 ( $\Delta$ CDF)	7.33E-10	2.04E-09	2.09E-09	1.96E-09	2.08E-09	2.10E-09	1.84E-09	1.95E-09
URI ( $\Delta$ CDF)	-5.14E-09	-5.02E-09	-5.04E-09	-4.93E-09	-4.57E-09	-4.26E-09	-4.56E-09	-4.55E-09
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-4.40E-09	-3.00E-09	-2.90E-09	-3.00E-09	-2.50E-09	-2.20E-09	-2.70E-09	-2.60E-09

Licensee Comments: none

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



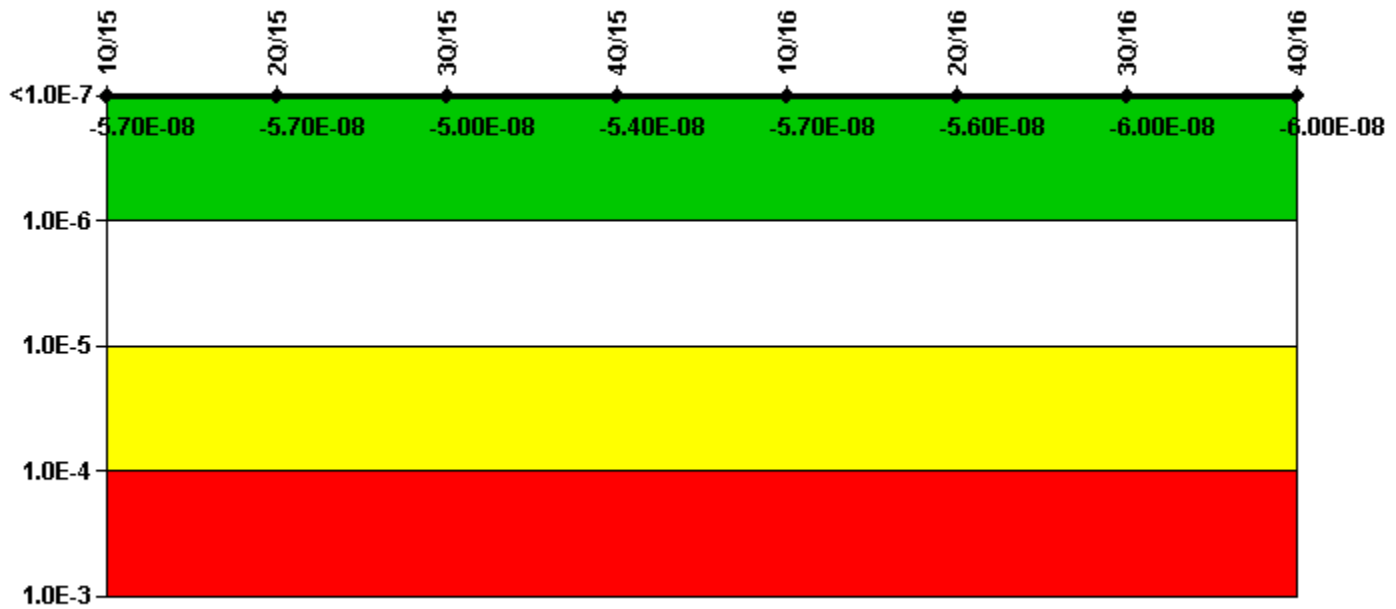
Thresholds: White > 1.00E-6 Yellow > 1.00E-5 Red > 1.00E-4

#### 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)	3.40E-09	-1.46E-09	-1.33E-09	-6.88E-11	-2.72E-10	3.82E-11	2.02E-11	-5.05E-11
URI ( $\Delta$ CDF)	-1.76E-09	-1.76E-09	-1.76E-09	-1.76E-09	-1.76E-09	-1.76E-09	-1.76E-09	-1.72E-09
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	1.60E-09	-3.20E-09	-3.10E-09	-1.80E-09	-2.00E-09	-1.70E-09	-1.70E-09	-1.80E-09

Licensee Comments: none

### Mitigating Systems Performance Index, Heat Removal System



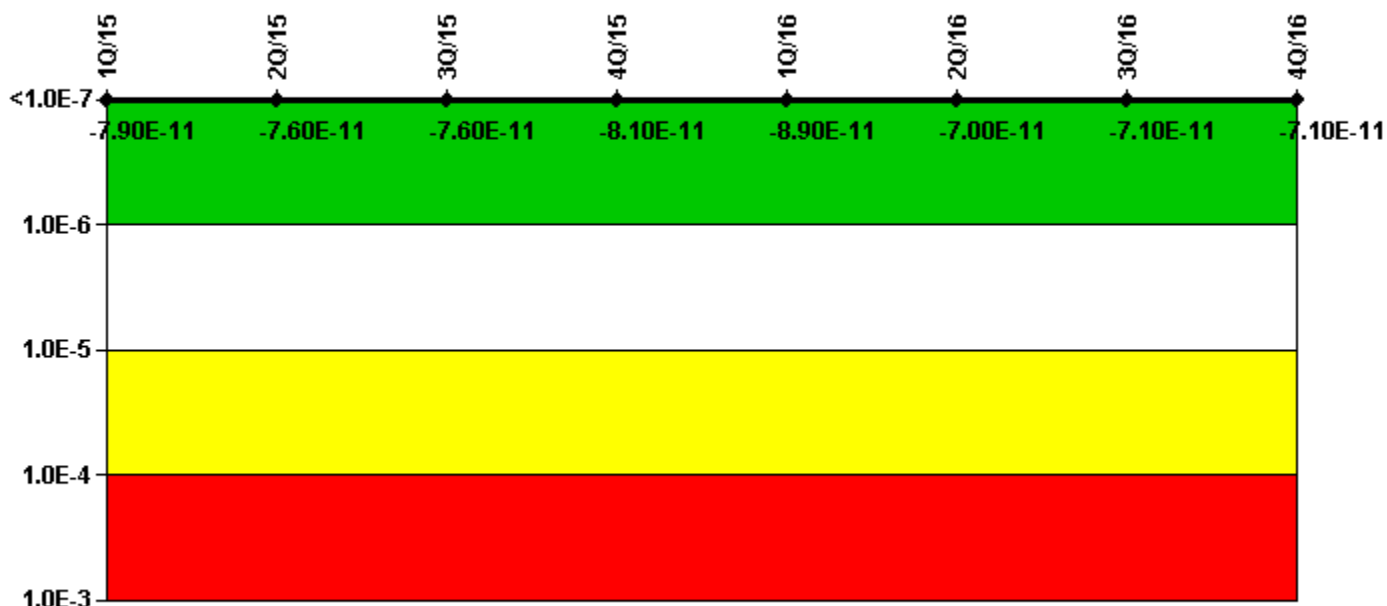
Thresholds: White > 1.00E-6 Yellow > 1.00E-5 Red > 1.00E-4

#### 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)	1.17E-08	1.21E-08	1.88E-08	1.48E-08	1.19E-08	1.22E-08	8.26E-09	8.13E-09
URI ( $\Delta$ CDF)	-6.89E-08	-6.90E-08	-6.90E-08	-6.90E-08	-6.85E-08	-6.84E-08	-6.84E-08	-6.84E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-5.70E-08	-5.70E-08	-5.00E-08	-5.40E-08	-5.70E-08	-5.60E-08	-6.00E-08	-6.00E-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

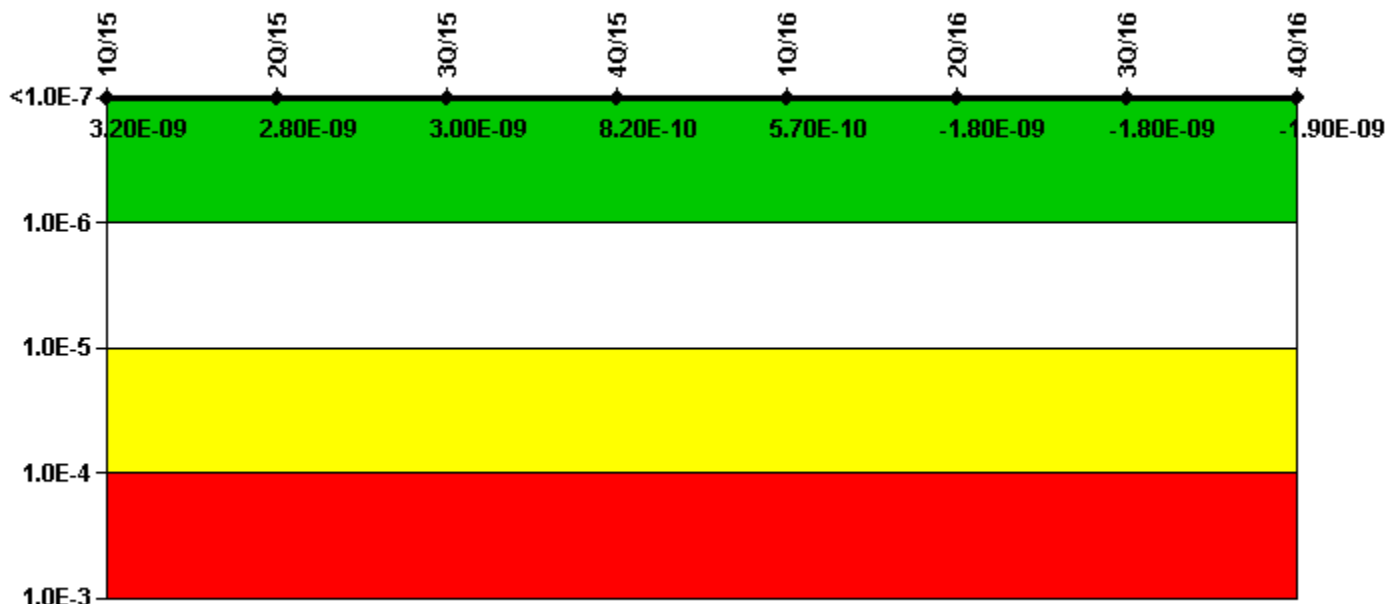
#### Notes

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)	-4.51E-12	-1.36E-12	-1.10E-12	-5.85E-12	-1.39E-11	4.33E-12	3.55E-12	3.35E-12
URI ( $\Delta$ CDF)	-7.47E-11	-7.47E-11	-7.47E-11	-7.47E-11	-7.47E-11	-7.47E-11	-7.47E-11	-7.47E-11
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-7.90E-11	-7.60E-11	-7.60E-11	-8.10E-11	-8.90E-11	-7.00E-11	-7.10E-11	-7.10E-11

Licensee Comments: none



### Mitigating Systems Performance Index, Cooling Water Systems



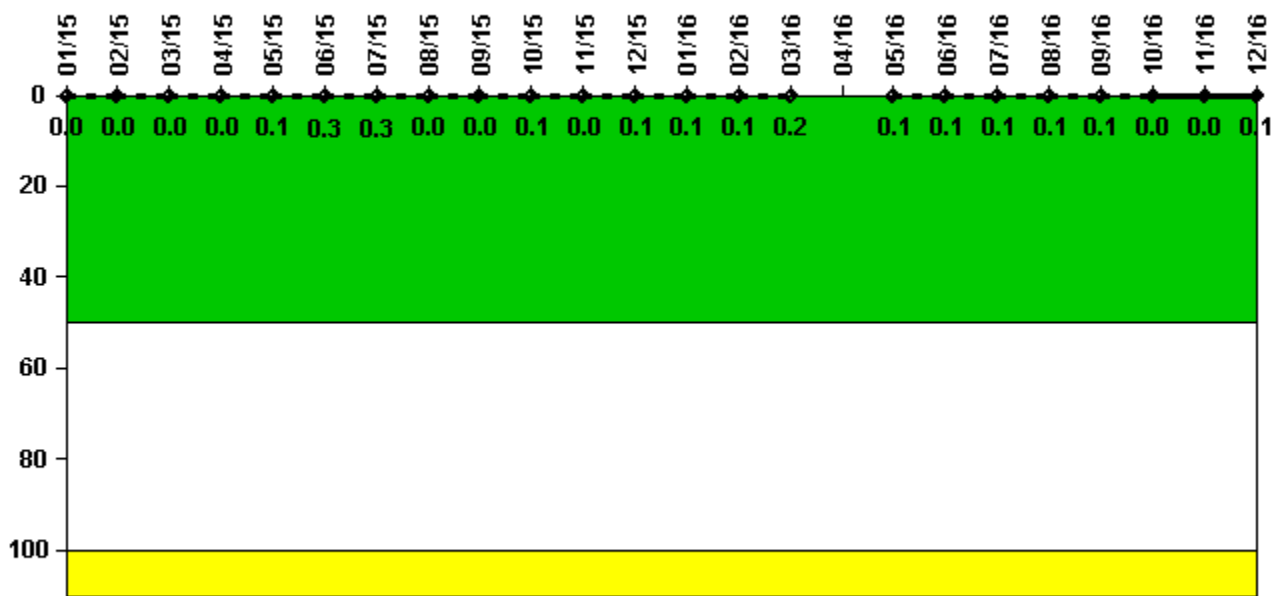
Thresholds: White > 1.00E-6 Yellow > 1.00E-5 Red > 1.00E-4

#### 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 (ΔCDF)	7.74E-09	7.33E-09	7.52E-09	5.34E-09	5.09E-09	2.74E-09	2.72E-09	2.67E-09
URI (ΔCDF)	-4.52E-09	-4.52E-09	-4.52E-09	-4.52E-09	-4.52E-09	-4.52E-09	-4.52E-09	-4.52E-09
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	3.20E-09	2.80E-09	3.00E-09	8.20E-10	5.70E-10	-1.80E-09	-1.80E-09	-1.90E-09

Licensee Comments: none

### Reactor Coolant System Activity



Thresholds: White > 50.0 Yellow > 100.0

#### Notes

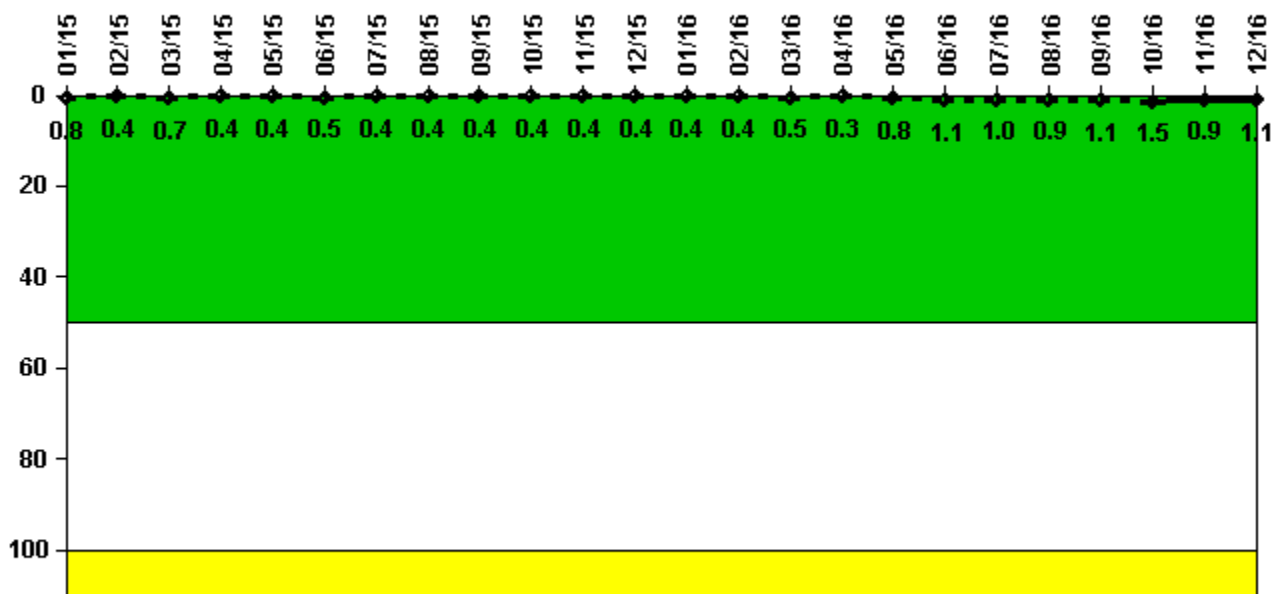
Reactor Coolant System Activity	1/15	2/15	3/15	4/15	5/15	6/15	7/15	8/15	9/15	10/15	11/15	12/15
Maximum activity	0.000100	0.000100	0.000100	0.000110	0.000240	0.000640	0.000850	0.000120	0.000120	0.000290	0.000100	0.000240
Technical specification limit	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Indicator value	0	0	0	0	0.1	0.3	0.3	0	0	0.1	0	0.1

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	0.000180	0.000140	0.000610	N/A	0.000320	0.000130	0.000130	0.000150	0.000150	0.000100	0.000100	0.000190
Technical specification limit	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Indicator value	0.1	0.1	0.2	N/A	0.1	0.1	0.1	0.1	0.1	0	0	0.1

Licensee Comments: none

### Reactor Coolant System Leakage



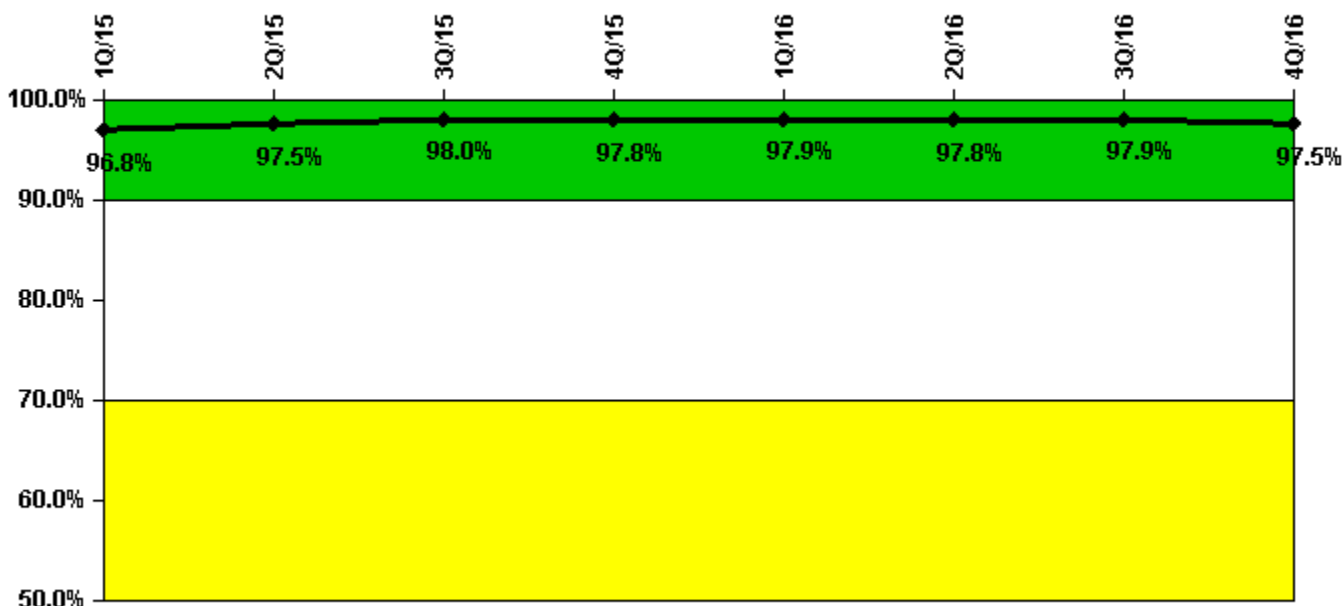
Thresholds: White > 50.0 Yellow > 100.0

#### 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	0.080	0.040	0.070	0.040	0.040	0.050	0.040	0.042	0.040	0.040	0.040	0.040
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>0.8</b>	<b>0.4</b>	<b>0.7</b>	<b>0.4</b>	<b>0.4</b>	<b>0.5</b>	<b>0.4</b>	<b>0.4</b>	<b>0.4</b>	<b>0.4</b>	<b>0.4</b>	<b>0.4</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	0.040	0.040	0.050	0.030	0.080	0.110	0.100	0.090	0.110	0.150	0.090	0.110
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>0.4</b>	<b>0.4</b>	<b>0.5</b>	<b>0.3</b>	<b>0.8</b>	<b>1.1</b>	<b>1.0</b>	<b>0.9</b>	<b>1.1</b>	<b>1.5</b>	<b>0.9</b>	<b>1.1</b>

Licensee Comments: none

### Drill/Exercise Performance



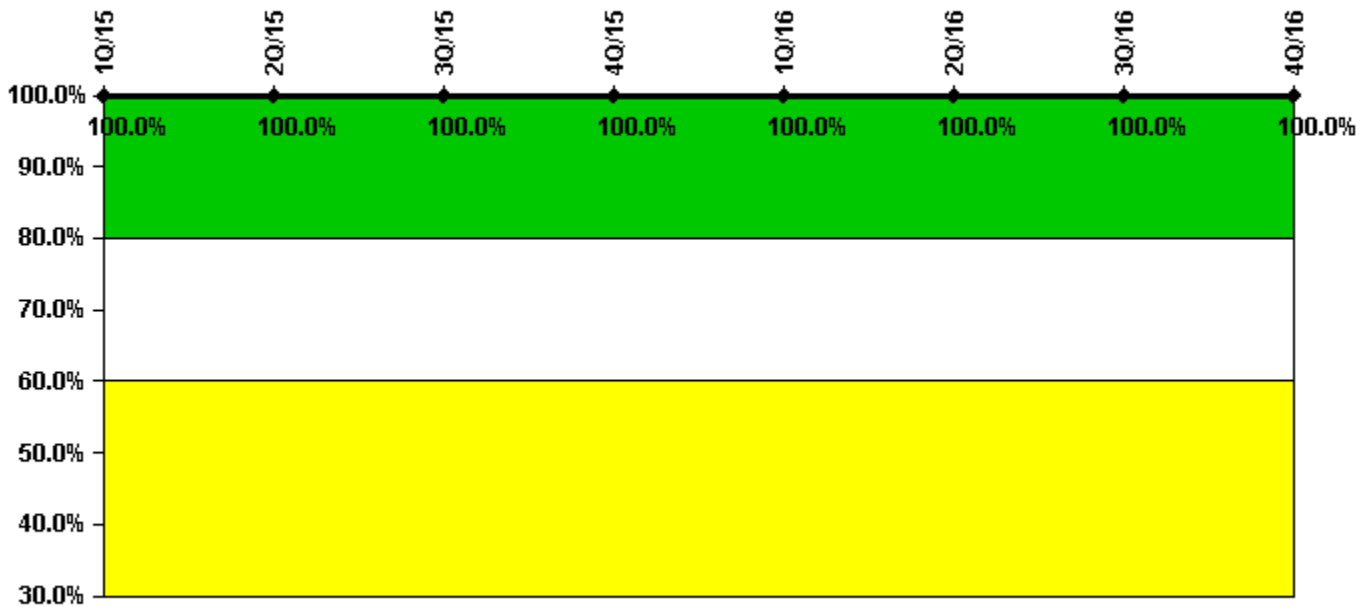
Thresholds: White < 90.0% Yellow < 70.0%

#### Notes

Drill/Exercise Performance	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16
Successful opportunities	29.0	33.0	40.0	14.0	44.0	4.0	26.0	40.0
Total opportunities	32.0	33.0	41.0	14.0	45.0	4.0	26.0	41.0
Indicator value	96.8%	97.5%	98.0%	97.8%	97.9%	97.8%	97.9%	97.5%

Licensee Comments: none

### ERO Drill Participation



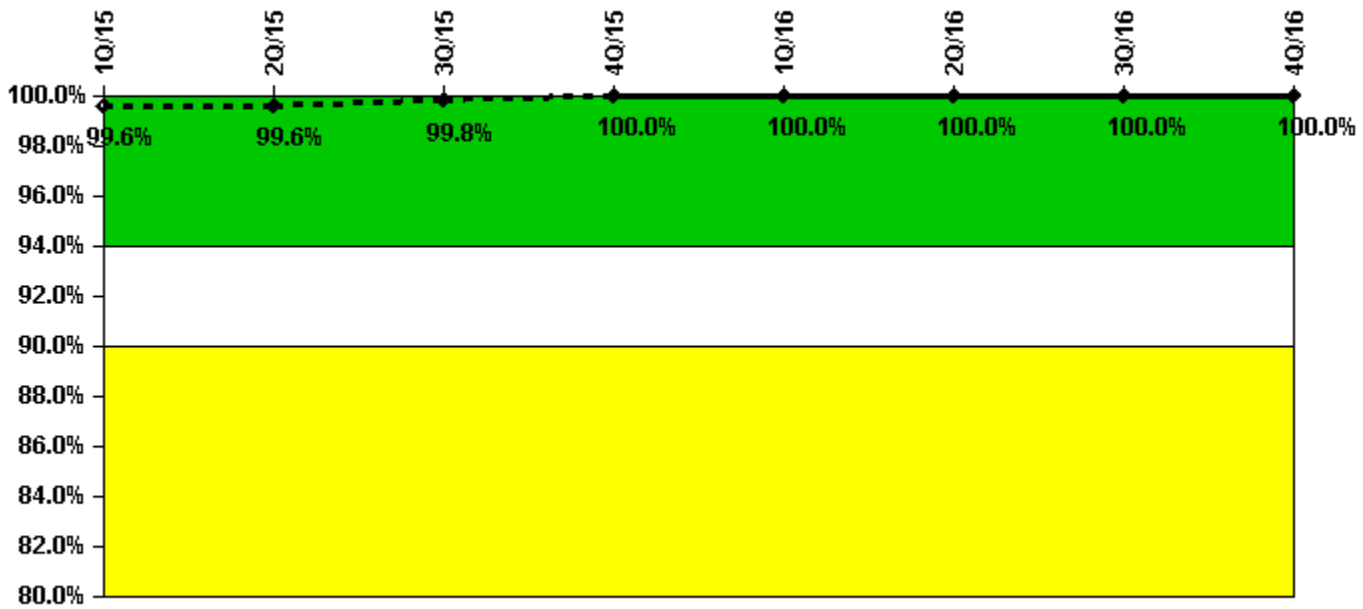
Thresholds: White < 80.0% Yellow < 60.0%

#### Notes

ERO Drill Participation	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16
Participating Key personnel	102.0	106.0	106.0	107.0	102.0	100.0	100.0	103.0
Total Key personnel	102.0	106.0	106.0	107.0	102.0	100.0	100.0	103.0
Indicator value	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Licensee Comments: none

### Alert & Notification System



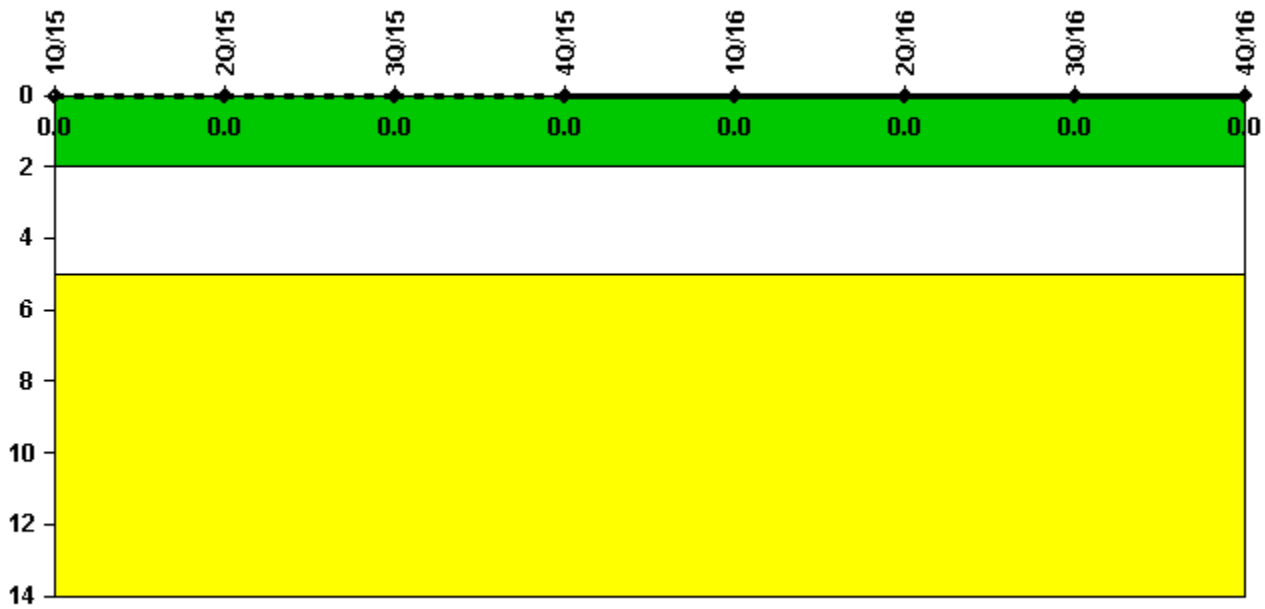
Thresholds: White < 94.0% Yellow < 90.0%

#### Notes

Alert & Notification System	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16
Successful siren-tests	329	329	376	376	336	384	336	336
Total sirens-tests	329	329	376	376	336	384	336	336
Indicator value	99.6%	99.6%	99.8%	100.0%	100.0%	100.0%	100.0%	100.0%

Licensee Comments: none

### Occupational Exposure Control Effectiveness



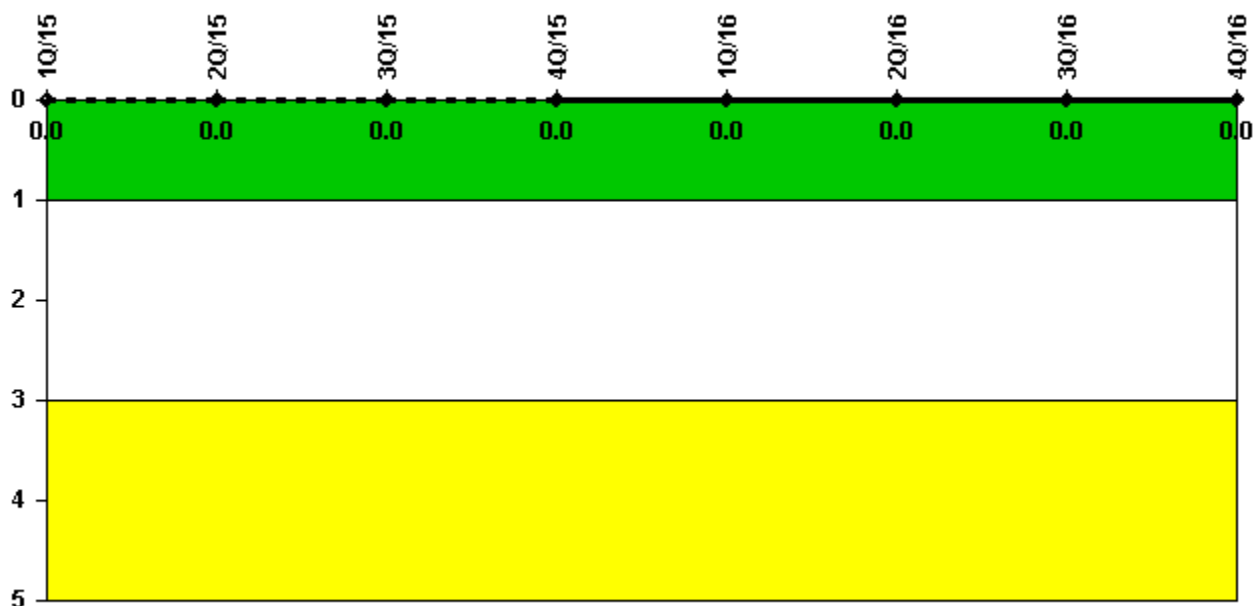
Thresholds: White > 2.0 Yellow > 5.0

#### 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*