

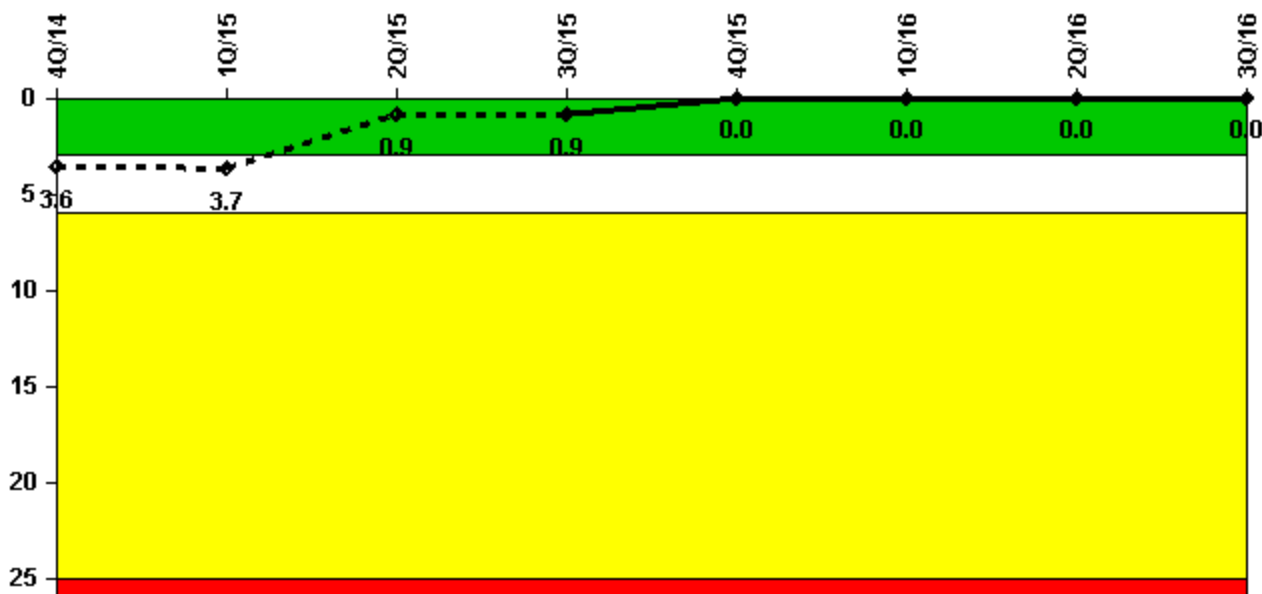
# Salem 1

## 3Q/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

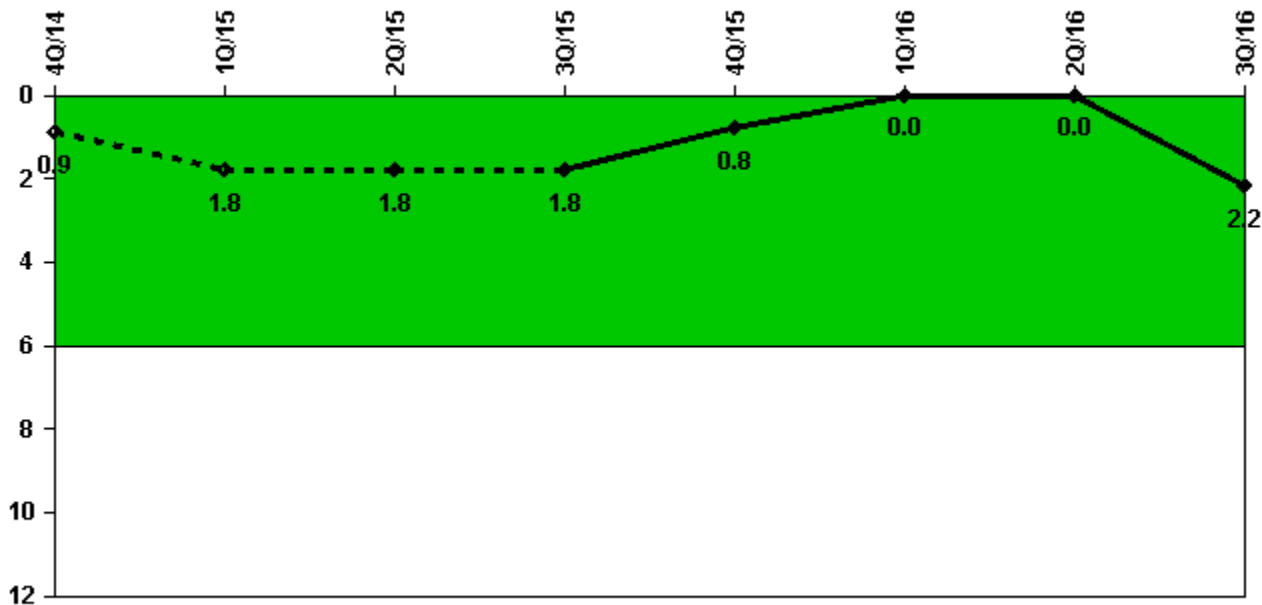
Unplanned Scrams per 7000 Critical Hrs	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16
Unplanned scrams	1.0	0	0	0	0	0	0	0
Critical hours	1422.1	2006.4	2184.0	2208.0	2209.0	2183.0	332.0	1531.6
<b>Indicator value</b>	<b>3.6</b>	<b>3.7</b>	<b>0.9</b>	<b>0.9</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

Licensee Comments:

4Q/14: LER 272/2014-006-00. A root cause evaluation is in progress to evaluate the 10/19 Scram that occurred prior to 1R23 due to the MPT Phase B. This trip caused Unit 1 to enter NRC Increased Regulator Response Band (White) due to a PI value greater than 3.0. The root cause will be used to support the NRC 95-001 Degraded Initiating Events Cornerstone Inspection. The actions from the root cause evaluation will be used to minimize risk of exceeding this PI in the future. The Unit 1 RCE will apply to both Salem Units.

4Q/14: LER 272/2014-005-00

### Unplanned Power Changes per 7000 Critical Hrs



Thresholds: White > 6.0

#### Notes

Unplanned Power Changes per 7000 Critical Hrs	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16
Unplanned power changes	1.0	1.0	0	0	0	0	0	2.0
Critical hours	1422.1	2006.4	2184.0	2208.0	2209.0	2183.0	332.0	1531.6
<b>Indicator value</b>	<b>0.9</b>	<b>1.8</b>	<b>1.8</b>	<b>1.8</b>	<b>0.8</b>	<b>0</b>	<b>0</b>	<b>2.2</b>

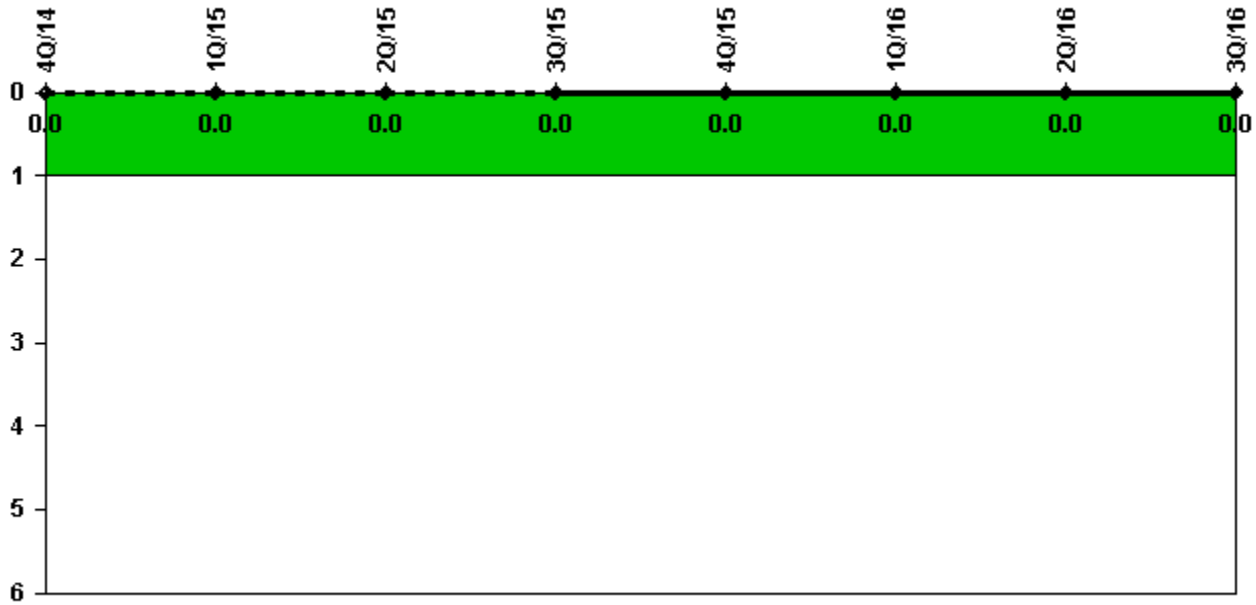
#### Licensee Comments:

3Q/15: On 9/4/15, NRC issued Emergency License Amendment Request (LAR) No. 310, which removed the pressurizer power operated relief valve position indication from the accident monitoring instrumentation tech specs. Issuance of this emergency LAR eliminated the need to perform a tech spec required shutdown due to a PART 21 issue associated with position indication limit switches.

4Q/14: Revised 11/2014 Unplanned power changes to include 11/27 emergent downpower.

4Q/14: A root cause evaluation is in progress to evaluate the 10/19 Scram that occurred prior to 1R23 due to the MPT Phase B. This trip caused Unit 1 to enter NRC Increased Regulator Response Band (White) due to a PI value greater than 3.0. The root cause will be used to support the NRC 95-001 Degraded Initiating Events Cornerstone Inspection. The actions from the root cause evaluation will be used to minimize risk of exceeding this PI in the future. The Unit 1 RCE will apply to both Salem Units.

### Unplanned Scrams with Complications



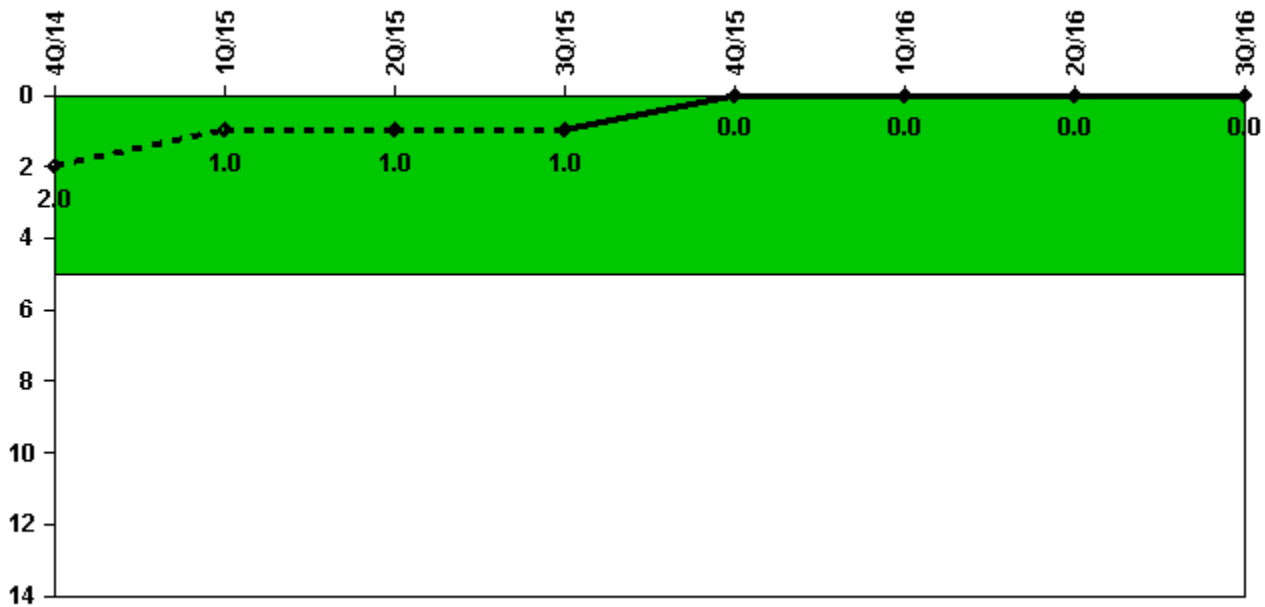
Thresholds: White > 1.0

#### Notes

Unplanned Scrams with Complications	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/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)	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16
Safety System Functional Failures	1	0	0	0	0	0	0	0
<b>Indicator value</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

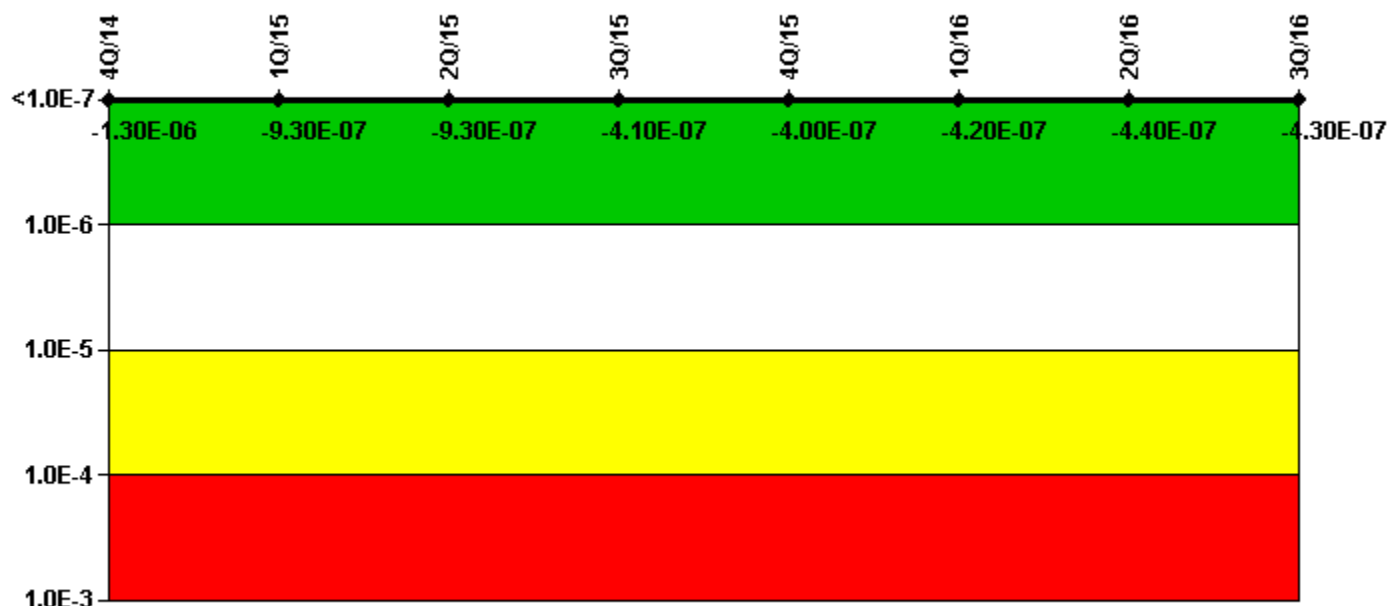
Licensee Comments:

3Q/15: LER 272/2015-001-002 - Evaluation determined that a SSFF did not occur, therefore PSEG is removing the 10 CFR 50.73(a)(2)(v)(C) reporting criterion from the LER, and has removed the 1Q15 SSFF from the MS05 Performance Indicator. This change does not cause a change in PI color, which remains green.

1Q/15: LER 272/2015-001

4Q/14: 10/2014 SSFF PI Data revised to include the required LER Number (LER 272/2014-005-00)

### 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/14	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16
UAI ( $\Delta$ CDF)	-1.62E-07	-1.66E-07	-1.66E-07	-1.42E-07	-1.42E-07	-1.42E-07	-1.41E-07	-1.40E-07
URI ( $\Delta$ CDF)	-1.12E-06	-7.65E-07	-7.60E-07	-2.65E-07	-2.63E-07	-2.76E-07	-2.96E-07	-2.93E-07
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-1.30E-06	-9.30E-07	-9.30E-07	-4.10E-07	-4.00E-07	-4.20E-07	-4.40E-07	-4.30E-07

#### Licensee Comments:

3Q/16: Risk Cap Invoked.

2Q/16: Risk Cap Invoked.

1Q/16: Risk Cap Invoked.

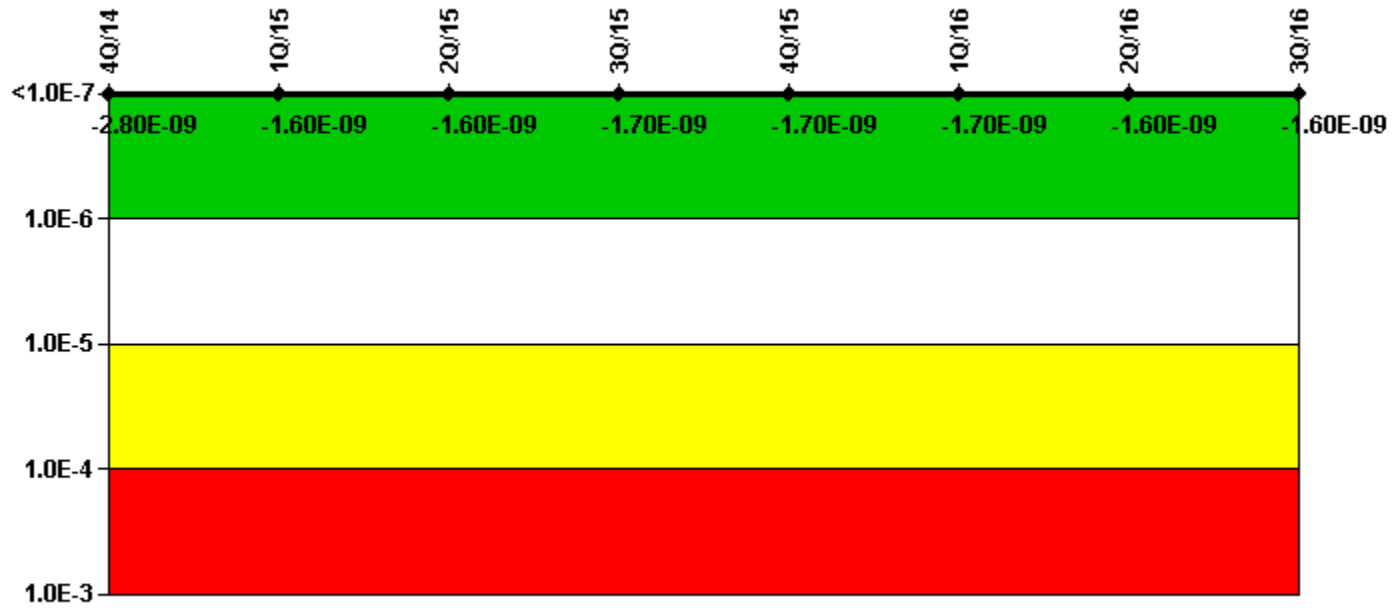
4Q/15: Risk Cap Invoked.

3Q/15: Risk Cap Invoked.

2Q/15: 2Q12 Through 4Q14 data was revised due to an error in the demand and run time calculations. Following the changes, this PI remained green during all time periods, however the risk cap was invoked from 2Q12 through 3Q13.

1Q/15: Changed PRA Parameter(s). Revised MSPI basis data due to incorrect accounting of post maintenance testing

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



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

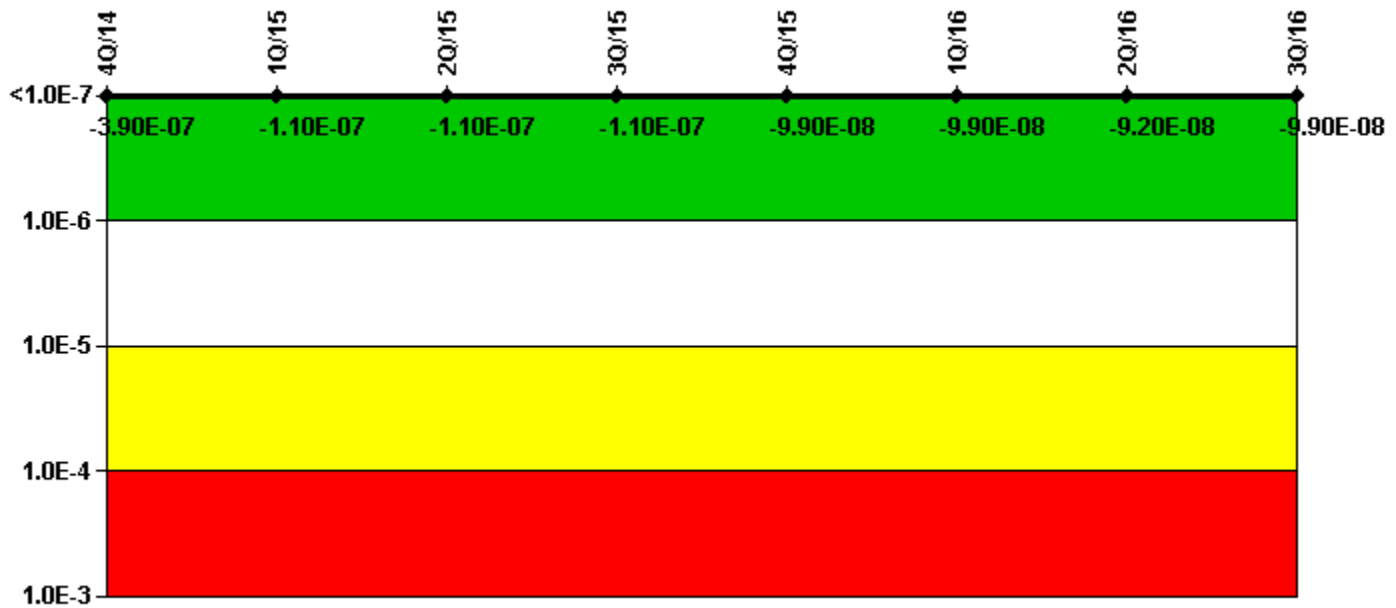
#### Notes

Mitigating Systems Performance Index, High Pressure Injection System	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16
UAI ( $\Delta$ CDF)	1.88E-10	-2.96E-10	-3.00E-10	-4.19E-10	-4.20E-10	-4.30E-10	-4.14E-10	-4.03E-10
URI ( $\Delta$ CDF)	-3.03E-09	-1.32E-09	-1.30E-09	-1.29E-09	-1.28E-09	-1.25E-09	-1.22E-09	-1.19E-09
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-2.80E-09	-1.60E-09	-1.60E-09	-1.70E-09	-1.70E-09	-1.70E-09	-1.60E-09	-1.60E-09

Licensee Comments:

2Q/15: 1Q13 through 4Q14 data was revised due to an error in the demand and run time calculations. This PI remained green during all time periods following the changes,

### Mitigating Systems Performance Index, Heat Removal System



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

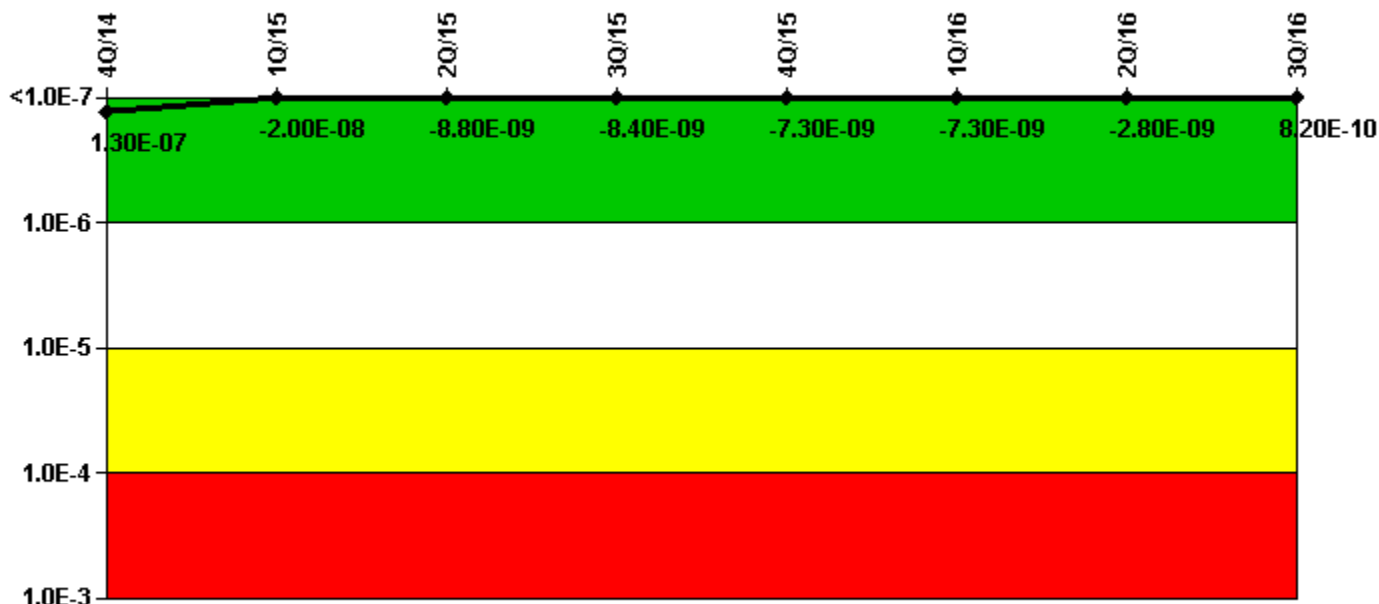
#### Notes

Mitigating Systems Performance Index, Heat Removal System	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16
UAI ( $\Delta$ CDF)	-6.21E-08	-1.72E-08	-1.72E-08	-1.72E-08	-1.72E-08	-1.72E-08	-1.72E-08	-1.72E-08
URI ( $\Delta$ CDF)	-3.30E-07	-9.59E-08	-9.15E-08	-8.85E-08	-8.18E-08	-8.18E-08	-7.46E-08	-8.19E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-3.90E-07	-1.10E-07	-1.10E-07	-1.10E-07	-9.90E-08	-9.90E-08	-9.20E-08	-9.90E-08

Licensee Comments:

2Q/15: 3Q13 through 4Q14 data was revised due to an error in the demand and run time calculations. This PI remained green during all time periods following the changes,

### 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/14	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16
UAI ( $\Delta$ CDF)	-9.16E-09	-1.06E-10	9.12E-09	9.12E-09	1.03E-08	1.02E-08	1.39E-08	1.88E-08
URI ( $\Delta$ CDF)	1.42E-07	-1.95E-08	-1.79E-08	-1.76E-08	-1.76E-08	-1.76E-08	-1.67E-08	-1.80E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	1.30E-07	-2.00E-08	-8.80E-09	-8.40E-09	-7.30E-09	-7.30E-09	-2.80E-09	8.20E-10

Licensee Comments:

2Q/15: 2Q14 through 4Q14 data was revised due to an error in the demand and run time calculations. This PI remained green during all time periods following the changes,



### Mitigating Systems Performance Index, Cooling Water Systems



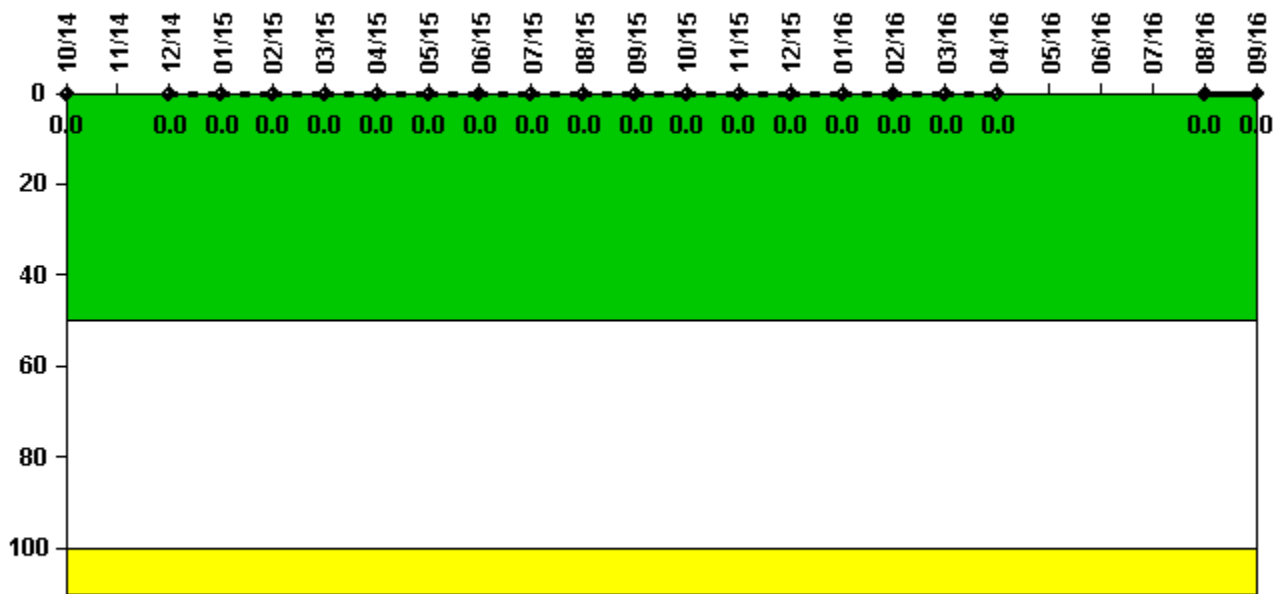
Thresholds: White > 1.00E-6 Yellow > 1.00E-5 Red > 1.00E-4

#### Notes

Mitigating Systems Performance Index, Cooling Water Systems	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16
UAI ( $\Delta$ CDF)	7.53E-08	2.98E-08	-2.82E-08	-2.81E-08	-2.81E-08	-2.81E-08	-2.81E-08	-2.81E-08
URI ( $\Delta$ CDF)	-4.96E-08	-3.66E-08	-3.66E-08	-3.66E-08	-3.66E-08	-3.66E-08	-3.66E-08	-3.66E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	2.60E-08	-6.80E-09	-6.50E-08	-6.50E-08	-6.50E-08	-6.50E-08	-6.50E-08	-6.50E-08

Licensee Comments: none

### Reactor Coolant System Activity



Thresholds: White > 50.0 Yellow > 100.0

#### Notes

Reactor Coolant System Activity	10/14	11/14	12/14	1/15	2/15	3/15	4/15	5/15	6/15	7/15	8/15	9/15
Maximum activity	0.000298	N/A	0.000059	0.000072	0.000065	0.000062	0.000069	0.000135	0.000074	0.000216	0.000077	0.000084
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	N/A	0	0	0	0	0	0	0	0	0	0

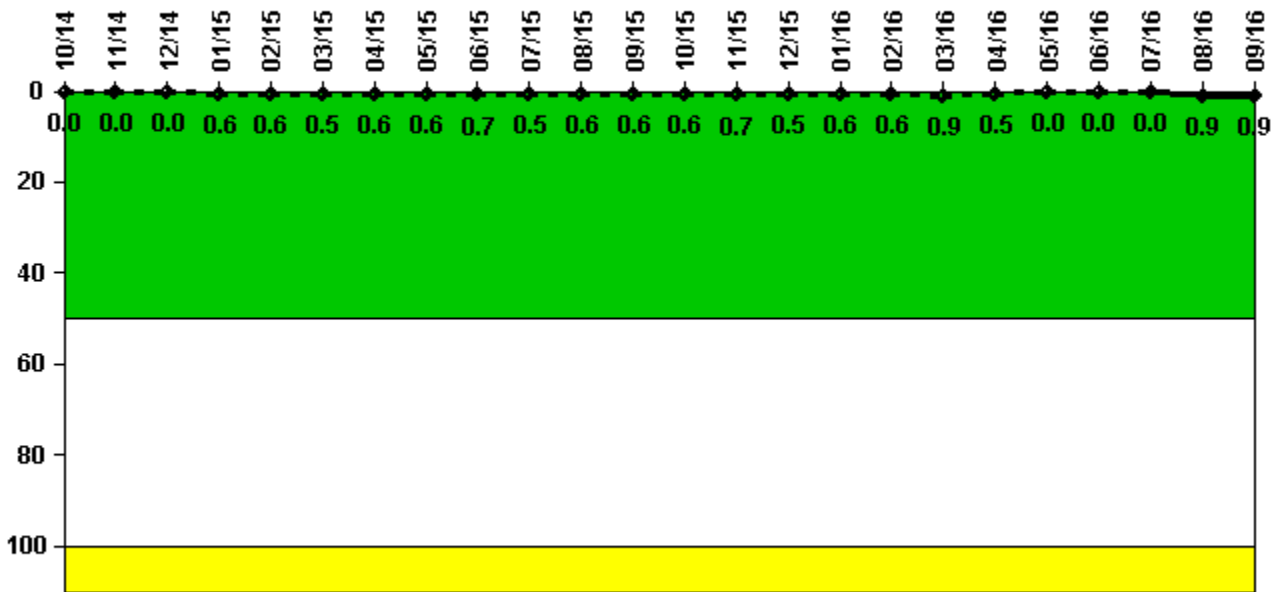
Reactor Coolant System Activity	10/15	11/15	12/15	1/16	2/16	3/16	4/16	5/16	6/16	7/16	8/16	9/16
Maximum activity	0.000101	0.000148	0.000102	0.000187	0.000142	0.000097	0.000183	N/A	N/A	N/A	0.000050	0.000100
Technical specification limit	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Indicator value	0	0	0	0	0	0	0	N/A	N/A	N/A	0	0

#### Licensee Comments:

6/15: Revised 11/2014 RCS activity PI to N/A. Required Steady State conditions did not occur during the month. There was no impact on PI color as a result of this change.

12/14: Revised 11/2014 RCS activity Pi to N/A. Required Steady State conditions did not occur during the month.

### Reactor Coolant System Leakage



Thresholds: White > 50.0 Yellow > 100.0

#### Notes

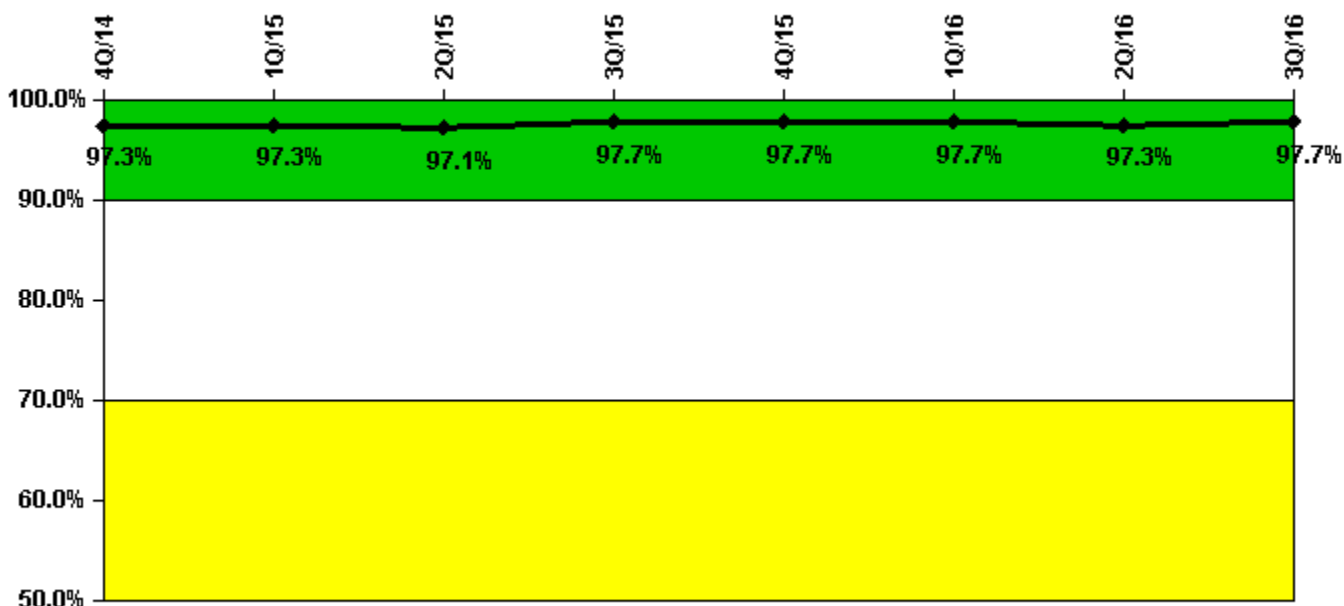
Reactor Coolant System Leakage	10/14	11/14	12/14	1/15	2/15	3/15	4/15	5/15	6/15	7/15	8/15	9/15
Maximum leakage	0	0	0	0.056	0.058	0.050	0.062	0.057	0.068	0.050	0.057	0.055
Technical specification limit	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Indicator value	0	0	0	0.6	0.6	0.5	0.6	0.6	0.7	0.5	0.6	0.6

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	0.058	0.071	0.052	0.058	0.055	0.090	0.051	0	0	0	0.088	0.085
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	0.6	0.7	0.5	0.6	0.6	0.9	0.5	0	0	0	0.9	0.9

Licensee Comments: none

### Drill/Exercise Performance



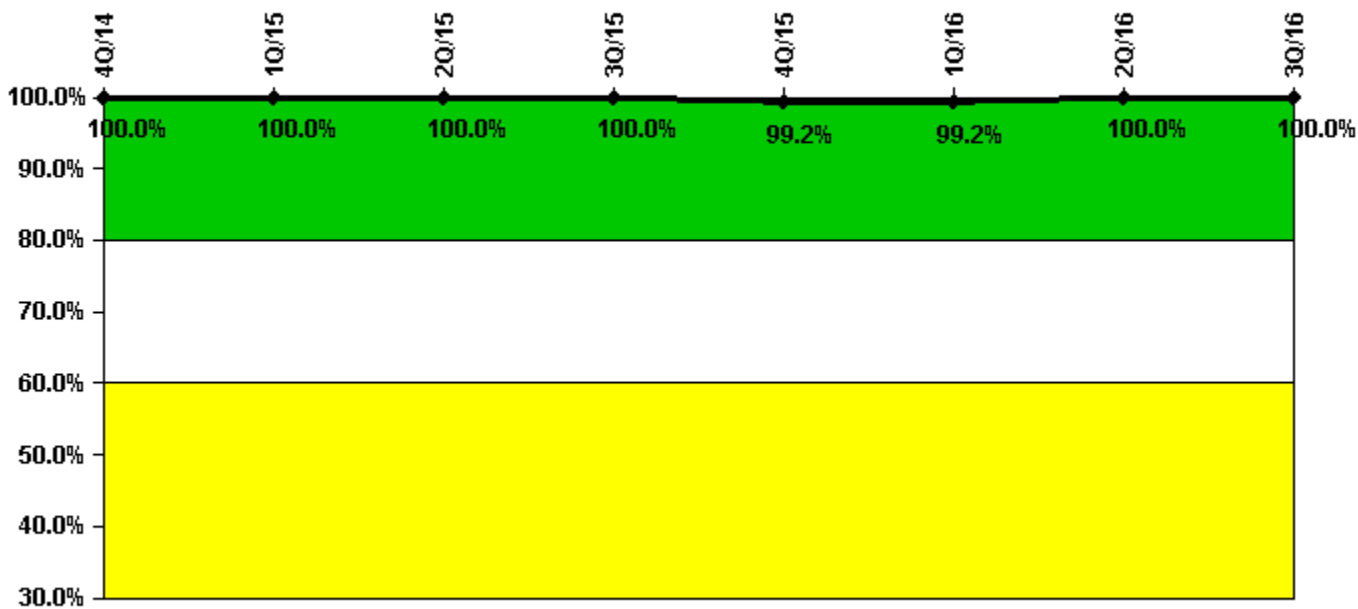
Thresholds: White < 90.0% Yellow < 70.0%

#### Notes

Drill/Exercise Performance	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16
Successful opportunities	27.0	34.0	29.0	41.0	31.0	38.0	34.0	64.0
Total opportunities	27.0	36.0	30.0	41.0	32.0	39.0	36.0	64.0
Indicator value	97.3%	97.3%	97.1%	97.7%	97.7%	97.7%	97.3%	97.7%

Licensee Comments: none

### ERO Drill Participation



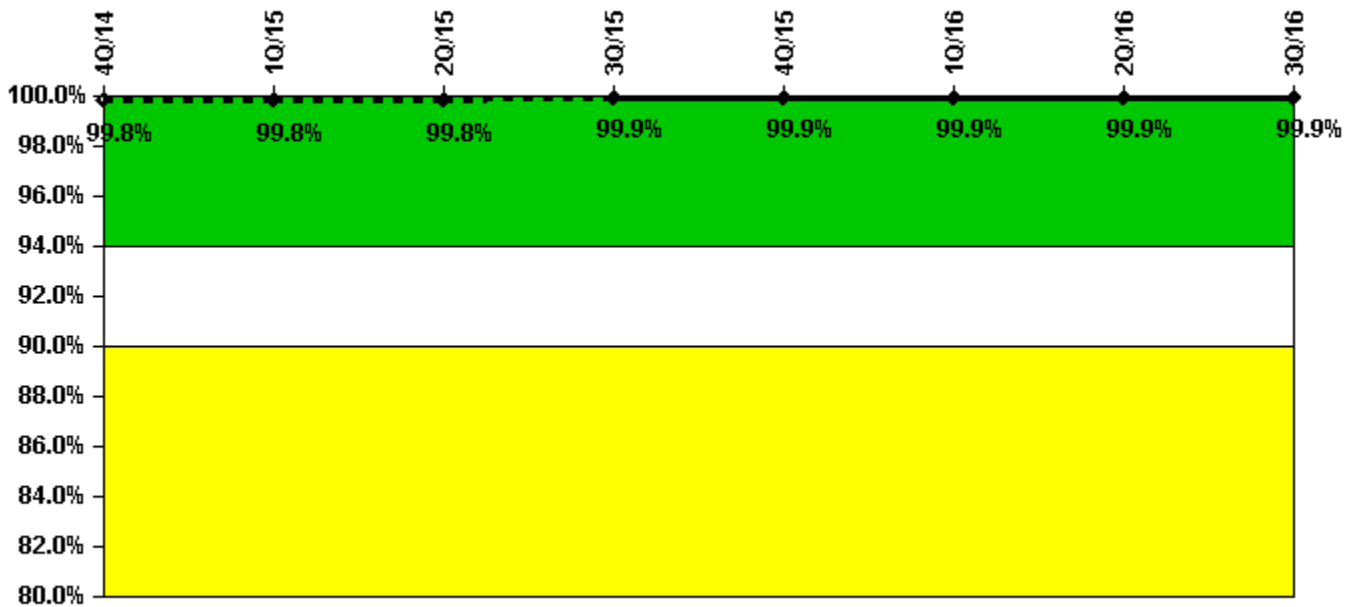
Thresholds: White < 80.0% Yellow < 60.0%

#### Notes

ERO Drill Participation	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16
Participating Key personnel	120.0	116.0	119.0	125.0	119.0	119.0	118.0	126.0
Total Key personnel	120.0	116.0	119.0	125.0	120.0	120.0	118.0	126.0
Indicator value	100.0%	100.0%	100.0%	100.0%	99.2%	99.2%	100.0%	100.0%

Licensee Comments: none

### Alert & Notification System



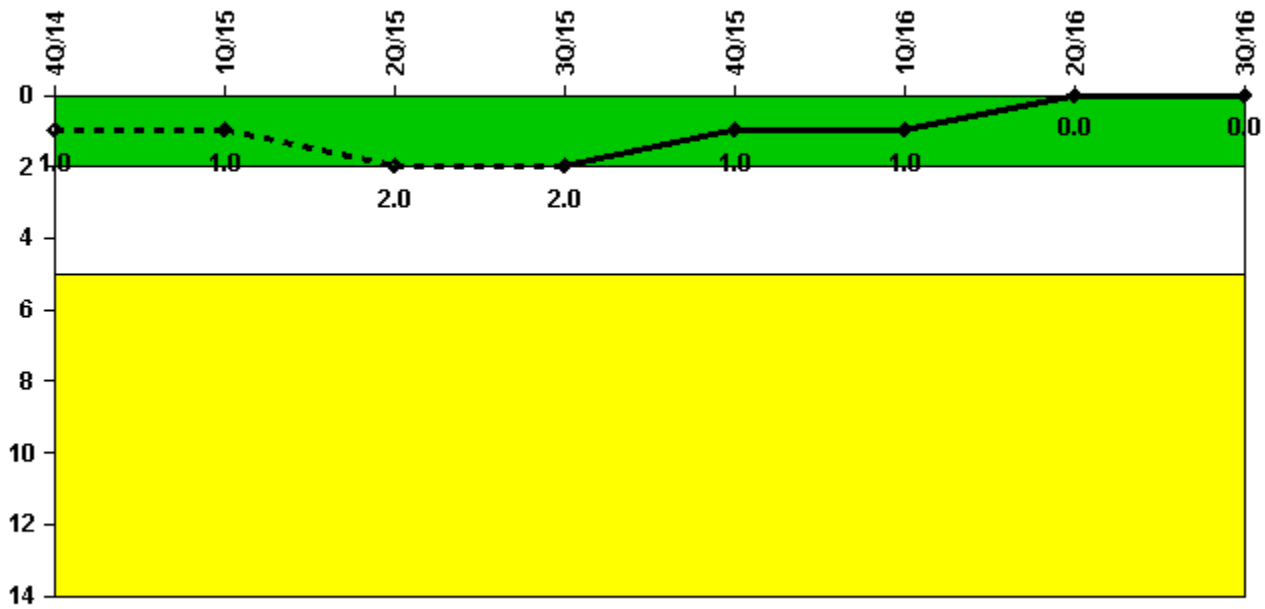
Thresholds: White < 94.0% Yellow < 90.0%

#### Notes

Alert & Notification System	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16
Successful siren-tests	497	497	497	496	496	497	497	496
Total sirens-tests	497	497	497	497	497	497	497	497
Indicator value	99.8%	99.8%	99.8%	99.9%	99.9%	99.9%	99.9%	99.9%

Licensee Comments: none

### Occupational Exposure Control Effectiveness



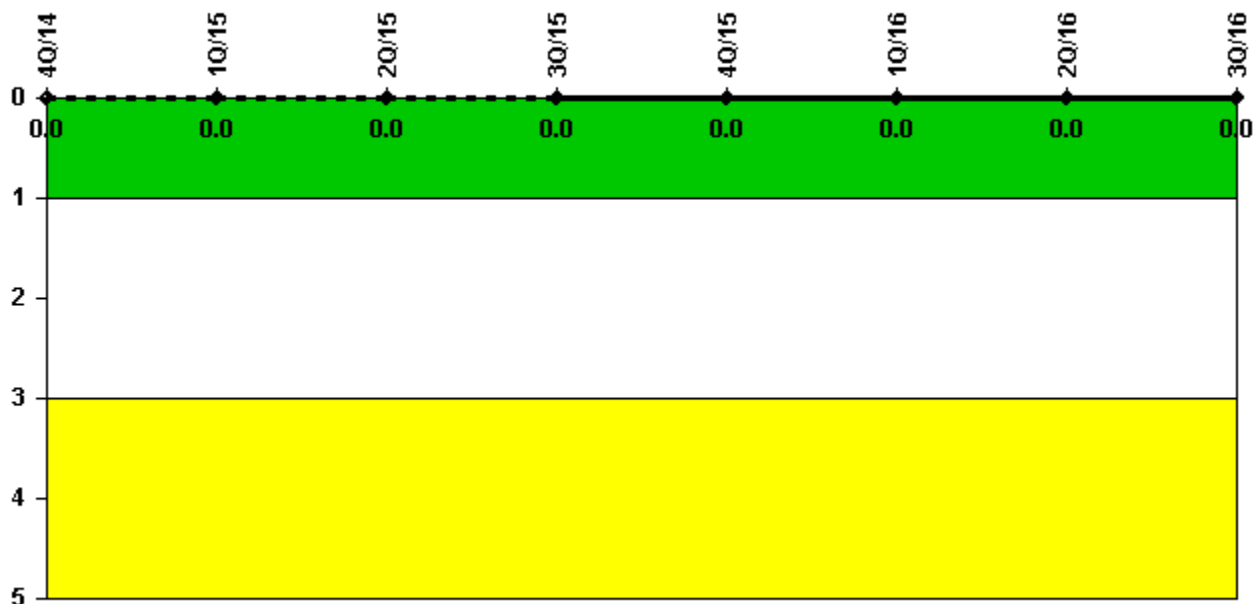
Thresholds: White > 2.0 Yellow > 5.0

#### Notes

Occupational Exposure Control Effectiveness	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16
High radiation area occurrences	1	0	1	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>1</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>1</b>	<b>1</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	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16
RETS/ODCM 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

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: October 23, 2016*