

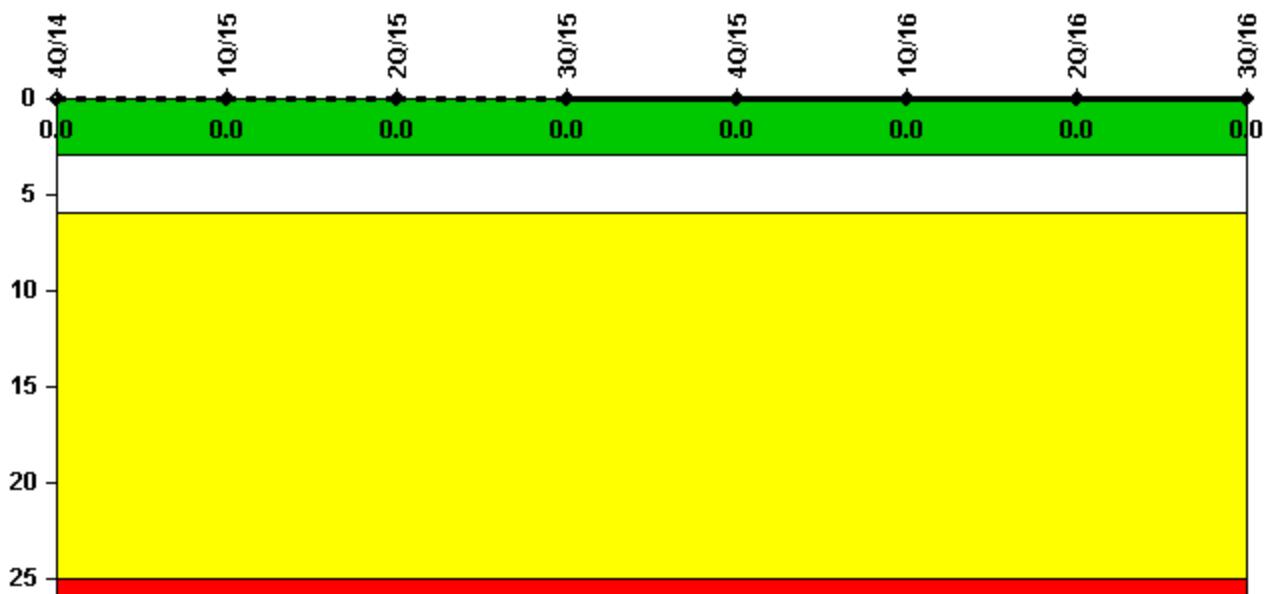
## Duane Arnold

### 3Q/2016 Performance Indicators

The solid trend line represents the current reporting period.

Licensee's General Comments: none

#### Unplanned Scrams per 7000 Critical Hrs



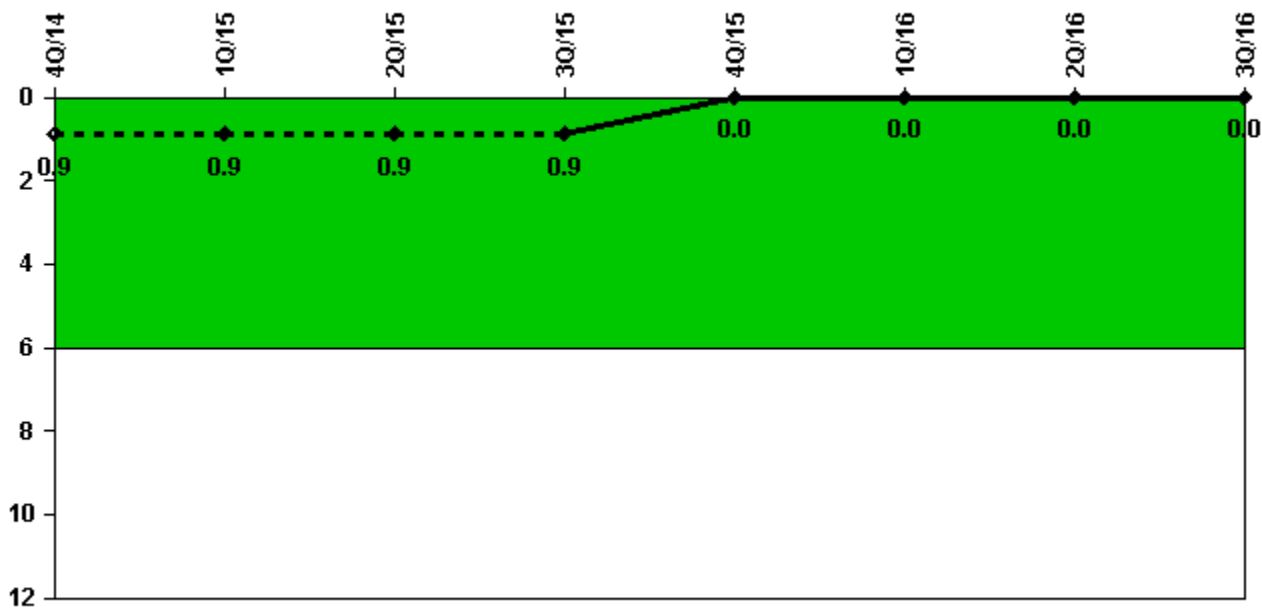
Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

#### 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	0	0	0	0	0	0	0	0
Critical hours	984.7	2159.0	2184.0	2208.0	2209.0	2183.0	2184.0	2208.0
Indicator value	0	0	0	0	0	0	0	0

Licensee Comments: none

### Unplanned Power Changes per 7000 Critical Hrs



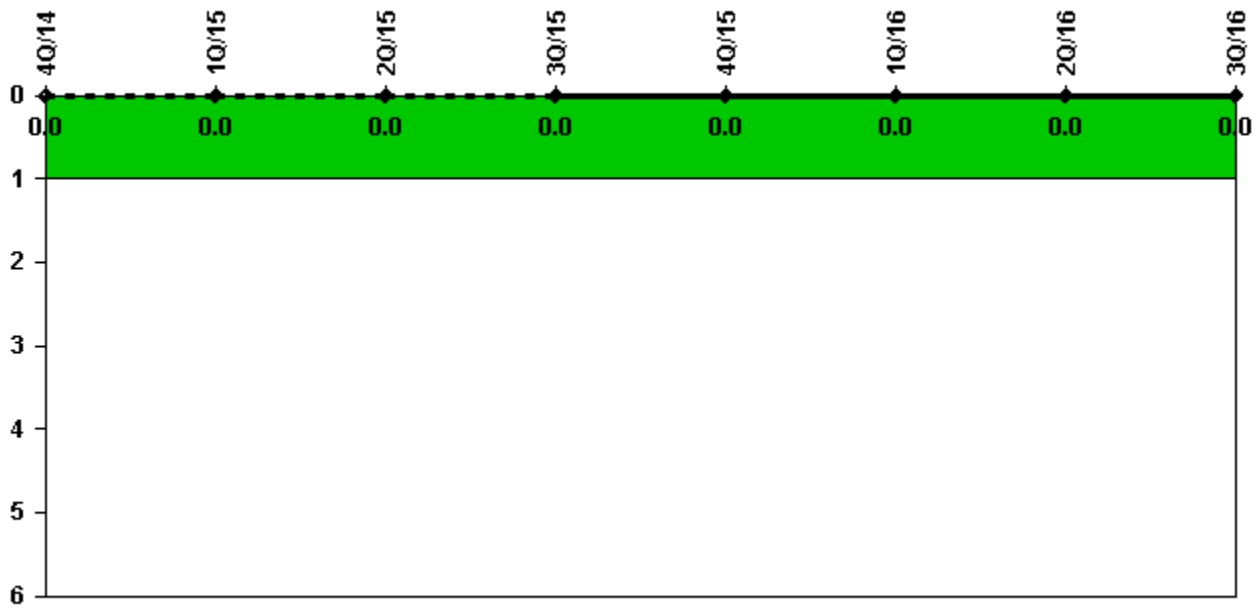
Thresholds: White > 6.0

#### 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	0	0	0	0	0	0	0
Critical hours	984.7	2159.0	2184.0	2208.0	2209.0	2183.0	2184.0	2208.0
<b>Indicator value</b>	<b>0.9</b>	<b>0.9</b>	<b>0.9</b>	<b>0.9</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

Licensee Comments: none

### Unplanned Scrams with Complications



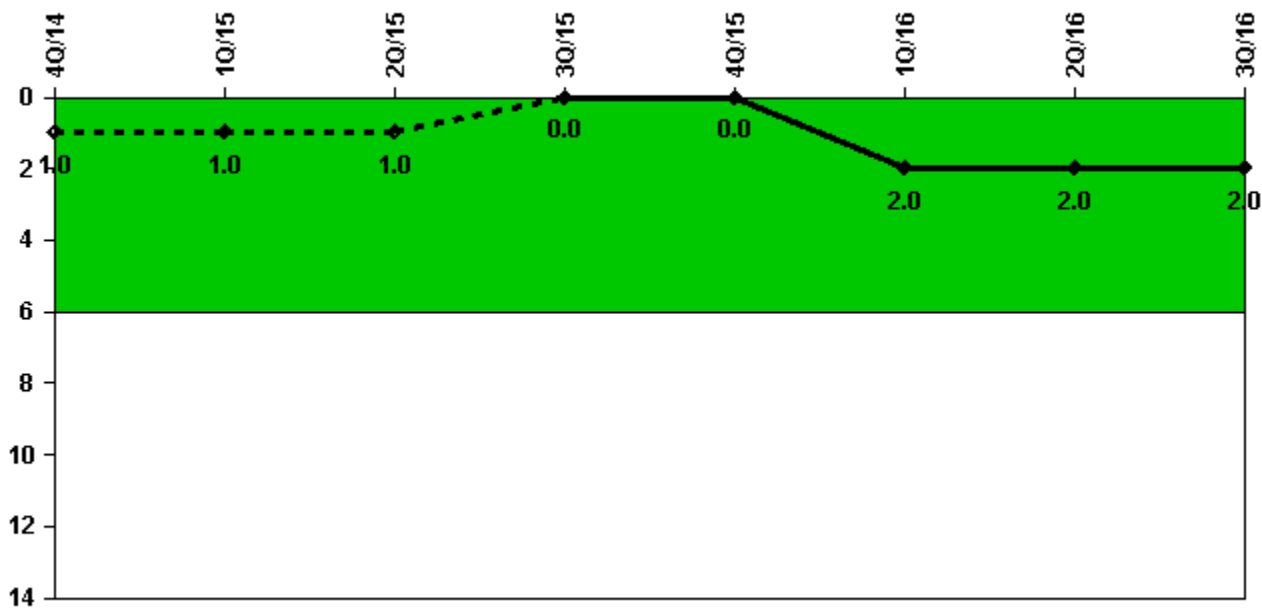
Thresholds: White > 1.0

#### 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 (BWR)



Thresholds: White > 6.0

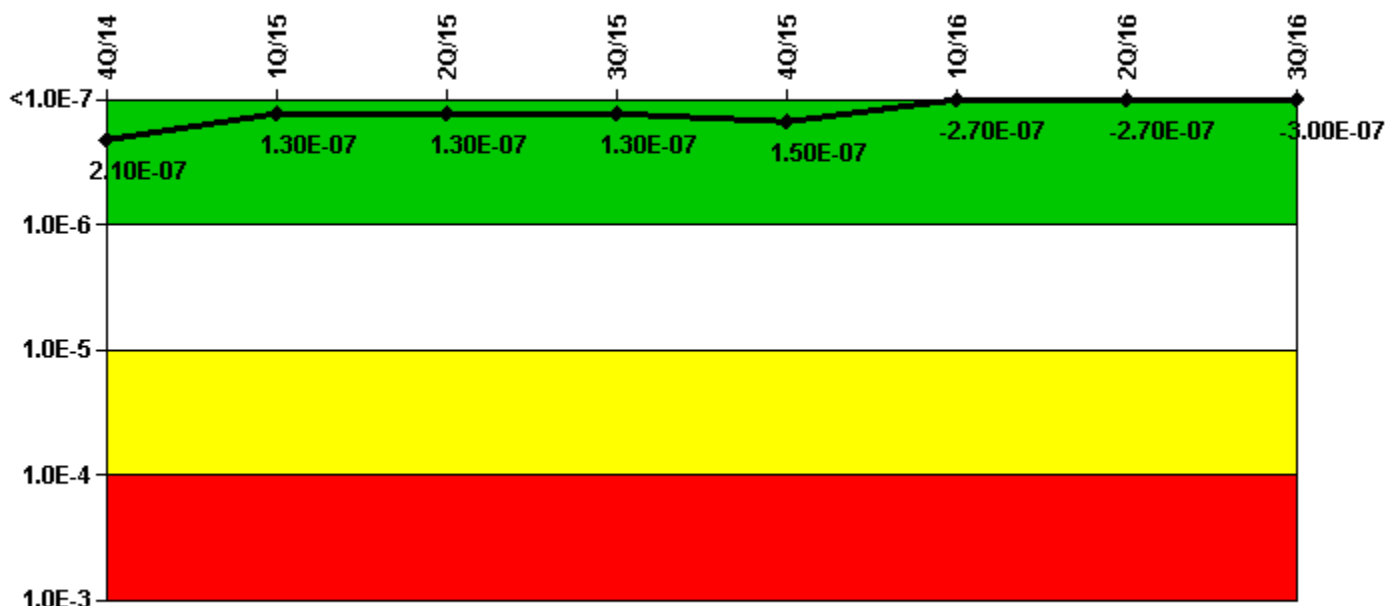
#### Notes

Safety System Functional Failures (BWR)	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16
Safety System Functional Failures	0	0	0	0	0	2	0	0
<b>Indicator value</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>2</b>

Licensee Comments:

1Q/16: Revised LER 2015-005 was submitted 1/28/16 for the affect on ECCS from the torus coating event. LER 2015-006, HPCI and RCIC CST Suction Transfer 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	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16
UAI ( $\Delta$ CDF)	3.16E-07	2.41E-07	2.41E-07	2.41E-07	2.61E-07	-2.11E-09	3.11E-09	-2.81E-08
URI ( $\Delta$ CDF)	-1.10E-07	-1.10E-07	-1.10E-07	-1.10E-07	-1.10E-07	-2.70E-07	-2.70E-07	-2.70E-07
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	2.10E-07	1.30E-07	1.30E-07	1.30E-07	1.50E-07	-2.70E-07	-2.70E-07	-3.00E-07

Licensee Comments: none

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



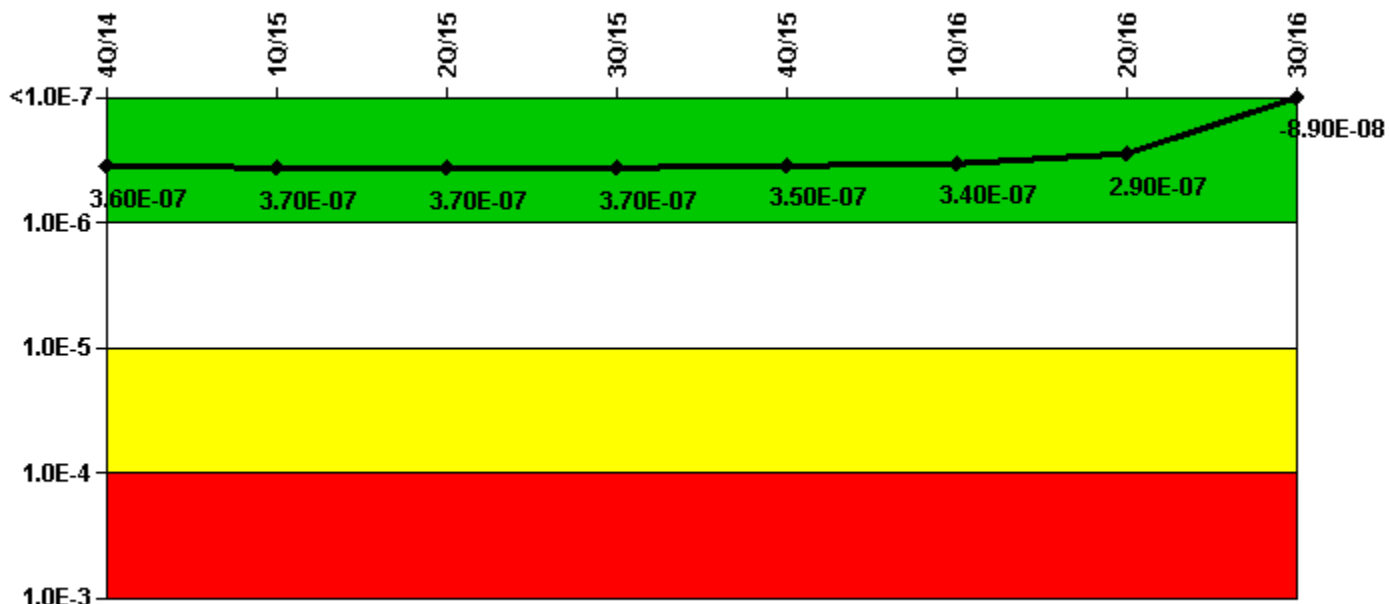
Thresholds: White > 1.00E-6 Yellow > 1.00E-5 Red > 1.00E-4

#### Notes

Mitigating Systems Performance Index, High Pressure Injection System	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16
UAI ( $\Delta$ CDF)	-1.46E-08	-1.46E-08	-1.46E-08	-1.65E-08	-1.65E-08	-1.65E-08	-7.31E-09	-4.34E-09
URI ( $\Delta$ CDF)	-3.33E-08	-3.33E-08	-3.33E-08	-3.33E-08	-3.33E-08	-3.33E-08	-3.33E-08	-3.33E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-4.80E-08	-4.80E-08	-4.80E-08	-5.00E-08	-5.00E-08	-5.00E-08	-4.10E-08	-3.80E-08

Licensee Comments: none

### Mitigating Systems Performance Index, Heat Removal System



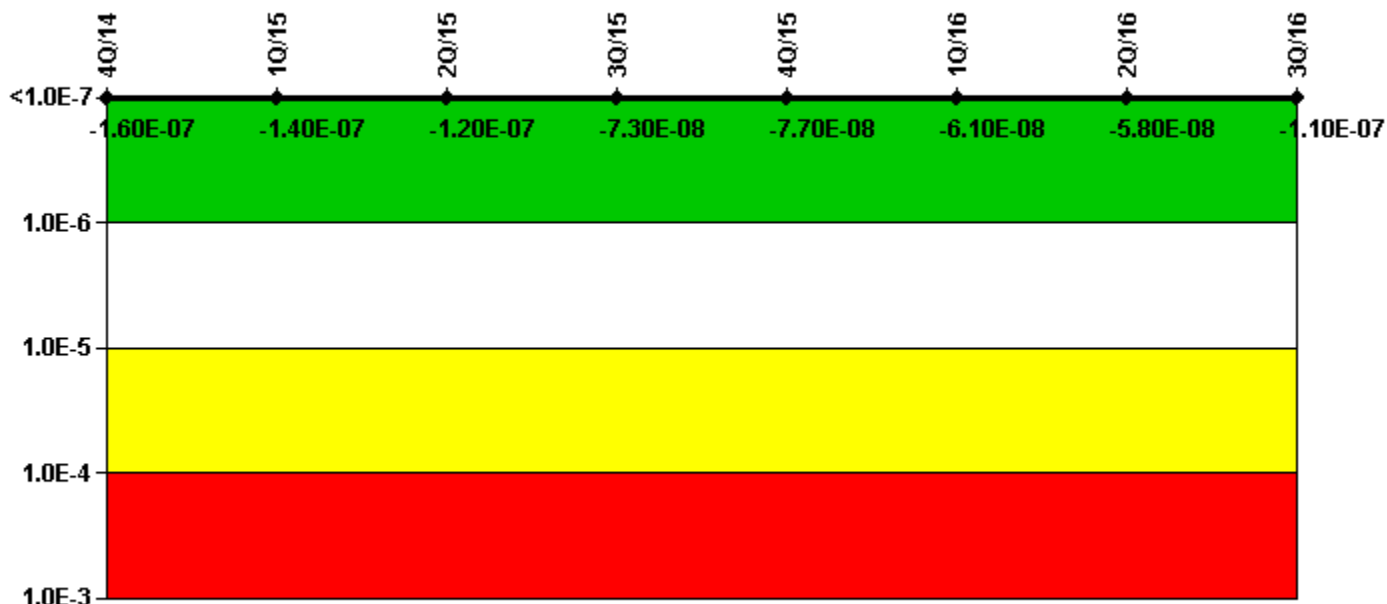
Thresholds: White > 1.00E-6 Yellow > 1.00E-5 Red > 1.00E-4

**Notes**

Mitigating Systems Performance Index, Heat Removal System	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16
UAI ( $\Delta$ CDF)	3.49E-07	3.59E-07	3.57E-07	3.57E-07	3.34E-07	3.30E-07	2.80E-07	-1.25E-08
URI ( $\Delta$ CDF)	1.35E-08	1.35E-08	1.35E-08	1.35E-08	1.35E-08	1.35E-08	1.35E-08	-7.69E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	3.60E-07	3.70E-07	3.70E-07	3.70E-07	3.50E-07	3.40E-07	2.90E-07	-8.90E-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	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16
UAI (ΔCDF)	7.95E-08	1.00E-07	1.20E-07	1.64E-07	1.59E-07	1.75E-07	1.78E-07	1.23E-07
URI (ΔCDF)	-2.36E-07	-2.36E-07	-2.36E-07	-2.36E-07	-2.36E-07	-2.36E-07	-2.36E-07	-2.36E-07
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-1.60E-07	-1.40E-07	-1.20E-07	-7.30E-08	-7.70E-08	-6.10E-08	-5.80E-08	-1.10E-07

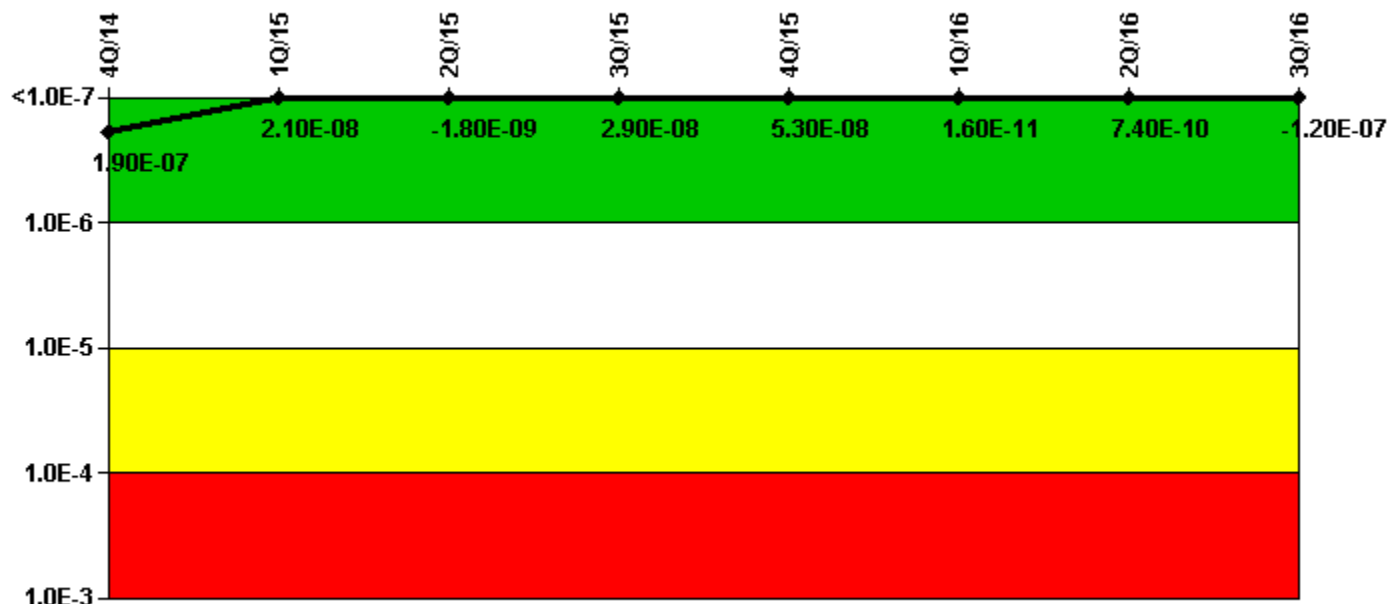
#### Licensee Comments:

2Q/15: The A RHRSW changed from 10.75 to 0.00 hours. The hours were adjusted based on MSPI DBD 46/102 Rev 3 which includes the RHRSW A/B RHR heat exchanger discharge valves MO2046/MO1947 in the RHR System.

1Q/15: A RHR in February 2015 changed from 0.00 hours to 11.00 hours. The hours were adjusted based on the MSPI DBD 46/102 Rev 3 which includes the RHRSW A/B RHR heat exchanger discharge valves MO2046/MO1947 in the RHR System.



### Mitigating Systems Performance Index, Cooling Water Systems



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

#### Notes

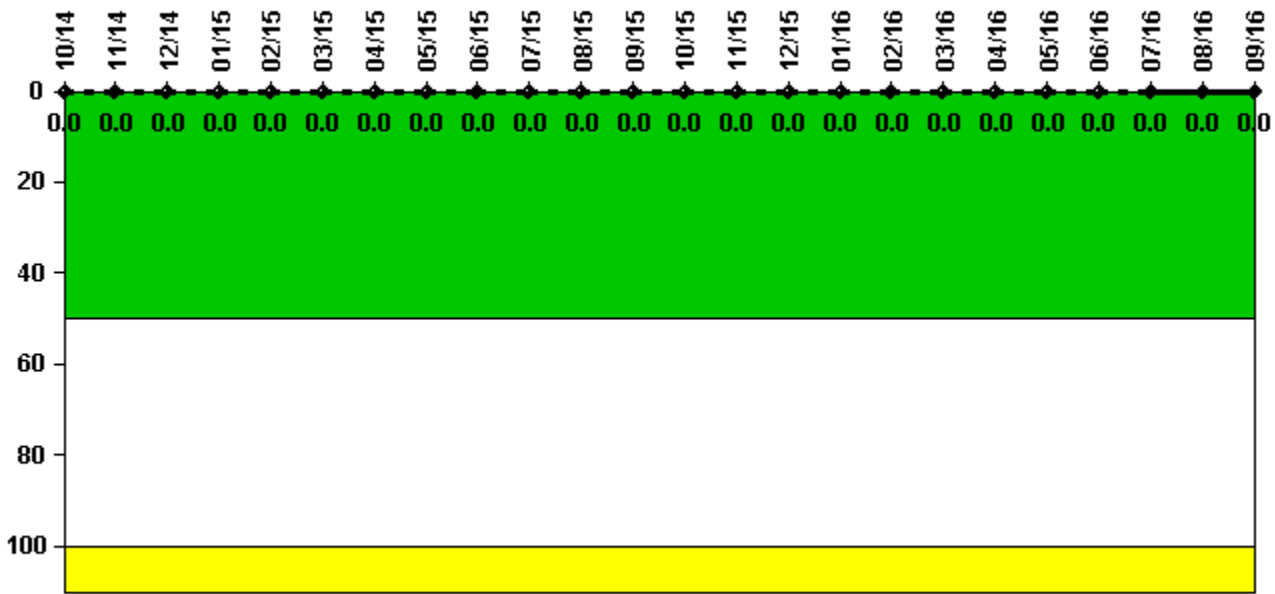
Mitigating Systems Performance Index, Cooling Water Systems	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16
UAI (ΔCDF)	4.67E-07	3.02E-07	2.79E-07	3.10E-07	3.34E-07	2.81E-07	2.82E-07	1.63E-07
URI (ΔCDF)	-2.81E-07	-2.81E-07	-2.81E-07	-2.81E-07	-2.81E-07	-2.81E-07	-2.81E-07	-2.81E-07
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	1.90E-07	2.10E-08	-1.80E-09	2.90E-08	5.30E-08	1.60E-11	7.40E-10	-1.20E-07

#### Licensee Comments:

2Q/15: The B RHR SW changed from 16.5 hours to 5.7 hours. The hours were adjusted based on MSPI DBD 46/102 Rev 3 which includes the RHR SW A/B RHR heat exchanger discharge valves MO2046/MO1947 in the RHR System.

1Q/15: B RHR in February 2015 changed from 22.00 hours to 44.00 hours. The hours were adjusted based on MSPI DBD 46/102 Rev 3 which includes the RHR SW A/B RHR heat exchanger discharge valves MO2046/MO1947 in the RHR System.

### Reactor Coolant System Activity



Thresholds: White > 50.0 Yellow > 100.0

#### Notes

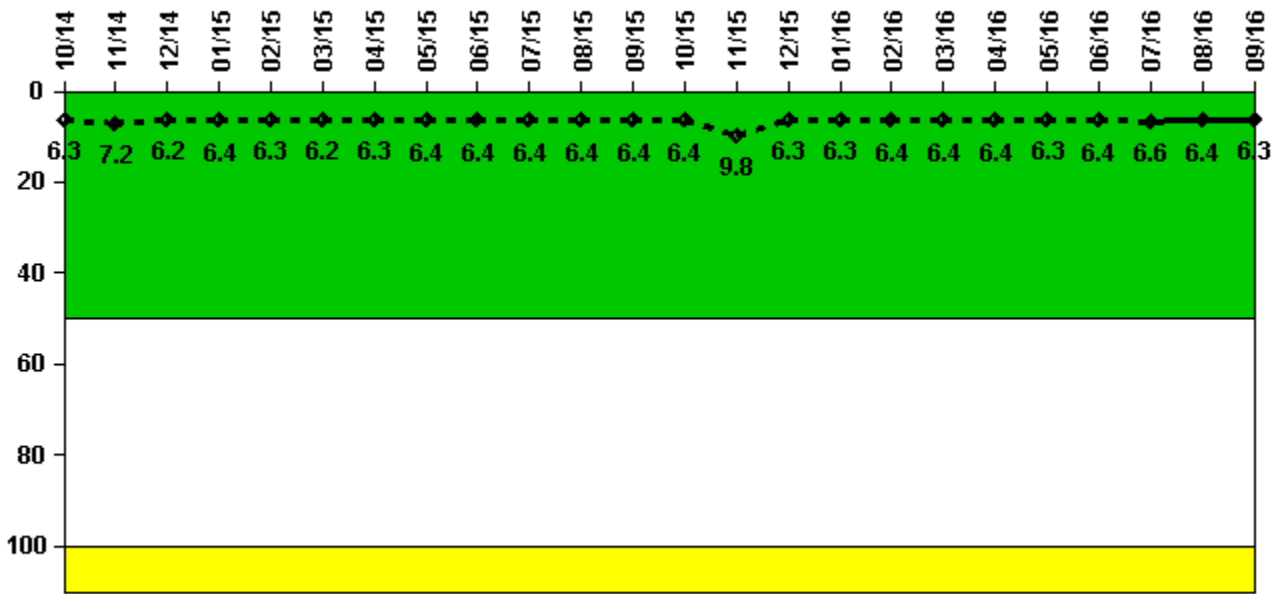
Reactor Coolant System Activity	10/14	11/14	12/14	1/15	2/15	3/15	4/15	5/15	6/15	7/15	8/15	9/15
Maximum activity	0	0	0	0	0.000002	0	0	0	0	0	0	0
Technical specification limit	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
<b>Indicator value</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

Reactor Coolant System 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	0	0	0	0	0	0	0	0	0	0	0
Technical specification limit	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
<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

### Reactor Coolant System Leakage



Thresholds: White > 50.0 Yellow > 100.0

#### Notes

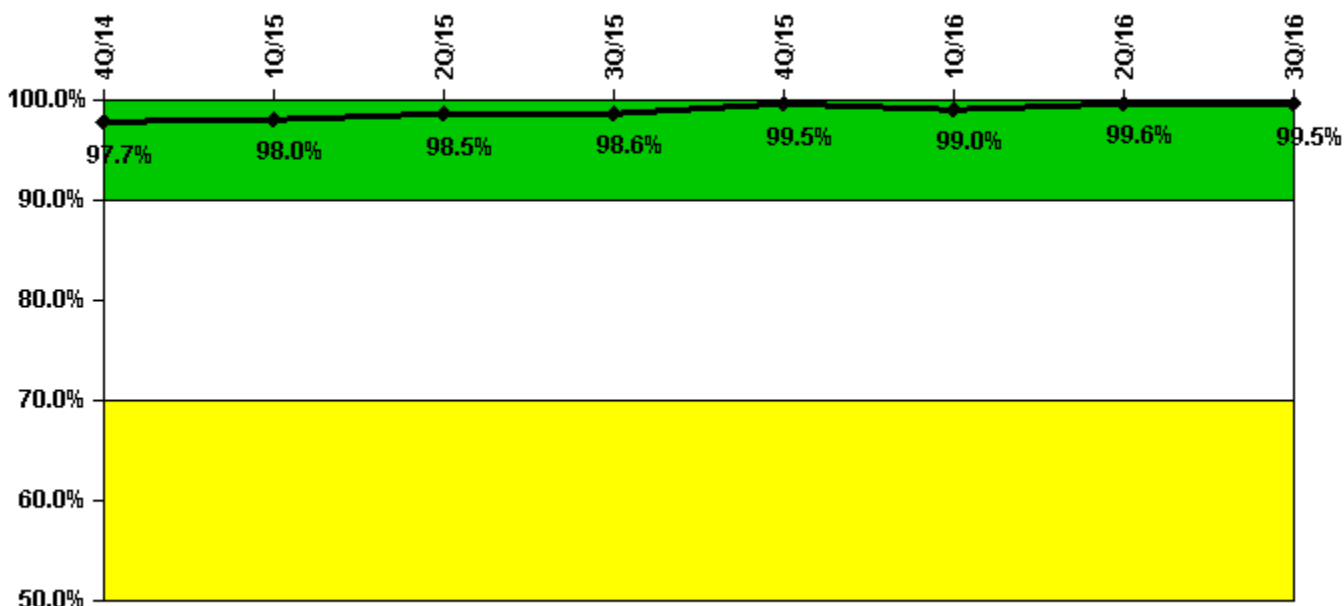
Reactor Coolant System Leakage	10/14	11/14	12/14	1/15	2/15	3/15	4/15	5/15	6/15	7/15	8/15	9/15
Maximum leakage	1.570	1.800	1.540	1.600	1.570	1.560	1.570	1.600	1.600	1.600	1.610	1.610
Technical specification limit	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
Indicator value	6.3	7.2	6.2	6.4	6.3	6.2	6.3	6.4	6.4	6.4	6.4	6.4

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	1.600	2.460	1.580	1.580	1.590	1.590	1.590	1.580	1.590	1.640	1.590	1.580
Technical specification limit	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
Indicator value	6.4	9.8	6.3	6.3	6.4	6.4	6.4	6.3	6.4	6.6	6.4	6.3

Licensee Comments: none

### Drill/Exercise Performance



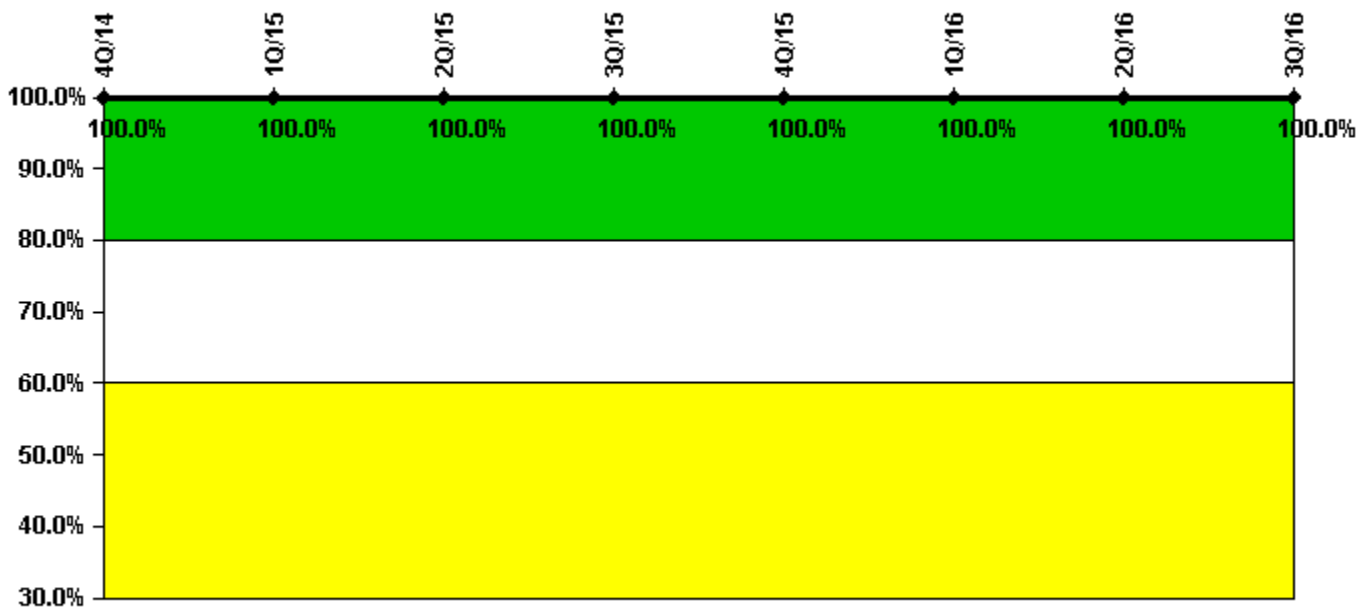
Thresholds: White < 90.0% Yellow < 70.0%

#### Notes

Drill/Exercise Performance	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16
Successful opportunities	0	24.0	35.0	26.0	18.0	39.0	45.0	17.0
Total opportunities	0	24.0	35.0	26.0	18.0	40.0	45.0	17.0
Indicator value	97.7%	98.0%	98.5%	98.6%	99.5%	99.0%	99.6%	99.5%

Licensee Comments: none

### ERO Drill Participation



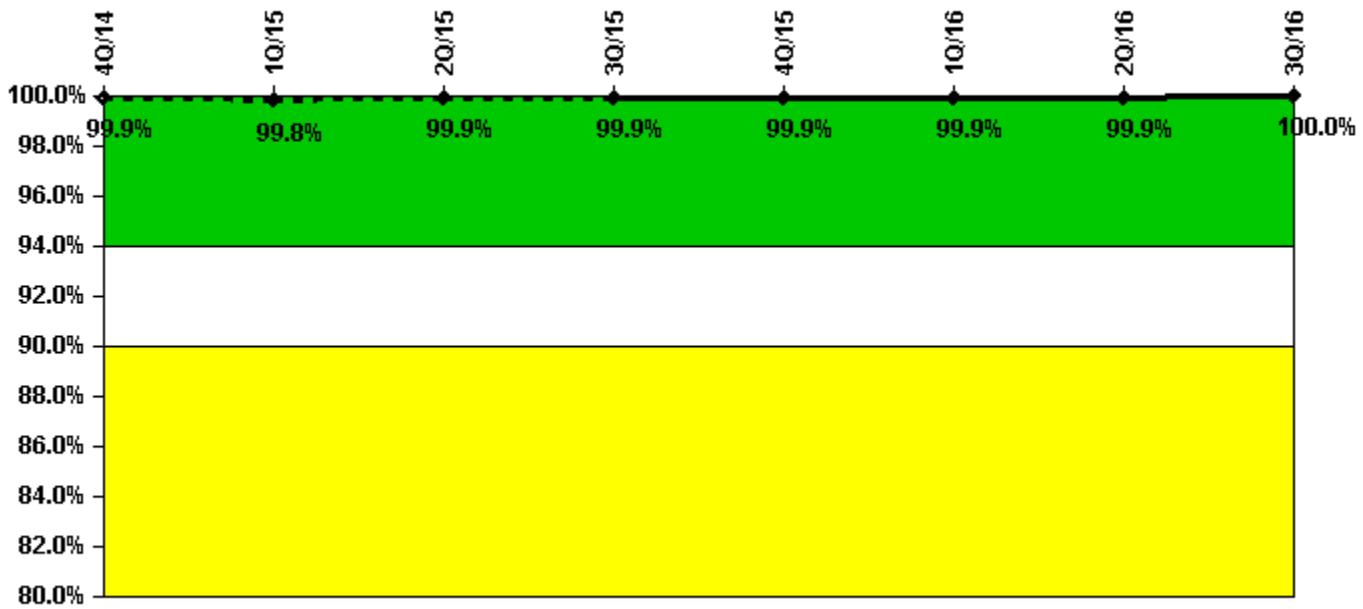
Thresholds: White < 80.0% Yellow < 60.0%

#### Notes

ERO Drill Participation	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16
Participating Key personnel	86.0	82.0	90.0	90.0	89.0	90.0	90.0	86.0
Total Key personnel	86.0	82.0	90.0	90.0	89.0	90.0	90.0	86.0
Indicator value	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Licensee Comments: none

### Alert & Notification System



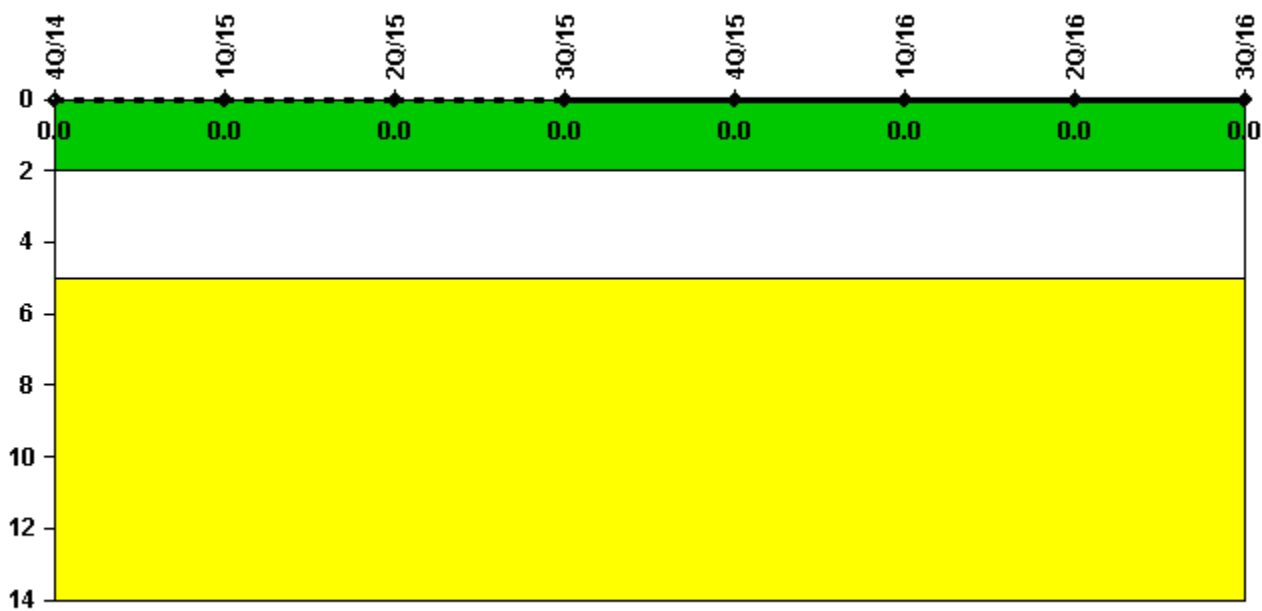
Thresholds: White < 94.0% Yellow < 90.0%

#### Notes

Alert & Notification System	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16
Successful siren-tests	432	431	432	431	430	432	432	432
Total sirens-tests	432	432	432	432	430	432	432	432
Indicator value	99.9%	99.8%	99.9%	99.9%	99.9%	99.9%	99.9%	100.0%

Licensee Comments: none

### Occupational Exposure Control Effectiveness



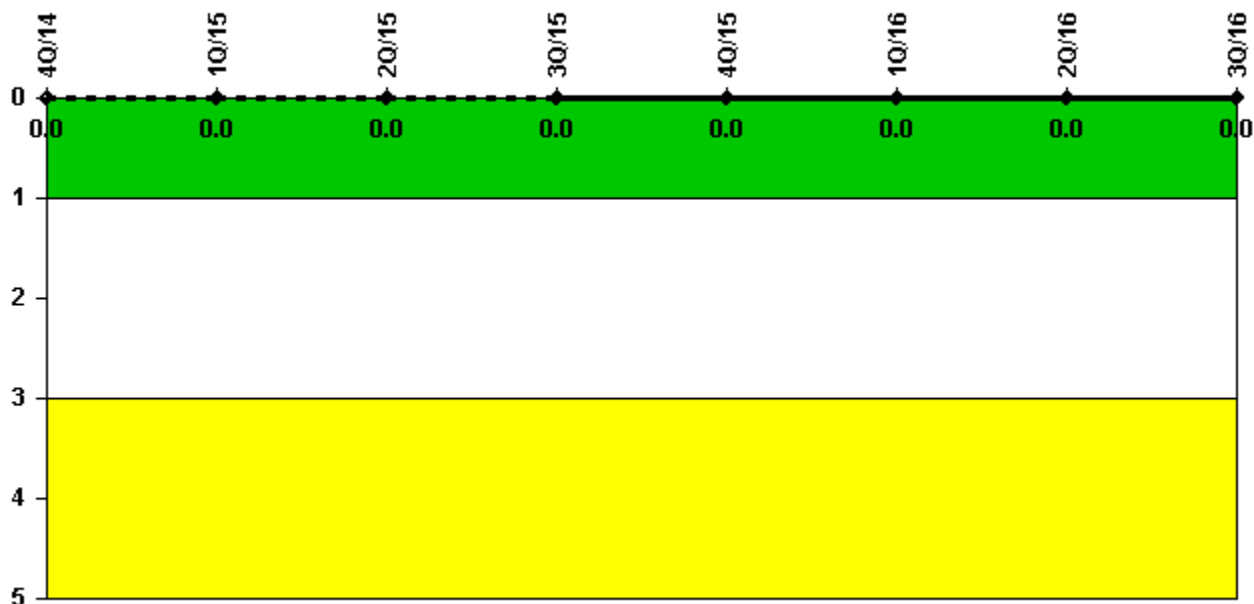
Thresholds: White > 2.0 Yellow > 5.0

#### 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	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	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
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: October 23, 2016*