

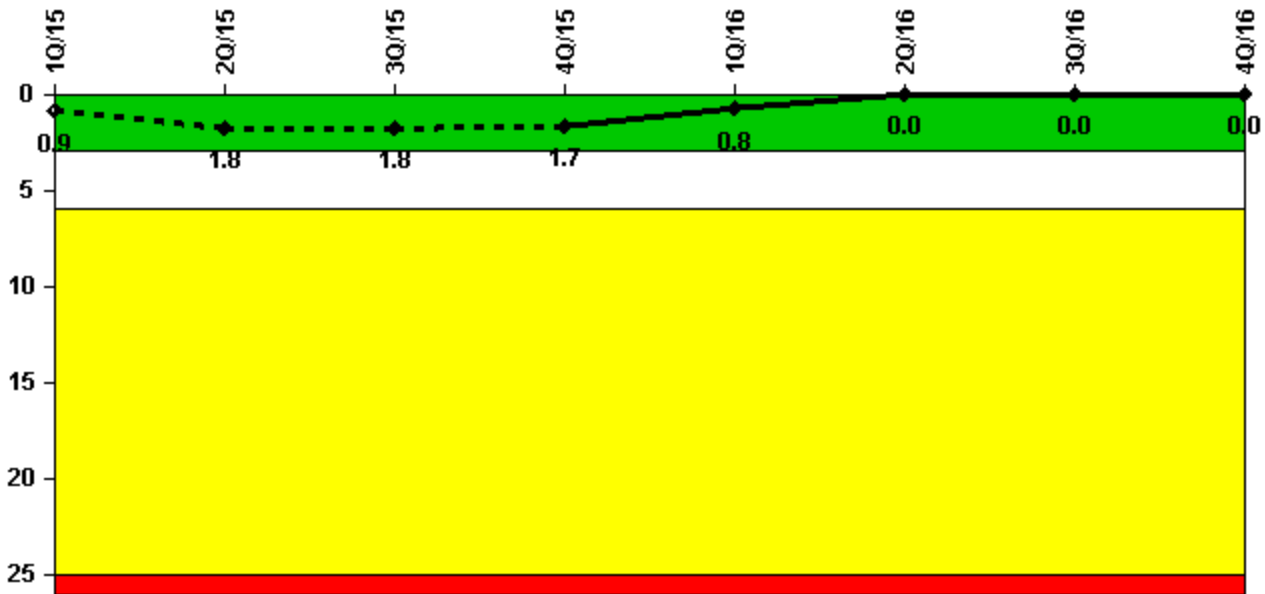
North Anna 1

4Q/2016 Performance Indicators

The solid trend line represents the current reporting period.

Licensee's General Comments: none

Unplanned Scrams per 7000 Critical Hrs



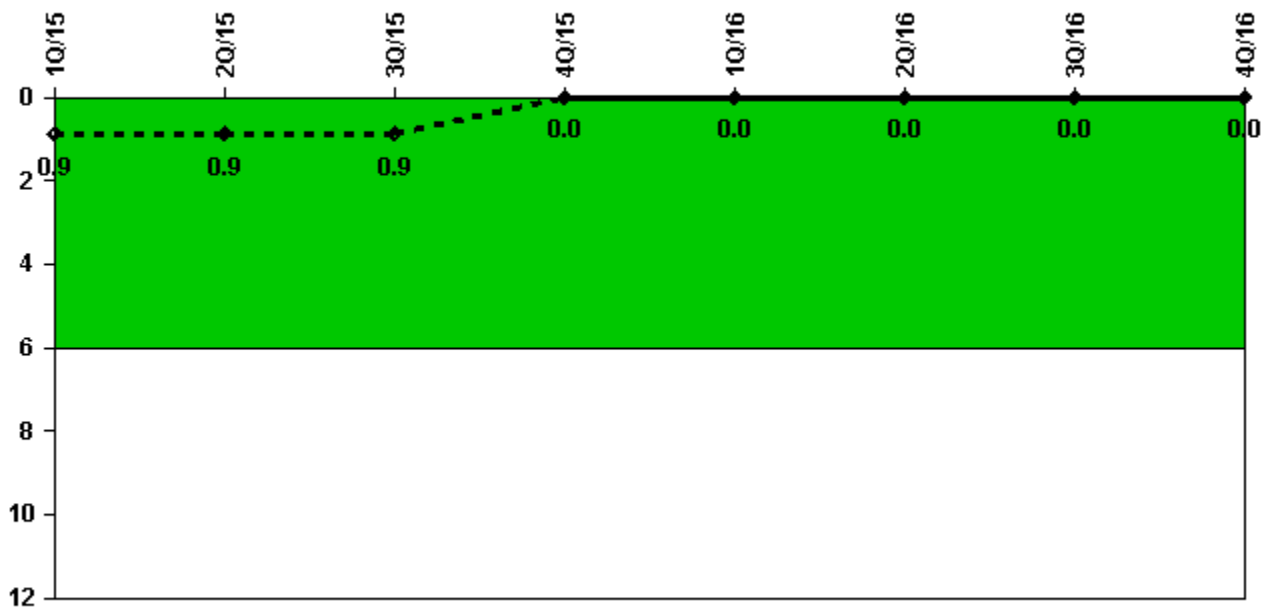
Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

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	1.0	1.0	0	0	0	0	0	0
Critical hours	1624.9	2127.7	2208.0	2209.0	2183.0	2184.0	1727.6	1847.5
Indicator value	0.9	1.8	1.8	1.7	0.8	0	0	0

Licensee Comments: none

Unplanned Power Changes per 7000 Critical Hrs



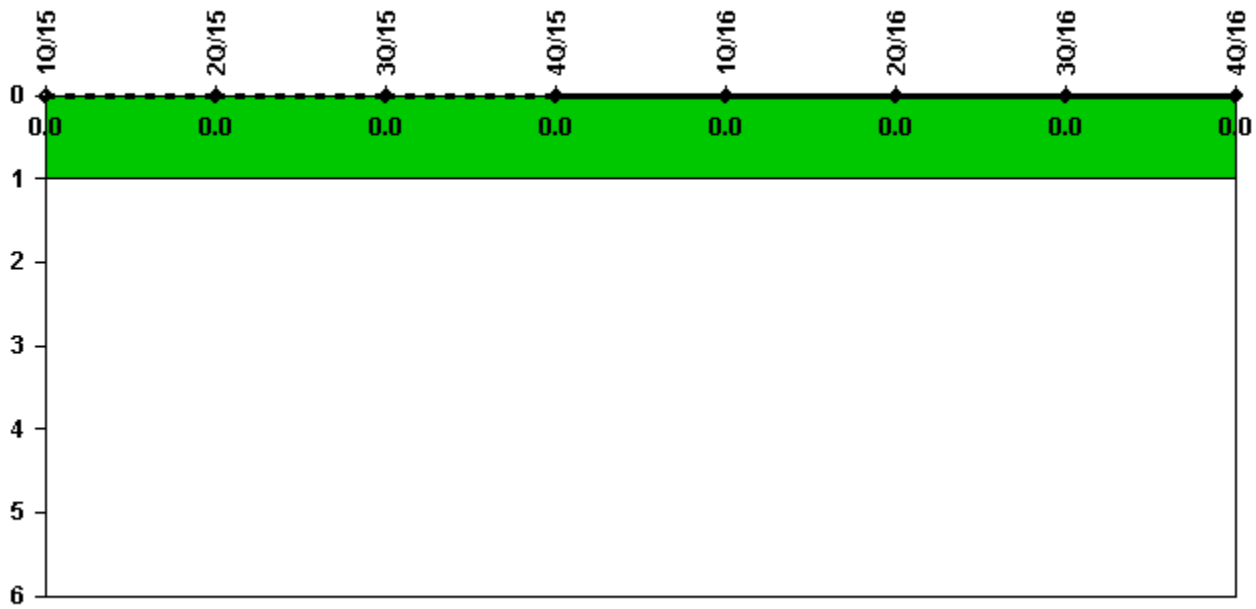
Thresholds: White > 6.0

Notes

Unplanned Power Changes per 7000 Critical Hrs	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16
Unplanned power changes	0	0	0	0	0	0	0	0
Critical hours	1624.9	2127.7	2208.0	2209.0	2183.0	2184.0	1727.6	1847.5
Indicator value	0.9	0.9	0.9	0	0	0	0	0

Licensee Comments: none

Unplanned Scrams with Complications



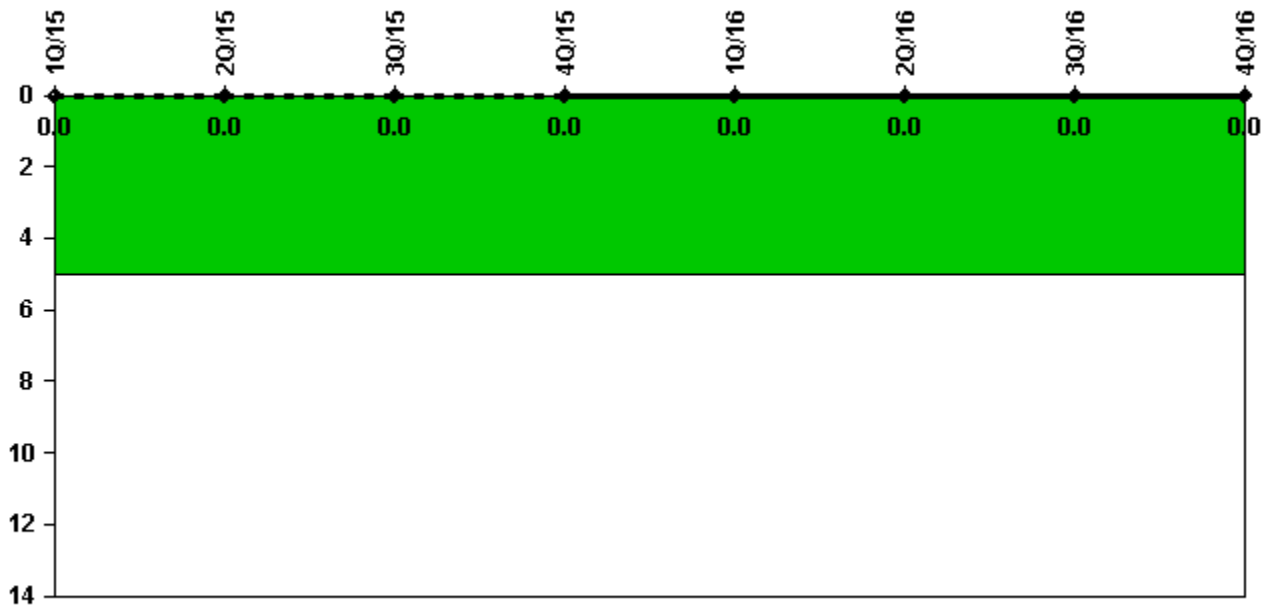
Thresholds: White > 1.0

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
Indicator value	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Licensee Comments: none

Safety System Functional Failures (PWR)



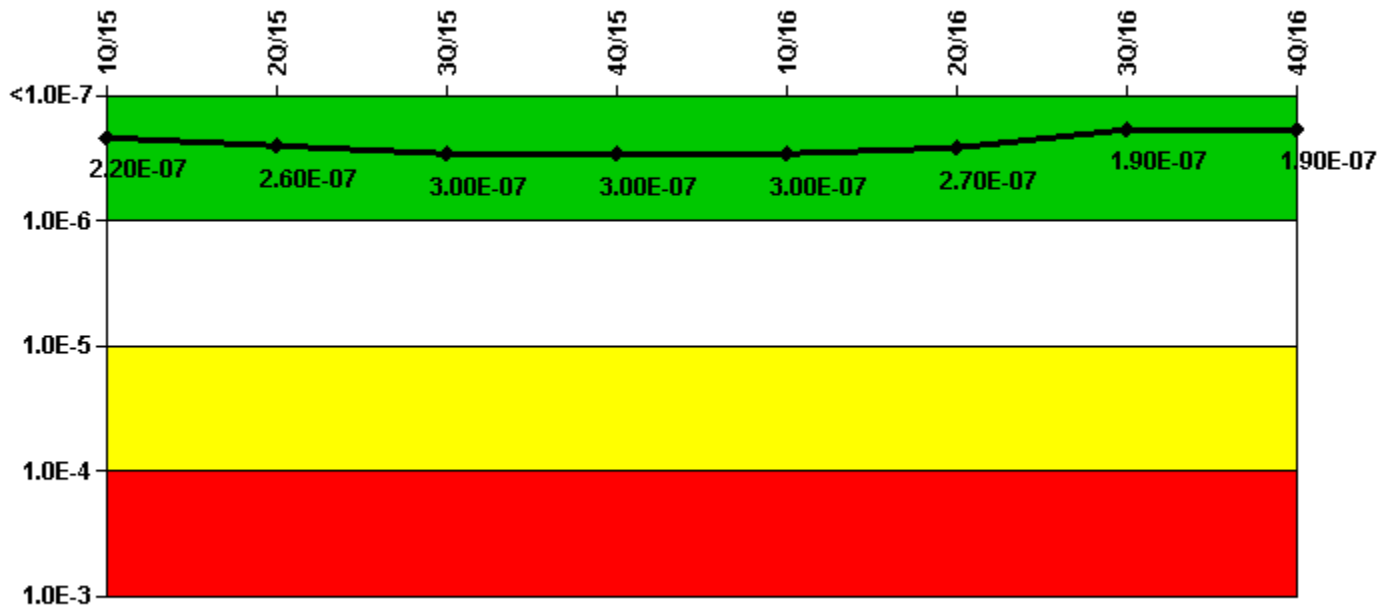
Thresholds: White > 5.0

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	0	0	0
Indicator value	0	0	0	0	0	0	0	0

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	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16
UAI (Δ CDF)	-1.18E-08	-1.24E-08	-1.43E-08	-1.43E-08	-1.43E-08	-2.52E-08	-8.62E-09	-8.62E-09
URI (Δ CDF)	2.27E-07	2.71E-07	3.14E-07	3.14E-07	3.12E-07	2.98E-07	1.96E-07	1.96E-07
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	2.20E-07	2.60E-07	3.00E-07	3.00E-07	3.00E-07	2.70E-07	1.90E-07	1.90E-07

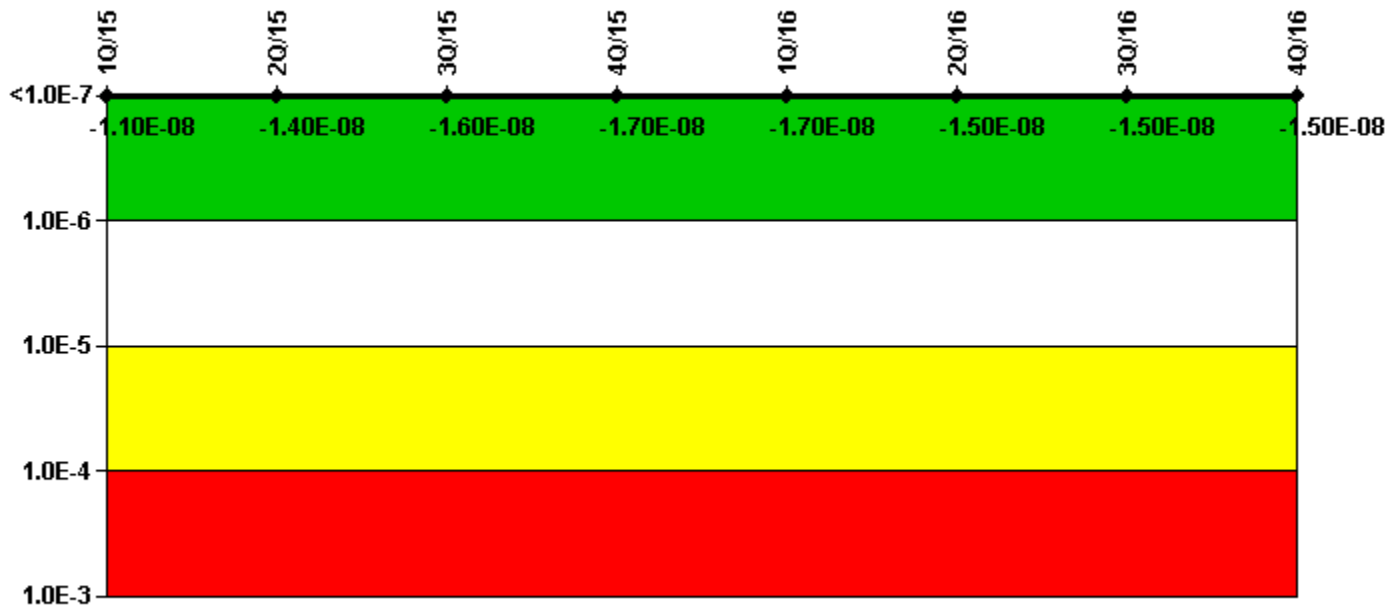
Licensee Comments:

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

2Q/16: Risk Cap Invoked. Changed PRA Parameter(s).

2Q/15: Changed PRA Parameter(s).

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 (Δ CDF)	-1.10E-09	-1.21E-09	-1.41E-09	-1.41E-09	-1.41E-09	-1.48E-09	-1.48E-09	-1.48E-09
URI (Δ CDF)	-9.46E-09	-1.26E-08	-1.51E-08	-1.54E-08	-1.59E-08	-1.31E-08	-1.34E-08	-1.37E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-1.10E-08	-1.40E-08	-1.60E-08	-1.70E-08	-1.70E-08	-1.50E-08	-1.50E-08	-1.50E-08

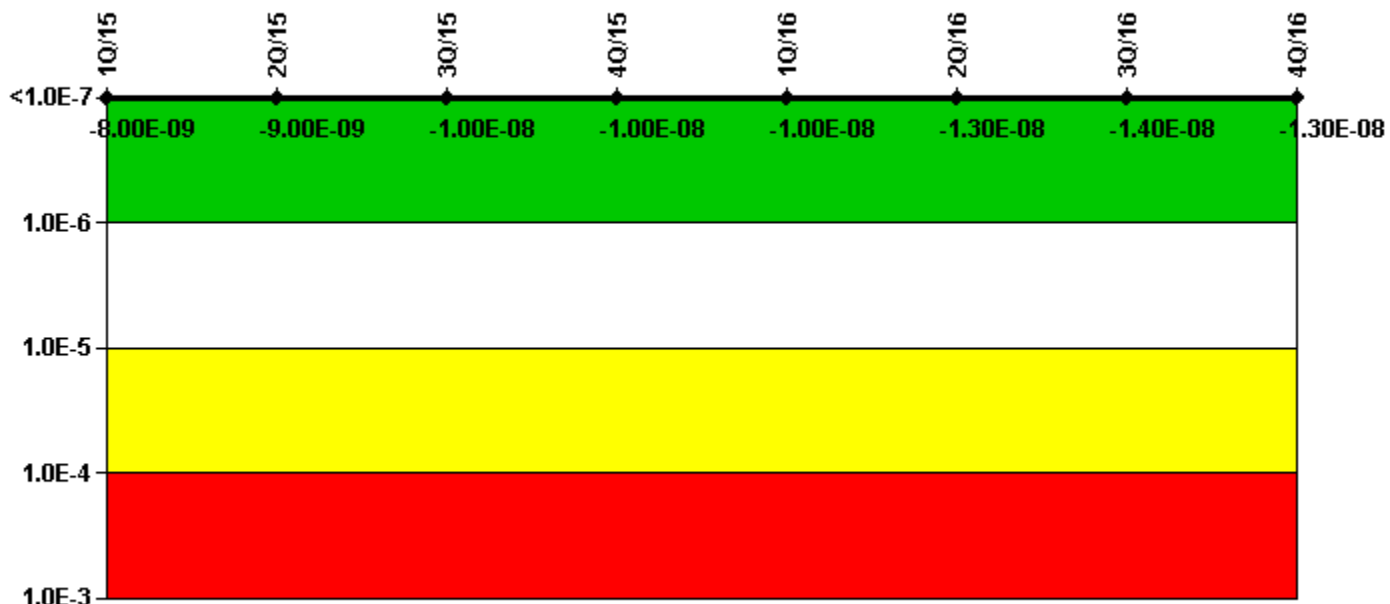
Licensee Comments:

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

2Q/16: Changed PRA Parameter(s).

2Q/15: Changed PRA Parameter(s).

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 (Δ CDF)	-2.78E-09	-2.62E-09	-3.04E-09	-3.04E-09	-3.04E-09	-3.69E-09	-3.93E-09	-3.93E-09
URI (Δ CDF)	-5.20E-09	-6.35E-09	-7.36E-09	-7.36E-09	-7.36E-09	-9.01E-09	-9.67E-09	-9.24E-09
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-8.00E-09	-9.00E-09	-1.00E-08	-1.00E-08	-1.00E-08	-1.30E-08	-1.40E-08	-1.30E-08

Licensee Comments:

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

2Q/16: Changed PRA Parameter(s).

2Q/15: Changed PRA Parameter(s).

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 (Δ CDF)	6.24E-09	4.06E-09	-3.70E-09	-3.70E-09	-3.70E-09	-6.11E-09	-6.12E-09	-7.86E-09
URI (Δ CDF)	-8.61E-09	-9.23E-09	-1.07E-08	-1.07E-08	-1.07E-08	-1.88E-08	-1.86E-08	-1.86E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-2.40E-09	-5.20E-09	-1.40E-08	-1.40E-08	-1.40E-08	-2.50E-08	-2.50E-08	-2.60E-08

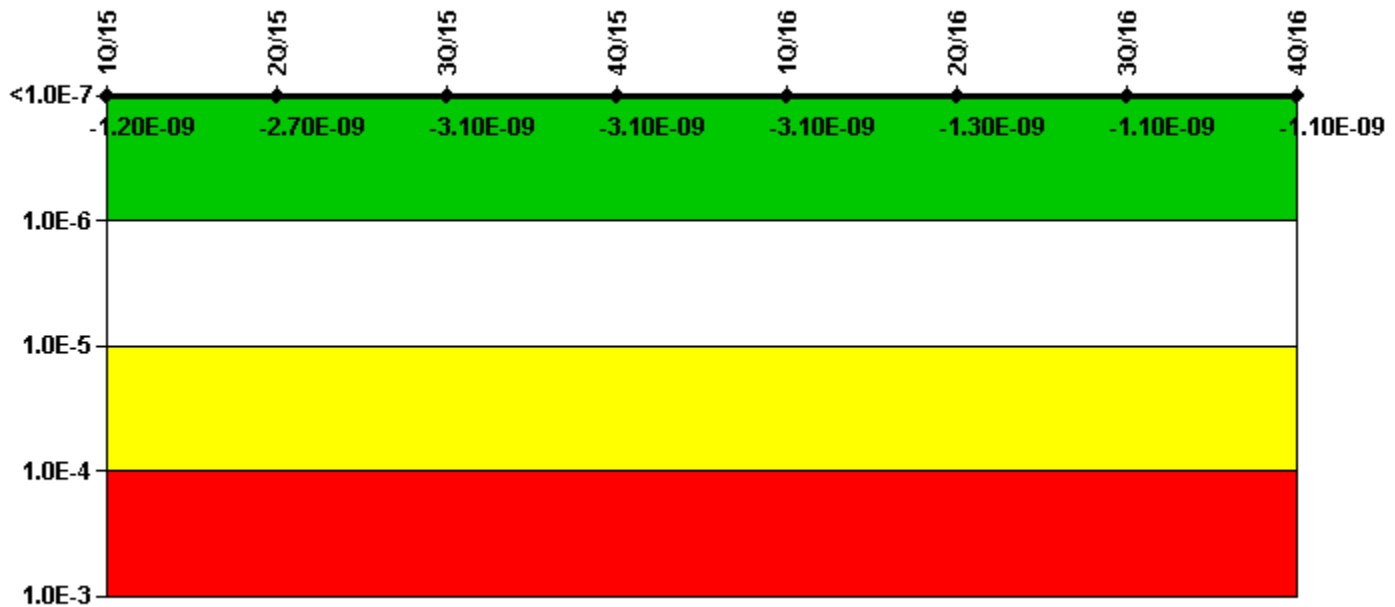
Licensee Comments:

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

2Q/16: Changed PRA Parameter(s).

2Q/15: Changed PRA Parameter(s).

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 (Δ CDF)	-2.30E-10	-3.22E-10	-3.74E-10	-3.74E-10	-3.74E-10	-7.07E-10	-7.11E-10	-7.11E-10
URI (Δ CDF)	-1.00E-09	-2.34E-09	-2.71E-09	-2.71E-09	-2.71E-09	-6.09E-10	-3.79E-10	-3.79E-10
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-1.20E-09	-2.70E-09	-3.10E-09	-3.10E-09	-3.10E-09	-1.30E-09	-1.10E-09	-1.10E-09

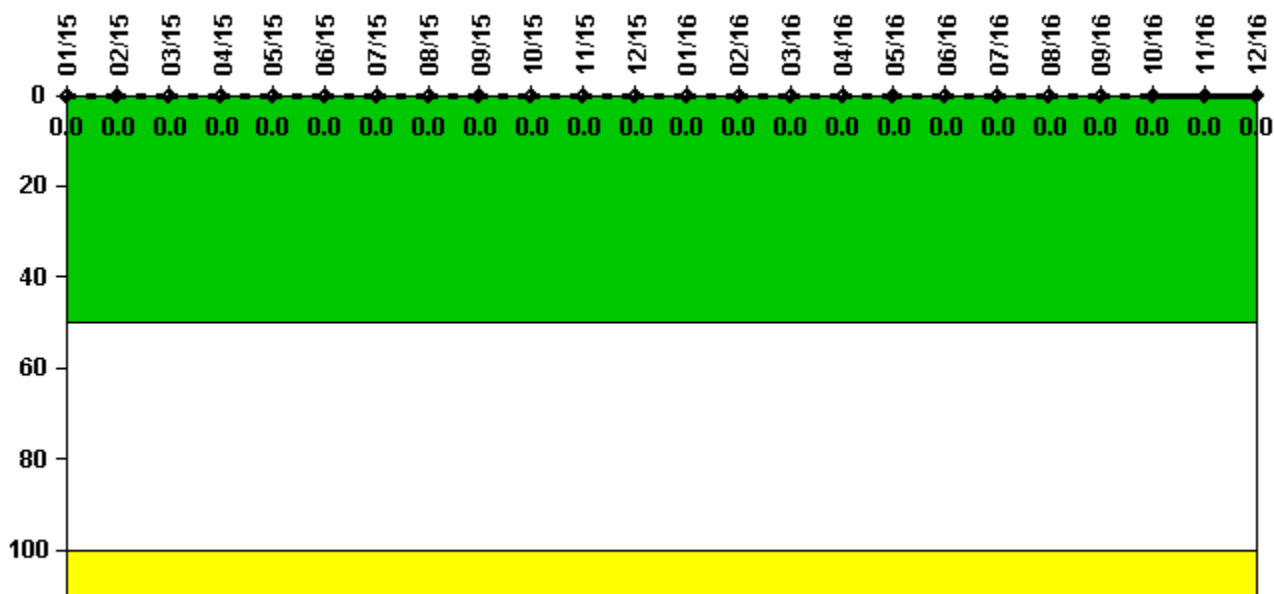
Licensee Comments:

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

2Q/16: Changed PRA Parameter(s).

2Q/15: Changed PRA Parameter(s).

Reactor Coolant System Activity



Thresholds: White > 50.0 Yellow > 100.0

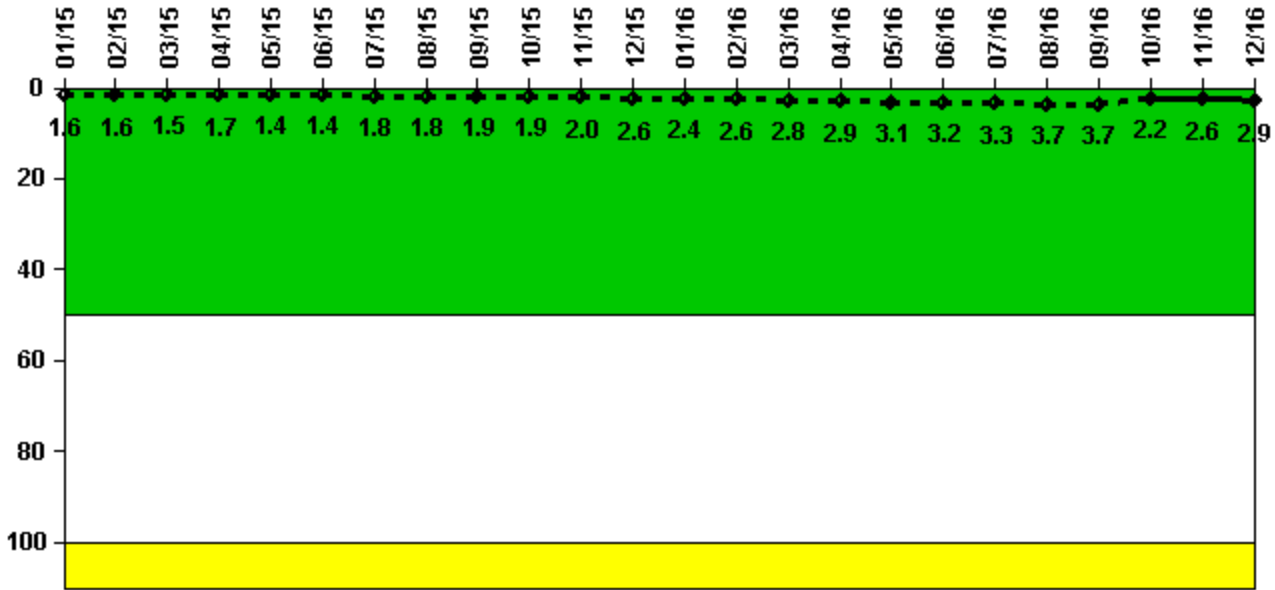
Notes

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	0.000277	0.000290	0.000254	0.000194	0.000152	0.000151	0.000167	0.000162	0.000183	0.000191	0.000178	0.000197
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

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	0.000214	0.000221	0.000227	0.000229	0.000249	0.000248	0.000476	0.000376	0.000261	0.000119	0.000132	0.000139
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

Licensee Comments: none

Reactor Coolant System Leakage



Thresholds: White > 50.0 Yellow > 100.0

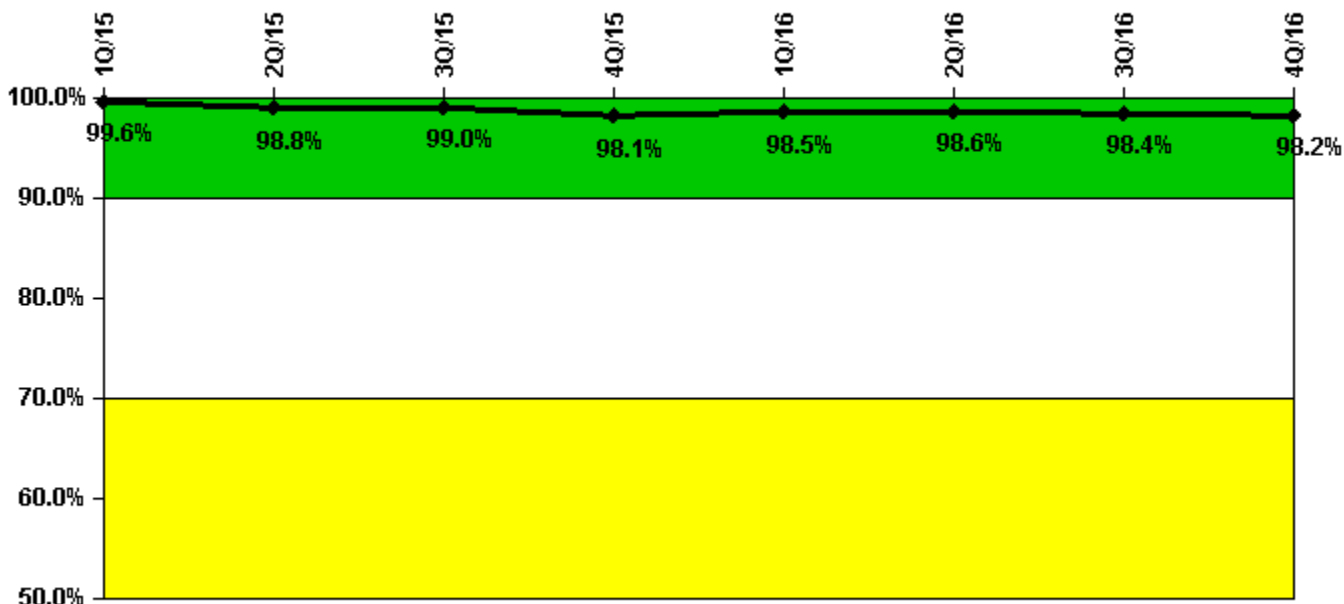
Notes

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	0.162	0.159	0.150	0.166	0.141	0.144	0.176	0.179	0.193	0.189	0.201	0.255
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	1.6	1.6	1.5	1.7	1.4	1.4	1.8	1.8	1.9	1.9	2.0	2.6

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	0.242	0.258	0.279	0.292	0.308	0.315	0.326	0.369	0.368	0.216	0.263	0.293
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	2.4	2.6	2.8	2.9	3.1	3.2	3.3	3.7	3.7	2.2	2.6	2.9

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	5.0	20.0	92.0	16.0	28.0	13.0	57.0	49.0
Total opportunities	5.0	22.0	92.0	18.0	28.0	13.0	57.0	50.0
Indicator value	99.6%	98.8%	99.0%	98.1%	98.5%	98.6%	98.4%	98.2%

Licensee Comments: none

ERO Drill Participation



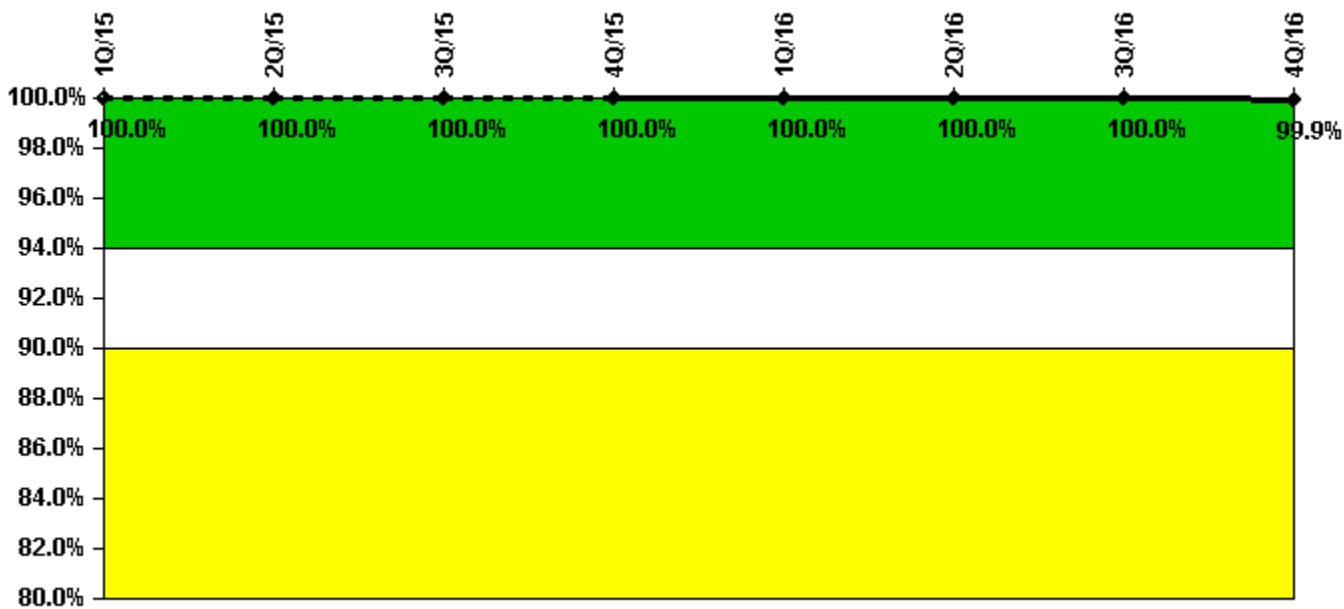
Thresholds: White < 80.0% Yellow < 60.0%

Notes

ERO Drill Participation	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16
Participating Key personnel	161.0	160.0	160.0	162.0	164.0	161.0	160.0	164.0
Total Key personnel	161.0	160.0	160.0	162.0	164.0	161.0	160.0	164.0
Indicator value	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Licensee Comments: none

Alert & Notification System



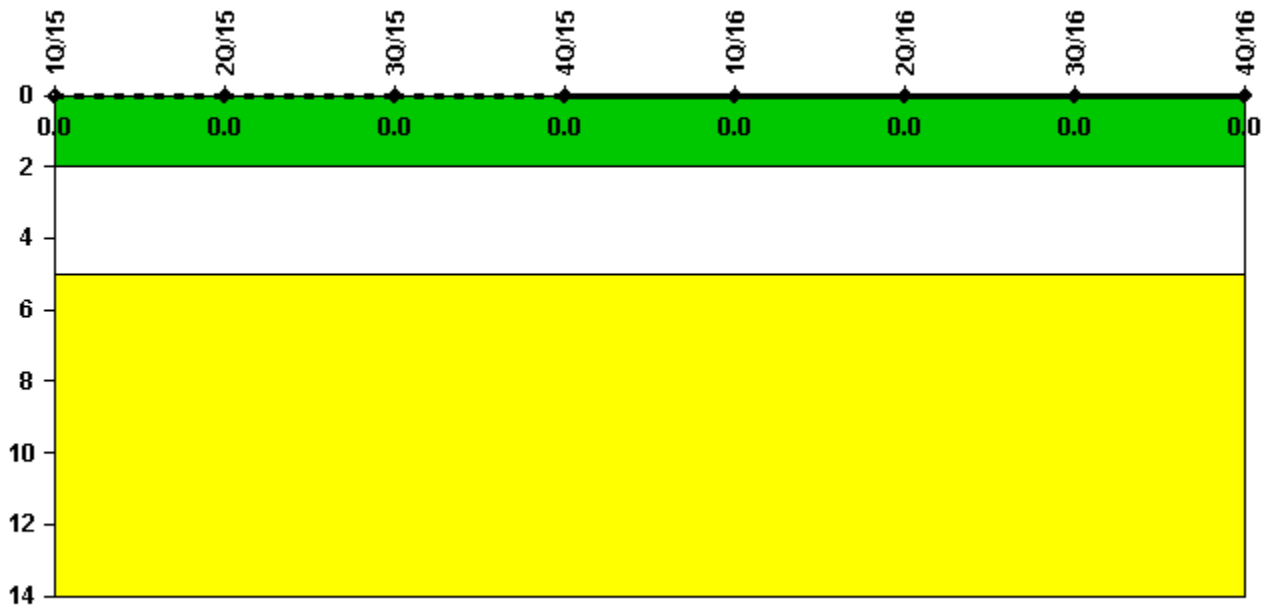
Thresholds: White < 94.0% Yellow < 90.0%

Notes

Alert & Notification System	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16
Successful siren-tests	476	476	476	476	476	476	476	475
Total sirens-tests	476	476	476	476	476	476	476	476
Indicator value	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	99.9%

Licensee Comments: none

Occupational Exposure Control Effectiveness



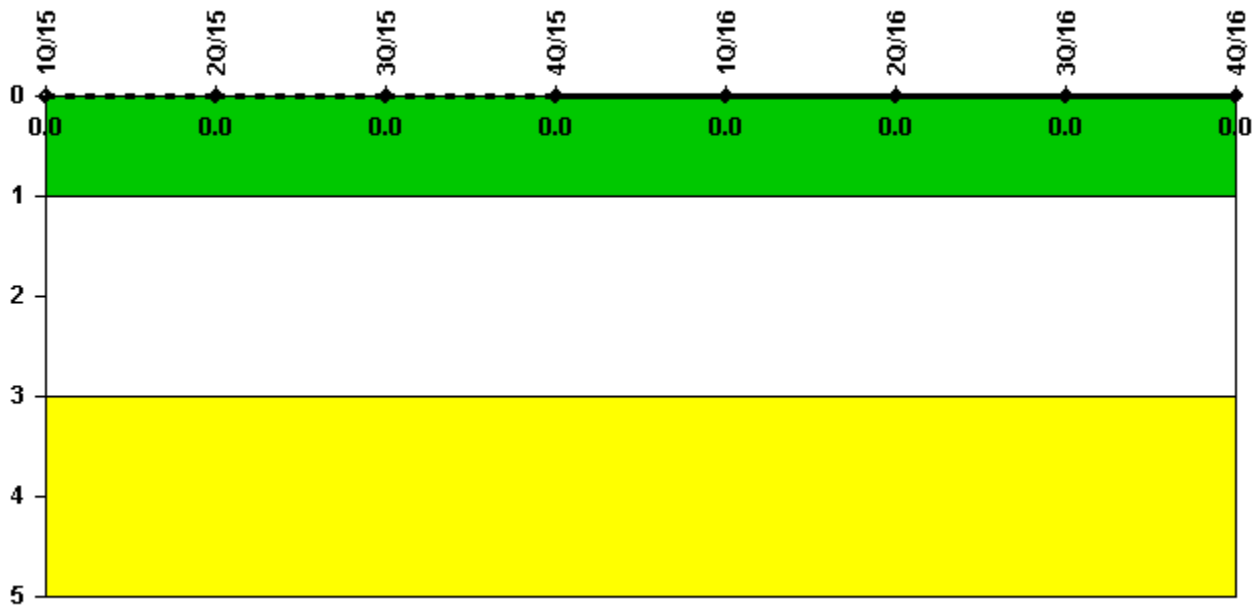
Thresholds: White > 2.0 Yellow > 5.0

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
Indicator value	0	0	0	0	0	0	0	0

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