

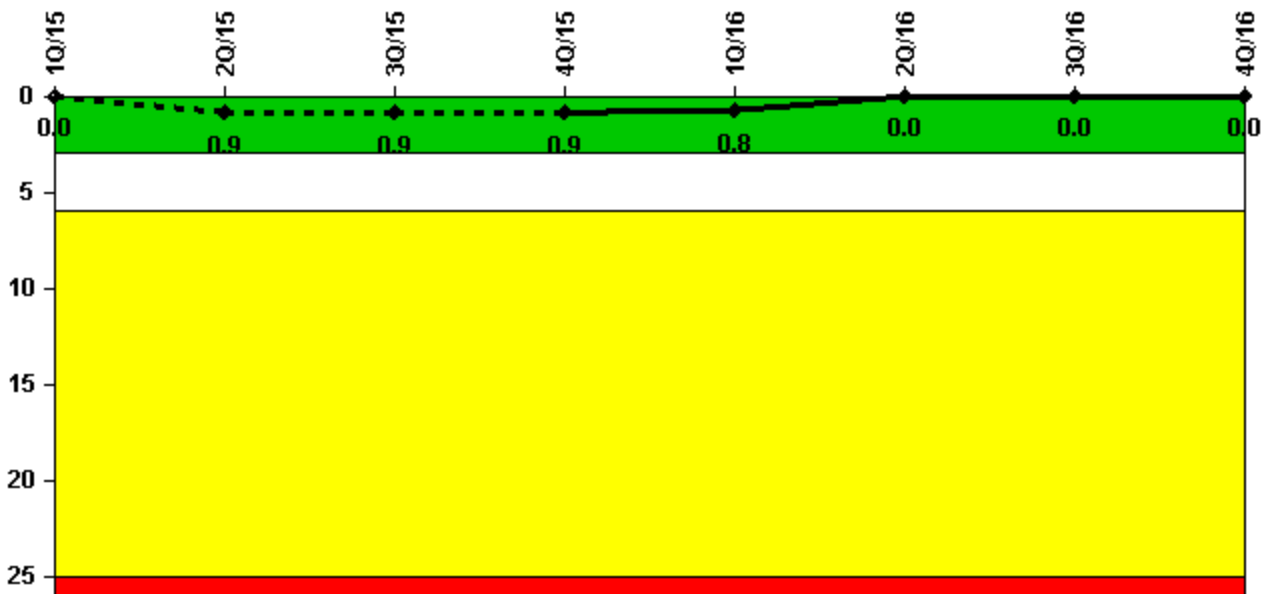
Quad Cities 1

4Q/2016 Performance Indicators

The solid trend line represents the current reporting period.

Licensee's General Comments: none

Unplanned Scrams per 7000 Critical Hrs



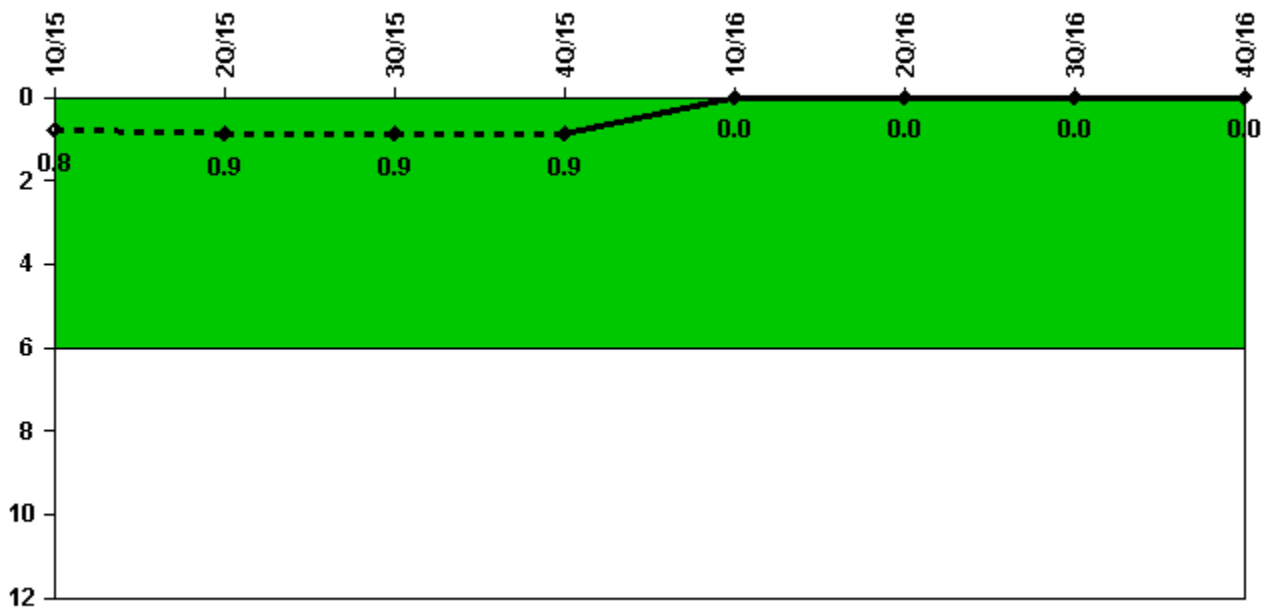
Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

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	0	0	0	0
Critical hours	1668.0	2125.7	2208.0	2209.0	2183.0	2184.0	2208.0	2209.0
Indicator value	0	0.9	0.9	0.9	0.8	0	0	0

Licensee Comments: none

Unplanned Power Changes per 7000 Critical Hrs



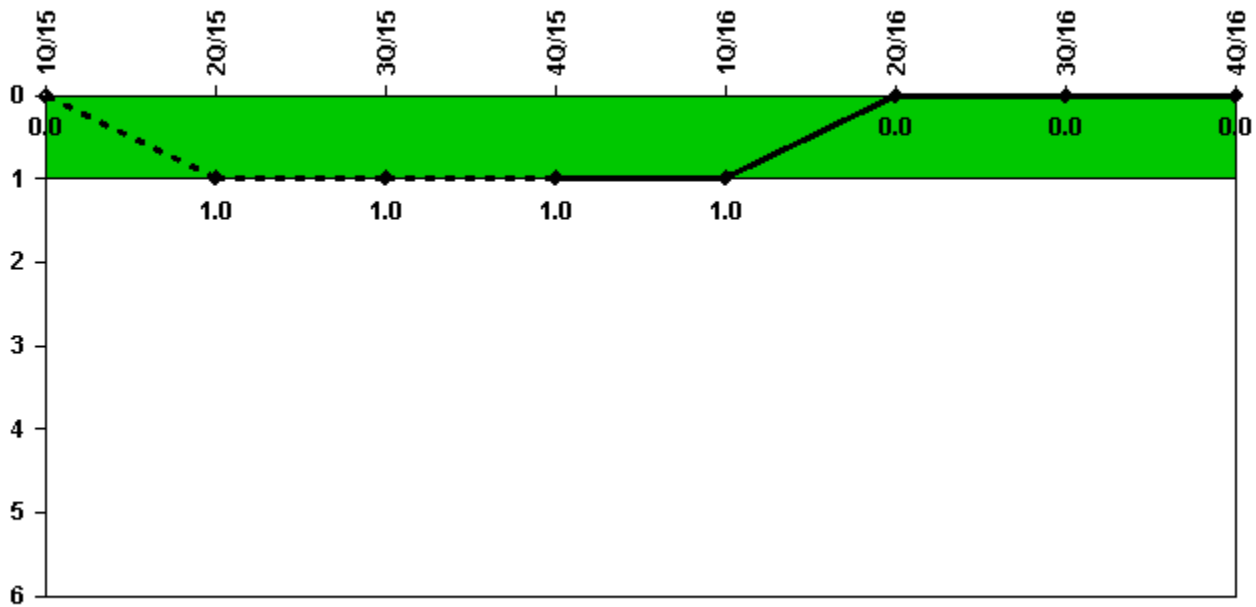
Thresholds: White > 6.0

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	1.0	0	0	0	0	0	0	0
Critical hours	1668.0	2125.7	2208.0	2209.0	2183.0	2184.0	2208.0	2209.0
Indicator value	0.8	0.9	0.9	0.9	0	0	0	0

Licensee Comments: none

Unplanned Scrams with Complications



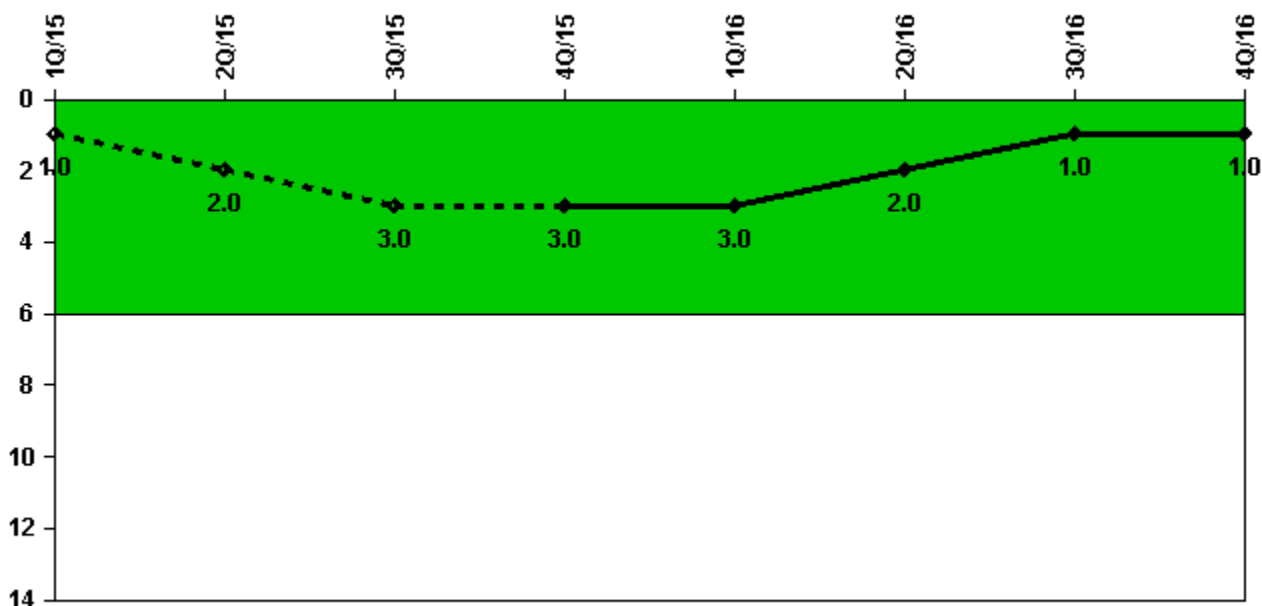
Thresholds: White > 1.0

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	1.0	0	0	0	0	0	0
Indicator value	0.0	1.0	1.0	1.0	1.0	0.0	0.0	0.0

Licensee Comments: none

Safety System Functional Failures (BWR)



Thresholds: White > 6.0

Notes

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

Licensee Comments:

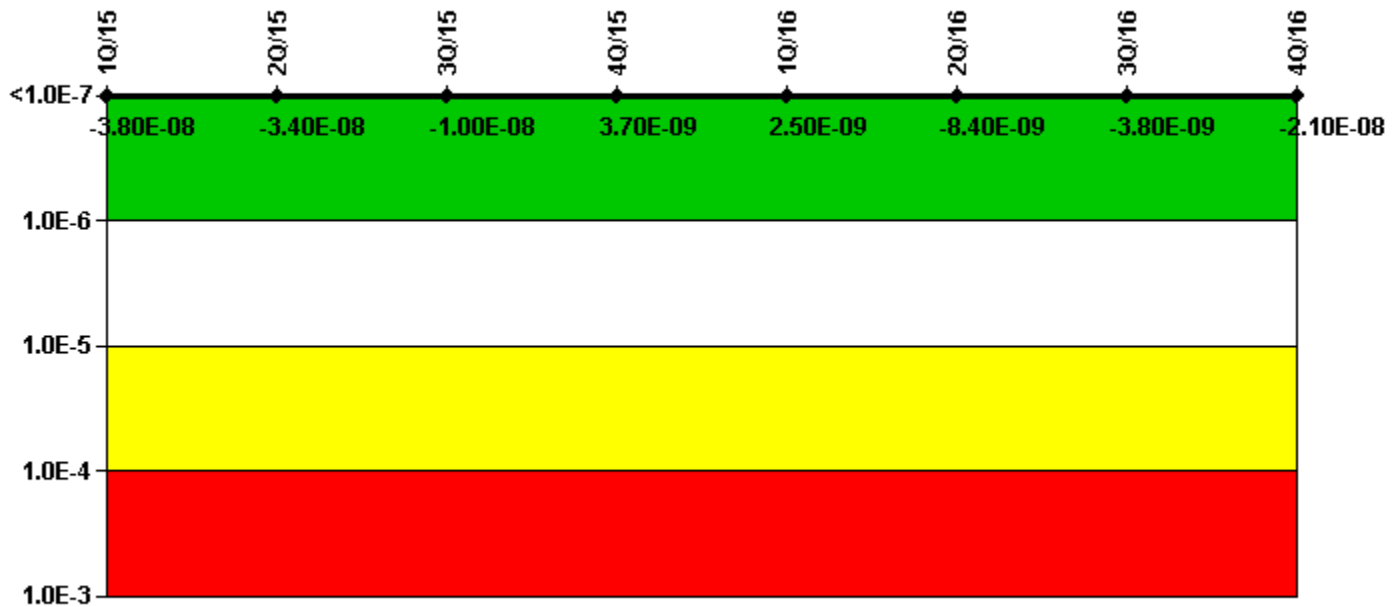
1Q/16: LER 254/2015-010-00, Loss of Control Room Emergency Ventilation System Due to Differential Pressure Switch Failure

3Q/15: LER 254/2015-009-00, Loss of Control Room Emergency Ventilation System Due to Air Filtration Unit Damper Failure (affects Units 1 and 2)

2Q/15: LER 254/2015-004-00, Automatic Depressurization System Trip Logic Failure

1Q/15: LER 254/2014-005-00, Main Control Room Door Unable to Close Causes Loss of Control Room Envelope Boundary (affects BOTH units)

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)	2.75E-08	3.65E-08	5.97E-08	7.42E-08	6.83E-08	5.76E-08	6.16E-08	4.75E-08
URI (ΔCDF)	-6.54E-08	-7.02E-08	-7.02E-08	-7.05E-08	-6.59E-08	-6.60E-08	-6.54E-08	-6.82E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-3.80E-08	-3.40E-08	-1.00E-08	3.70E-09	2.50E-09	-8.40E-09	-3.80E-09	-2.10E-08

Licensee Comments:

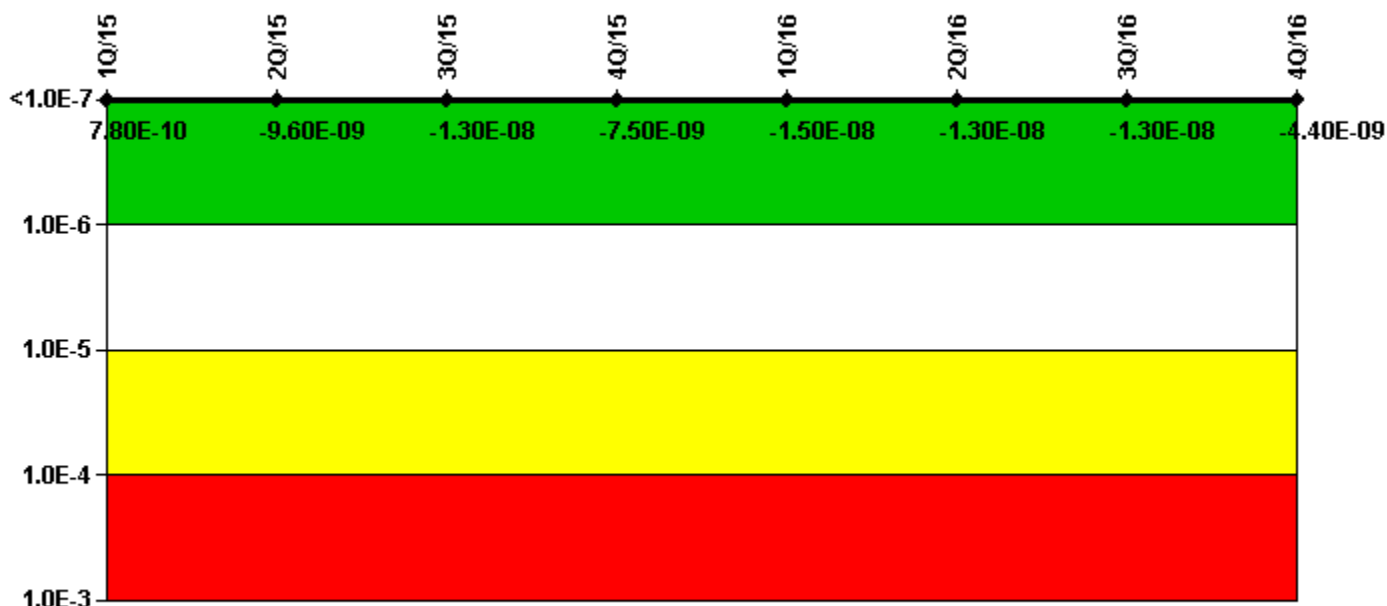
4Q/15: November data corrected

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

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

1Q/15: Error in original submittal. Two successful starts of the Unit 0 EDG were accounted for when three actually occurred.

Mitigating Systems Performance Index, High Pressure Injection System



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

Notes

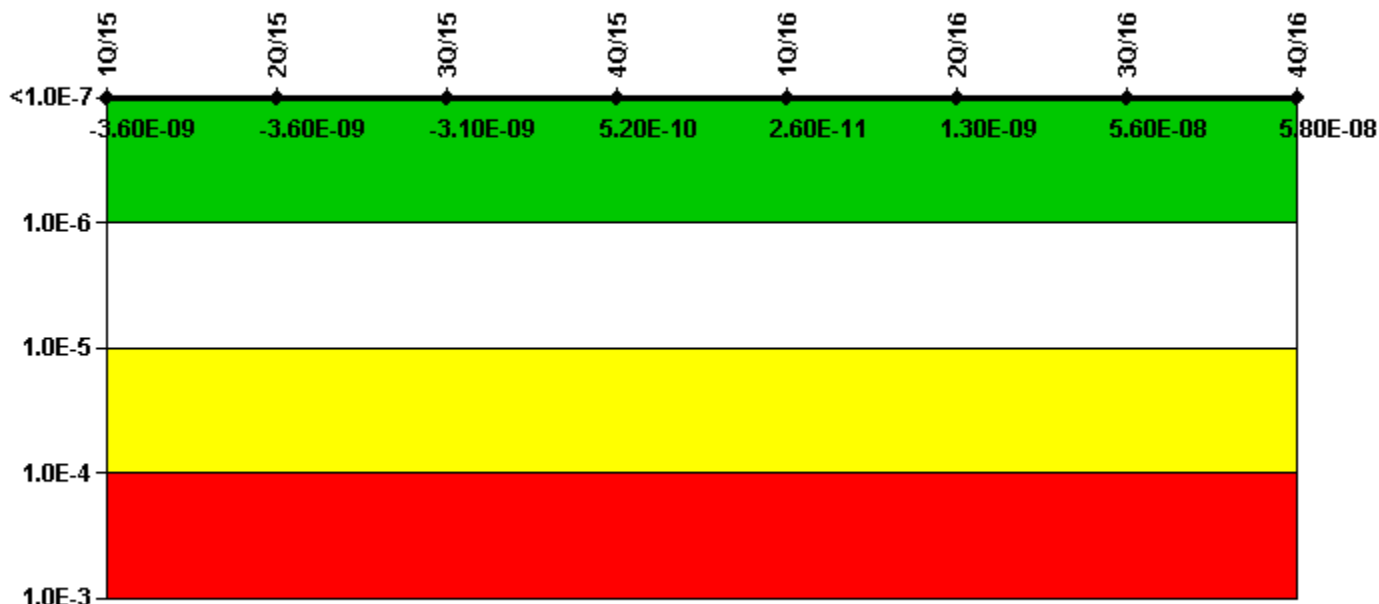
Mitigating Systems Performance Index, High Pressure Injection System	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16
UAI (Δ CDF)	1.57E-08	9.81E-09	6.63E-09	1.18E-08	5.18E-09	5.17E-09	5.39E-09	1.35E-08
URI (Δ CDF)	-1.49E-08	-1.94E-08	-1.94E-08	-1.94E-08	-2.01E-08	-1.79E-08	-1.79E-08	-1.79E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	7.80E-10	9.60E-09	1.30E-08	7.50E-09	1.50E-08	1.30E-08	1.30E-08	4.40E-09

Licensee Comments:

4Q/15: November data corrected.

2Q/15: Changed PRA Parameter(s). 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 (ΔCDF)	-2.17E-09	-2.37E-09	-1.84E-09	1.75E-09	1.25E-09	1.99E-09	3.66E-09	4.77E-09
URI (ΔCDF)	-1.38E-09	-1.22E-09	-1.22E-09	-1.22E-09	-1.22E-09	-7.28E-10	5.28E-08	5.28E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-3.60E-09	-3.60E-09	-3.10E-09	5.20E-10	2.60E-11	1.30E-09	5.60E-08	5.80E-08

Licensee Comments:

3Q/16: July - Reference IR 02696095 (U-1 RCIC FIC, WO 01941037)

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

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

1Q/15: 1-1301-61 valve failure

Mitigating Systems Performance Index, Residual Heat Removal System



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

Notes

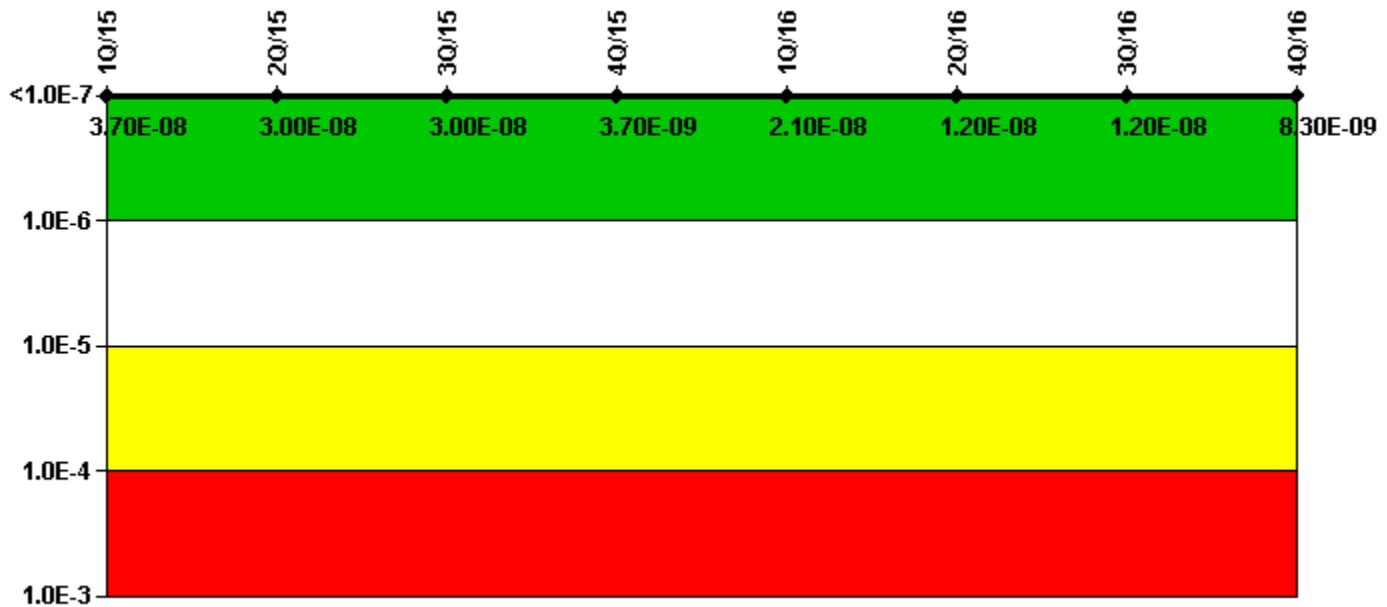
Mitigating Systems Performance Index, Residual Heat Removal System	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16
UAI (Δ CDF)	-2.38E-08	-1.35E-08	-1.35E-08	-1.35E-08	-1.35E-08	-1.35E-08	-1.35E-08	-1.35E-08
URI (Δ CDF)	-4.06E-08	-2.77E-08	-2.65E-08	-2.65E-08	-2.65E-08	-2.65E-08	-2.65E-08	-2.65E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-6.40E-08	-4.10E-08	-4.00E-08	-4.00E-08	-4.00E-08	-4.00E-08	-4.00E-08	-4.00E-08

Licensee Comments:

3Q/16: 1B HRH Seal Cooler 7/27/2016 04:00 - 7/28/2016 20:15

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

Mitigating Systems Performance Index, Cooling Water Systems



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

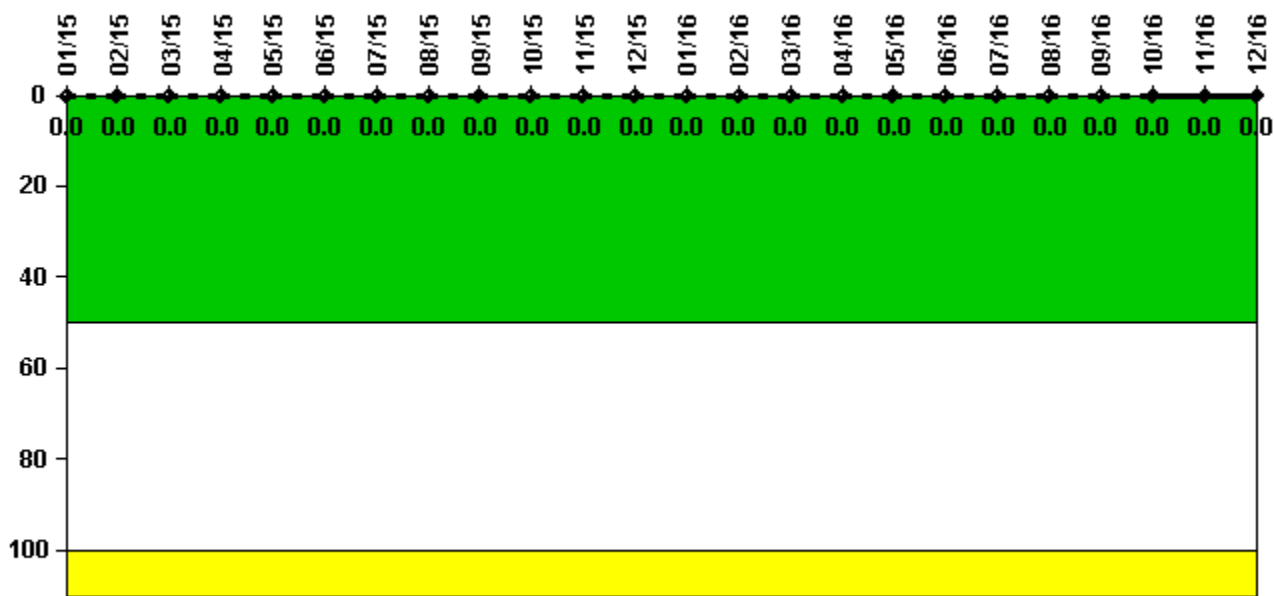
Notes

Mitigating Systems Performance Index, Cooling Water Systems	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16
UAI (ΔCDF)	3.80E-08	3.01E-08	3.01E-08	3.84E-09	2.13E-08	1.25E-08	1.25E-08	8.45E-09
URI (ΔCDF)	-5.28E-10	-1.39E-10	-1.39E-10	-1.39E-10	-1.39E-10	-1.39E-10	-1.39E-10	-1.39E-10
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	3.70E-08	3.00E-08	3.00E-08	3.70E-09	2.10E-08	1.20E-08	1.20E-08	8.30E-09

Licensee Comments:

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

Reactor Coolant System Activity



Thresholds: White > 50.0 Yellow > 100.0

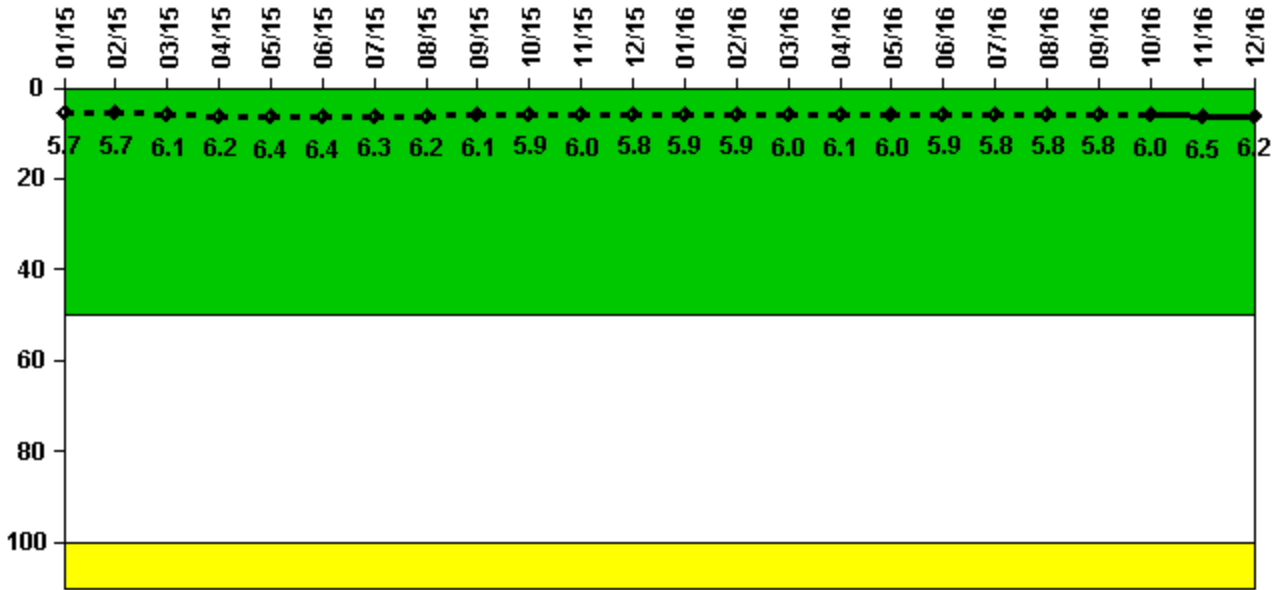
Notes

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	0.000029	0.000041	0.000027	0.000029	0.000031	0.000029	0.000032	0.000054	0.000043	0.000036	0.000041	0.000043
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
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	0.000046	0.000040	0.000047	0.000049	0.000067	0.000068	0.000040	0.000068	0.000055	0.000052	0.000055	0.000052
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
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

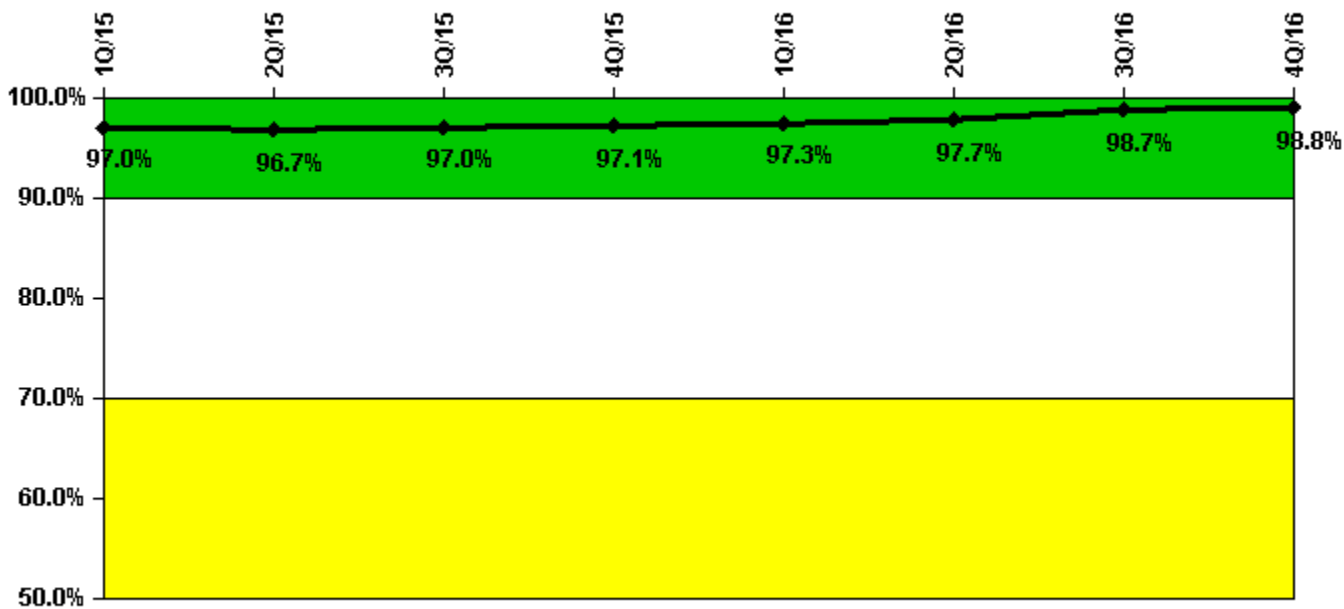
Notes

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	1.426	1.426	1.533	1.562	1.594	1.605	1.585	1.556	1.517	1.476	1.506	1.455
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	5.7	5.7	6.1	6.2	6.4	6.4	6.3	6.2	6.1	5.9	6.0	5.8

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	1.465	1.478	1.490	1.521	1.495	1.474	1.459	1.459	1.452	1.501	1.619	1.542
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	5.9	5.9	6.0	6.1	6.0	5.9	5.8	5.8	5.8	6.0	6.5	6.2

Licensee Comments: none

Drill/Exercise Performance



Thresholds: White < 90.0% Yellow < 70.0%

Notes

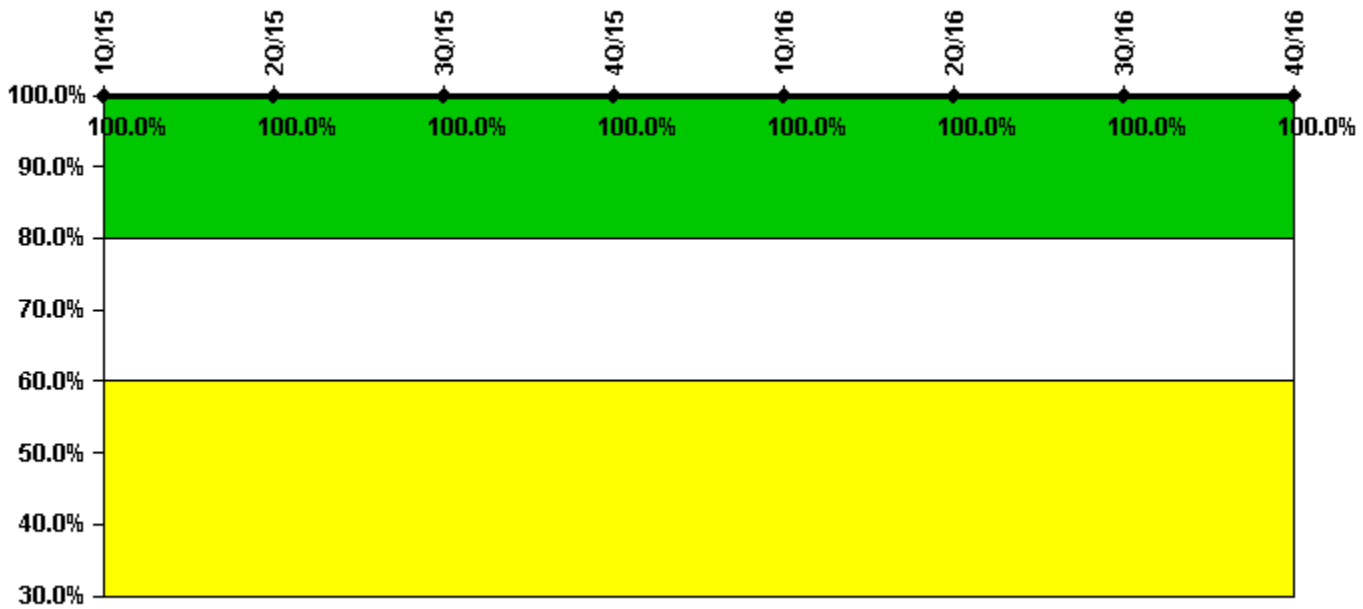
Drill/Exercise Performance	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16
Successful opportunities	28.0	51.0	25.0	33.0	35.0	70.0	34.0	42.0
Total opportunities	28.0	52.0	26.0	33.0	35.0	70.0	36.0	42.0
Indicator value	97.0%	96.7%	97.0%	97.1%	97.3%	97.7%	98.7%	98.8%

Licensee Comments:

3Q/15: 2015-09 changed successful drills from 13 to 17 and changed total drills from 14 to 18.

2Q/15: 2015-05 changed successful drills from 13 to 16 and total drills from 13 to 16.

ERO Drill Participation



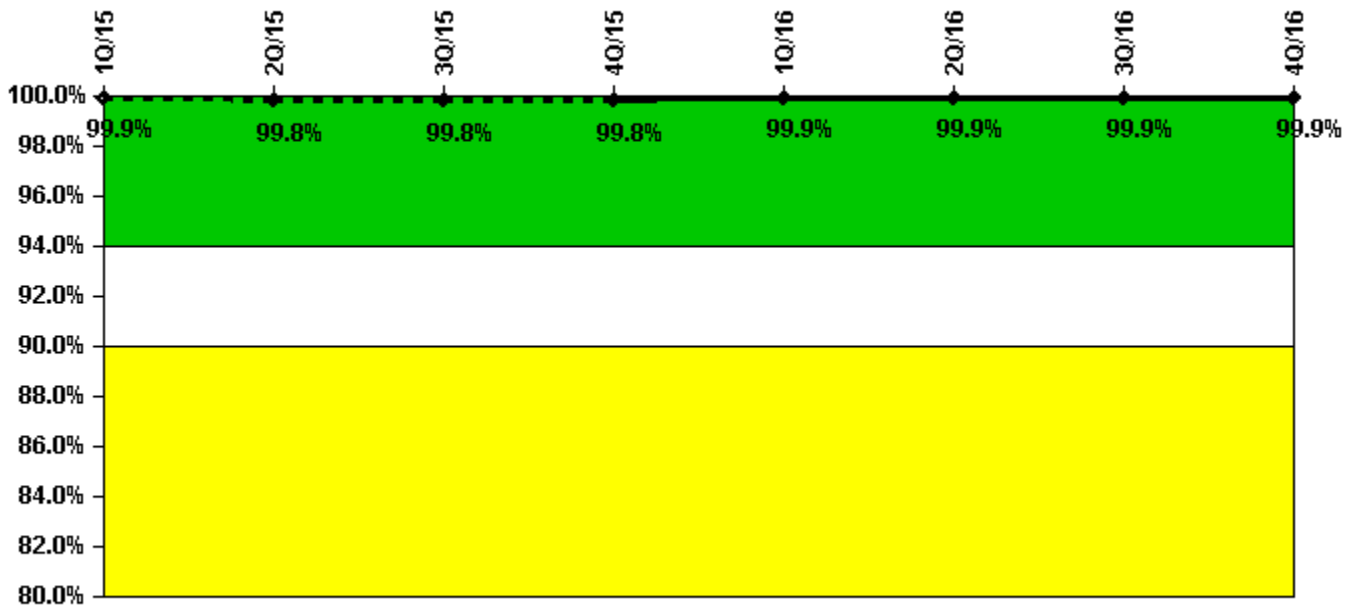
Thresholds: White < 80.0% Yellow < 60.0%

Notes

ERO Drill Participation	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16
Participating Key personnel	76.0	73.0	72.0	73.0	74.0	76.0	85.0	86.0
Total Key personnel	76.0	73.0	72.0	73.0	74.0	76.0	85.0	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



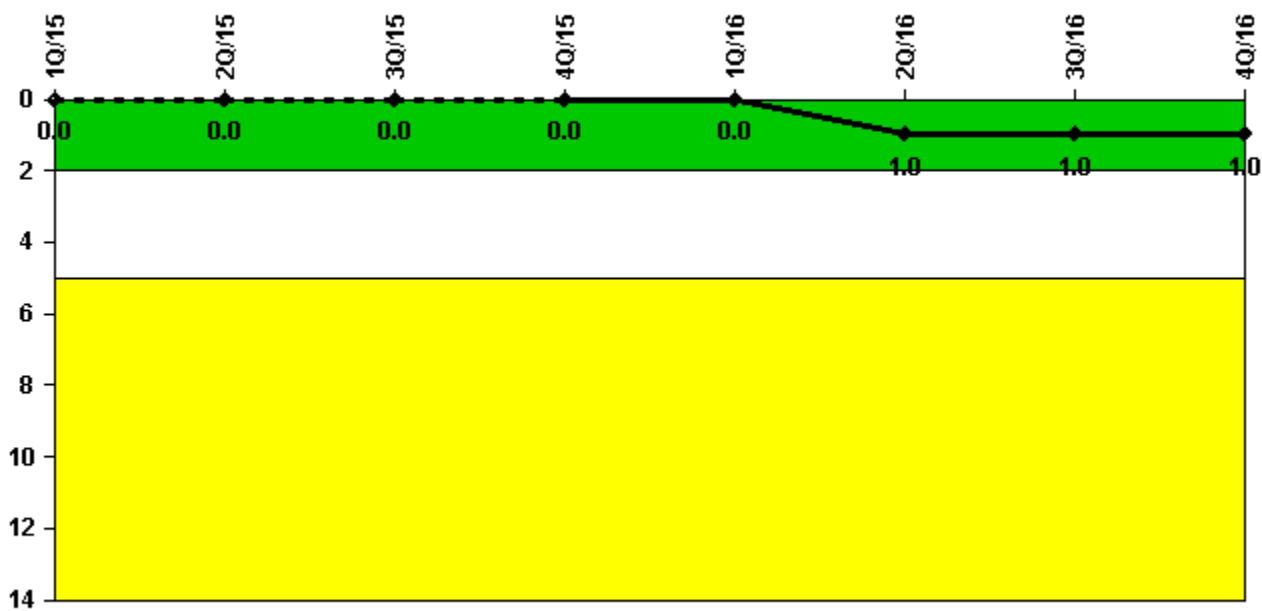
Thresholds: White < 94.0% Yellow < 90.0%

Notes

Alert & Notification System	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16
Successful siren-tests	2641	2680	2725	2686	2687	2687	2682	2604
Total sirens-tests	2646	2688	2730	2688	2688	2688	2688	2604
Indicator value	99.9%	99.8%	99.8%	99.8%	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	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	1	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	1	1	1

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