

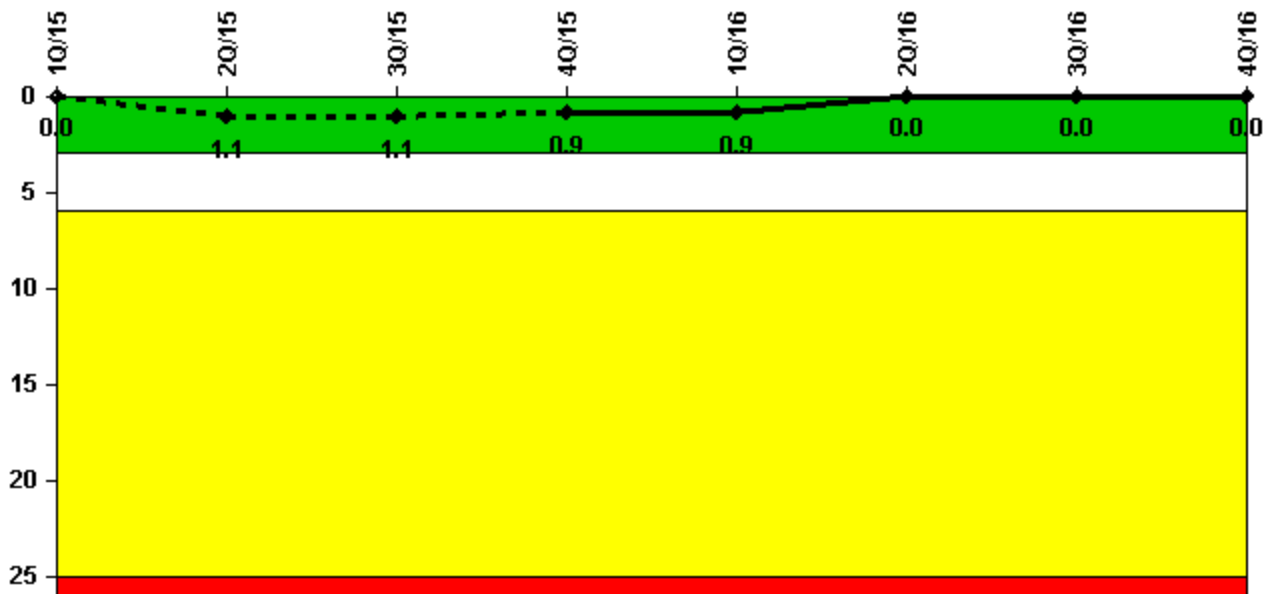
Prairie Island 1

4Q/2016 Performance Indicators

The solid trend line represents the current reporting period.

Licensee's General Comments: none

Unplanned Scrams per 7000 Critical Hrs



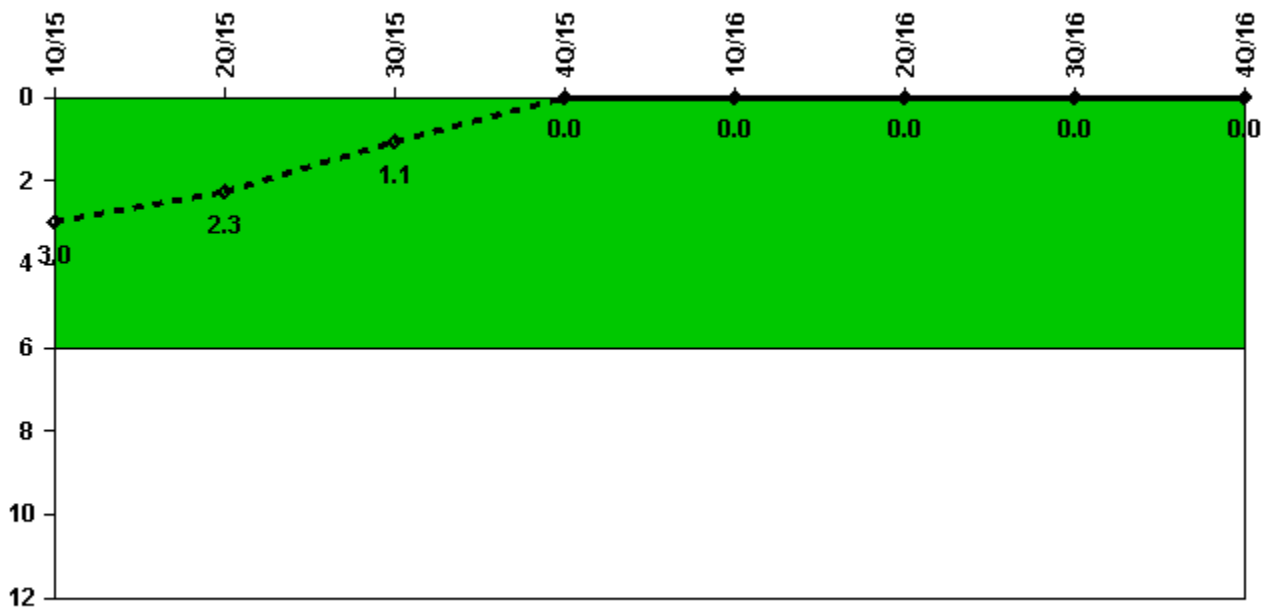
Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

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	1778.7	1378.2	2208.0	2209.0	2183.0	2184.0	2208.0	1349.3
Indicator value	0	1.1	1.1	0.9	0.9	0	0	0

Licensee Comments: none

Unplanned Power Changes per 7000 Critical Hrs



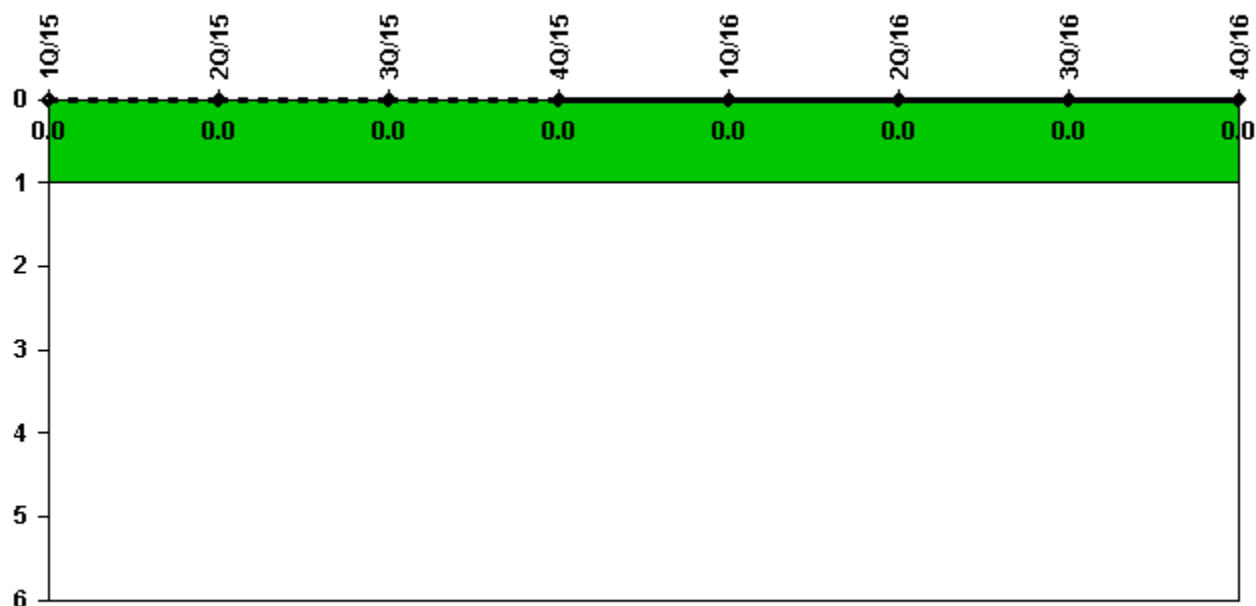
Thresholds: White > 6.0

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	1778.7	1378.2	2208.0	2209.0	2183.0	2184.0	2208.0	1349.3
Indicator value	3.0	2.3	1.1	0	0	0	0	0

Licensee Comments: none

Unplanned Scrams with Complications



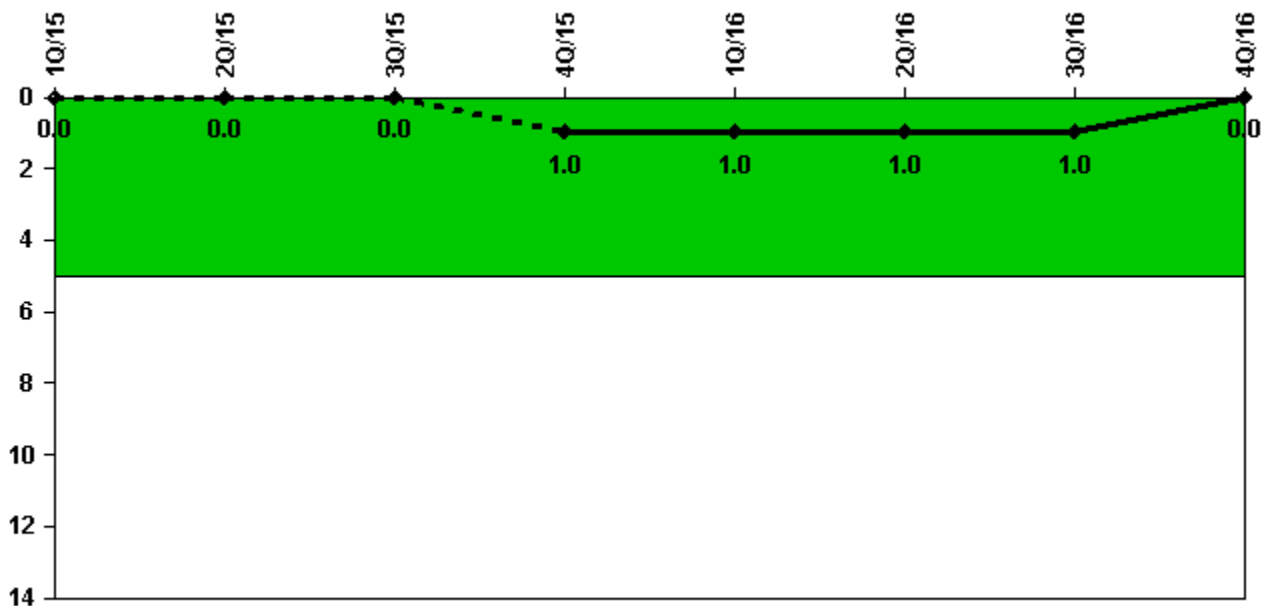
Thresholds: White > 1.0

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	1	0	0	0	0
Indicator value	0	0	0	1	1	1	1	0

Licensee Comments:

4Q/15: LER 50-282/2015-006-00, reported on 10/5/15 for Quarterly Containment Spray Pump Surveillance Test Methodology

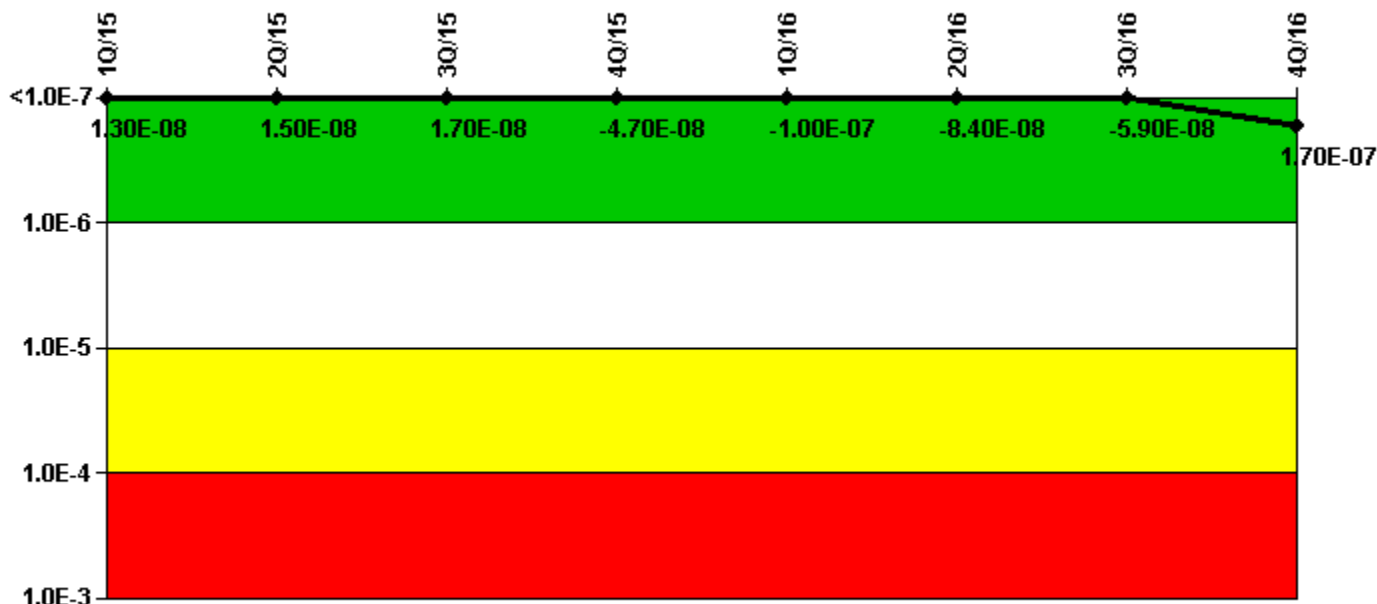
2Q/15: LER 50-282/2015-002-00, 4/10/2015, 14 Fan Coil Unit Leak (lower head)

2Q/15: LER 50-282/2015-002-00, 14 Fan Coil Unit Leak (lower head) reported on 4/10/2015 has been cancelled. Based on engineering's analysis, containment leakage was less than the available leakage margin. The safety function to control the release of radioactive material was not lost.

1Q/15: LER 50-282/2015-001-00, for 14 Fan Coil Unit Leak reported on 1/16/2015 has been cancelled. Based on engineering analysis, containment was less than the available leakage margin. The safety function to control the release of radioactive material was not lost.

1Q/15: LER 50-282/2015-001-00, for 14 Fan Coil Unit Leak reported on 1/16/2015.

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)	2.82E-08	2.96E-08	3.08E-08	2.23E-08	2.39E-09	1.95E-08	4.46E-08	1.56E-07
URI (ΔCDF)	-1.47E-08	-1.47E-08	-1.39E-08	-6.89E-08	-1.04E-07	-1.04E-07	-1.04E-07	1.07E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	1.30E-08	1.50E-08	1.70E-08	-4.70E-08	-1.00E-07	-8.40E-08	-5.90E-08	1.70E-07

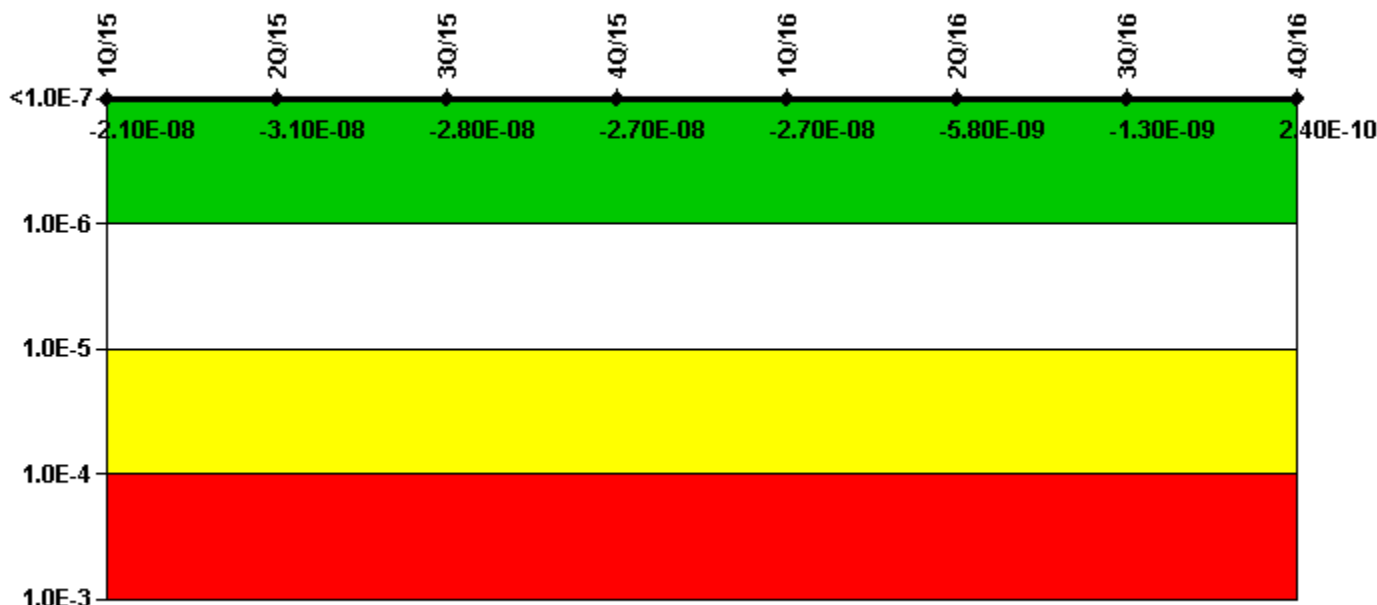
Licensee Comments:

1Q/16: Changed PRA Parameter(s). The PINGP PRA Model Revision 5.2 was approved on 11/30/2015 with corresponding MSPI Basis Document Revision 20 approved 3/18/2016. This incorporates FAQ 14-01, data analysis update and plant installed Mayer Groove RCP seals.

3Q/15: PINGP PRA Model Revision 5.1 was approved on 4/20/2014 with a corresponding MSPI Basis Document Revision 18 approved on 6/10/2015 and Coefficients effective 7/1/2015. The PRA model revision was to incorporate Mayer Groove RCP seals installed on Unit 1 and minor updates identified in the PRA Change Database Process.

1Q/15: Changed PRA Parameter(s). The PINGP PRA Model Revision 5.1 was approved on 11/21/2014 with a corresponding MSPI Basis Document Revision 16 approved on 2/26/2015. The PRA model revision was a maintenance update to the model which included an update to incorporate newly installed Unit 1 RCP Seals and PRA specific success criteria for cooling water trains. As a result of the PRA model change, the cross-tie breakers are no longer monitored components.

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)	2.87E-09	-8.16E-09	-5.44E-09	-6.11E-09	-2.86E-09	1.85E-08	2.29E-08	2.46E-08
URI (Δ CDF)	-2.40E-08	-2.32E-08	-2.28E-08	-2.07E-08	-2.42E-08	-2.42E-08	-2.42E-08	-2.44E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-2.10E-08	-3.10E-08	-2.80E-08	-2.70E-08	-2.70E-08	-5.80E-09	-1.30E-09	2.40E-10

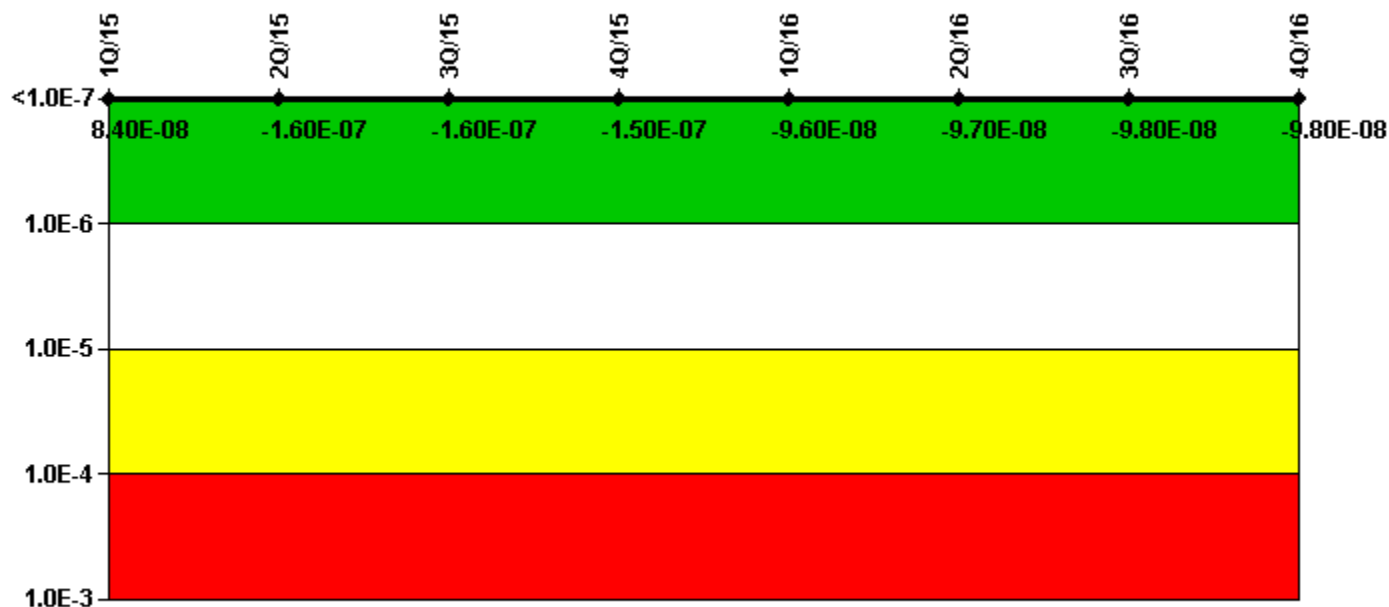
Licensee Comments:

1Q/16: Changed PRA Parameter(s). The PINGP PRA Model Revision 5.2 was approved on 11/30/2015 with corresponding MSPI Basis Document Revision 20 approved 3/18/2016. This incorporates FAQ 14-01, data analysis update and plant installed Mayer Groove RCP seals.

3Q/15: PINGP PRA Model Revision 5.1 was approved on 4/20/2014 with a corresponding MSPI Basis Document Revision 18 approved on 6/10/2015 and Coefficients effective 7/1/2015. The PRA model revision was to incorporate Mayer Groove RCP seals installed on Unit 1 and minor updates identified in the PRA Change Database Process.

1Q/15: Changed PRA Parameter(s). The PINGP PRA Model Revision 5.1 was approved on 11/21/2014 with a corresponding MSPI Basis Document Revision 16 approved on 2/26/2015. The PRA model revision was a maintenance update to the model which included an update to incorporate newly installed Unit 1 RCP Seals and PRA specific success criteria for cooling water trains.

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)	-1.76E-08	-2.40E-08	-2.38E-08	-2.38E-08	-2.10E-08	-2.10E-08	-2.10E-08	-2.01E-08
URI (ΔCDF)	1.02E-07	-1.35E-07	-1.32E-07	-1.27E-07	-7.47E-08	-7.57E-08	-7.67E-08	-7.76E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	8.40E-08	-1.60E-07	-1.60E-07	-1.50E-07	-9.60E-08	-9.70E-08	-9.80E-08	-9.80E-08

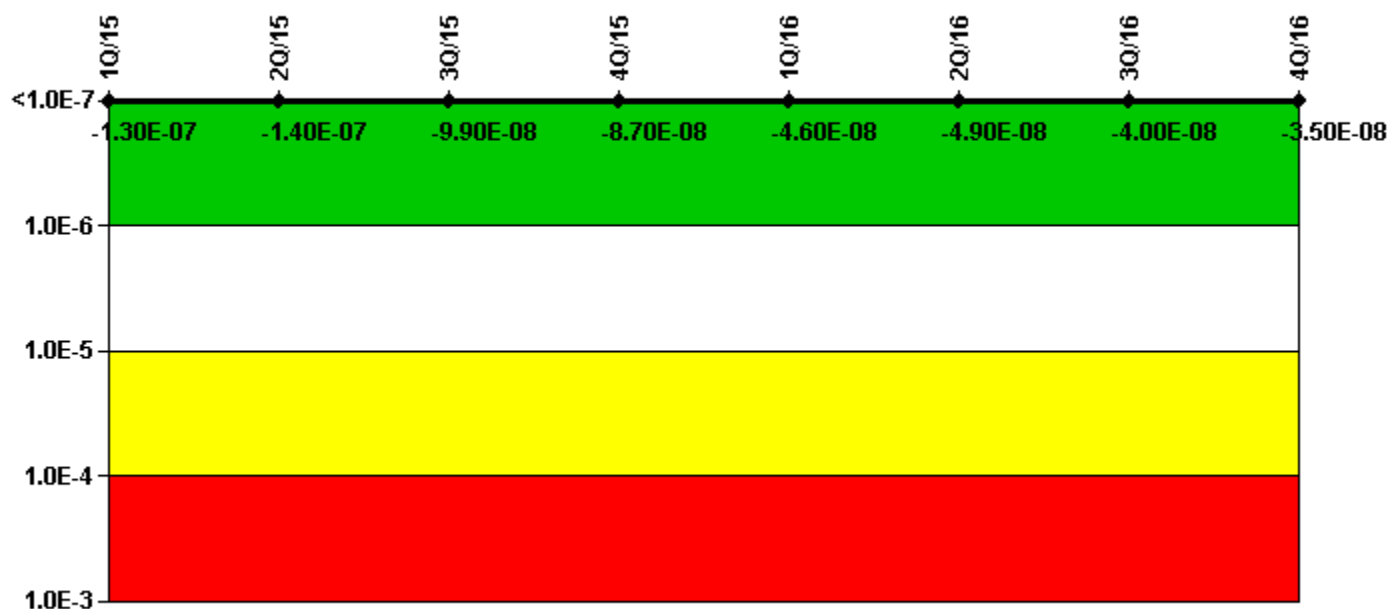
Licensee Comments:

1Q/16: Changed PRA Parameter(s). The PINGP PRA Model Revision 5.2 was approved on 11/30/2015 with corresponding MSPI Basis Document Revision 20 approved 3/18/2016. This incorporates FAQ 14-01, data analysis update and plant installed Mayer Groove RCP seals.

3Q/15: PINGP PRA Model Revision 5.1 was approved on 4/20/2014 with a corresponding MSPI Basis Document Revision 18 approved on 6/10/2015 and Coefficients effective 7/1/2015. The PRA model revision was to incorporate Mayer Groove RCP seals installed on Unit 1 and minor updates identified in the PRA Change Database Process.

1Q/15: Changed PRA Parameter(s). The PINGP PRA Model Revision 5.1 was approved on 11/21/2014 with a corresponding MSPI Basis Document Revision 16 approved on 2/26/2015. The PRA model revision was a maintenance update to the model which included an update to incorporate newly installed Unit 1 RCP Seals and PRA specific success criteria for cooling water trains. As a result of the PRA model change, the motor valves are no longer monitored components.

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 (ΔCDF)	-1.71E-08	-1.71E-08	2.55E-08	1.75E-08	1.16E-08	9.76E-09	1.87E-08	3.02E-08
URI (ΔCDF)	-1.11E-07	-1.23E-07	-1.24E-07	-1.05E-07	-5.80E-08	-5.84E-08	-5.86E-08	-6.56E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-1.30E-07	-1.40E-07	-9.90E-08	-8.70E-08	-4.60E-08	-4.90E-08	-4.00E-08	-3.50E-08

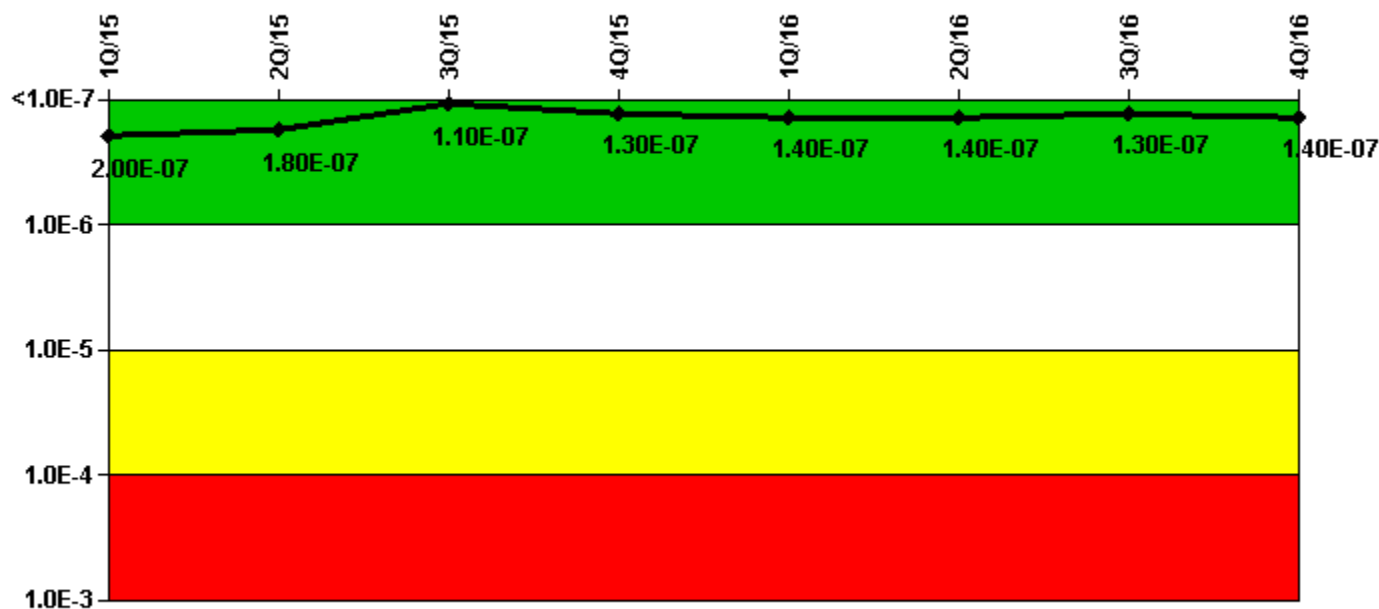
Licensee Comments:

1Q/16: Changed PRA Parameter(s). The PINGP PRA Model Revision 5.2 was approved on 11/30/2015 with corresponding MSPI Basis Document Revision 20 approved 3/18/2016. This incorporates FAQ 14-01, data analysis update and plant installed Mayer Groove RCP seals.

3Q/15: PINGP PRA Model Revision 5.1 was approved on 4/20/2014 with a corresponding MSPI Basis Document Revision 18 approved on 6/10/2015 and Coefficients effective 7/1/2015. The PRA model revision was to incorporate Mayer Groove RCP seals installed on Unit 1 and minor updates identified in the PRA Change Database Process.

1Q/15: Changed PRA Parameter(s). The PINGP PRA Model Revision 5.1 was approved on 11/21/2014 with a corresponding MSPI Basis Document Revision 16 approved on 2/26/2015. The PRA model revision was a maintenance update to the model which included an update to incorporate newly installed Unit 1 RCP Seals and PRA specific success criteria for cooling water trains.

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)	2.30E-07	2.07E-07	2.11E-07	2.16E-07	1.64E-07	1.64E-07	1.53E-07	1.58E-07
URI (ΔCDF)	-3.13E-08	-3.17E-08	-9.70E-08	-8.54E-08	-2.13E-08	-2.17E-08	-2.22E-08	-2.22E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO

Indicator value	2.00E-07	1.80E-07	1.10E-07	1.30E-07	1.40E-07	1.40E-07	1.30E-07	1.40E-07

Licensee Comments:

1Q/16: Changed PRA Parameter(s). The PINGP PRA Model Revision 5.2 was approved on 11/30/2015 with corresponding MSPI Basis Document Revision 20 approved 3/18/2016. This incorporates FAQ 14-01, data analysis update and plant installed Mayer Groove RCP seals.

4Q/15: The pending evaluation for loss of bearing water pressure on 121 motor driven cooling water pump in a previous quarter was not an MSPI failure. Bearing water flow was observed, although indicated pressure was zero. Pump was not failed and would not fail prior to meeting mission time.

3Q/15: PINGP PRA Model Revision 5.1 was approved on 4/20/2014 with a corresponding MSPI Basis Document Revision 18 approved on 6/10/2015 and Coefficients effective 7/1/2015. The PRA model revision was to incorporate Mayer Groove RCP seals installed on Unit 1 and minor updates identified in the PRA Change Database Process. Also, revised planned unavailability baseline value for the Unit 1 Loop B cooling Water Segment approved 9/16/2015 is effective 10/1/2015. This reflects the performance of periodic internal coating inspection while Unit 1 is critical during Unit 2 refueling outage. A failure evaluation for Sept 26, 2015, loss of bearing water pressure on 121 motor driven cooling water pump while the pump was running is pending. Preliminary determination is that this condition is not an MSPI failure.

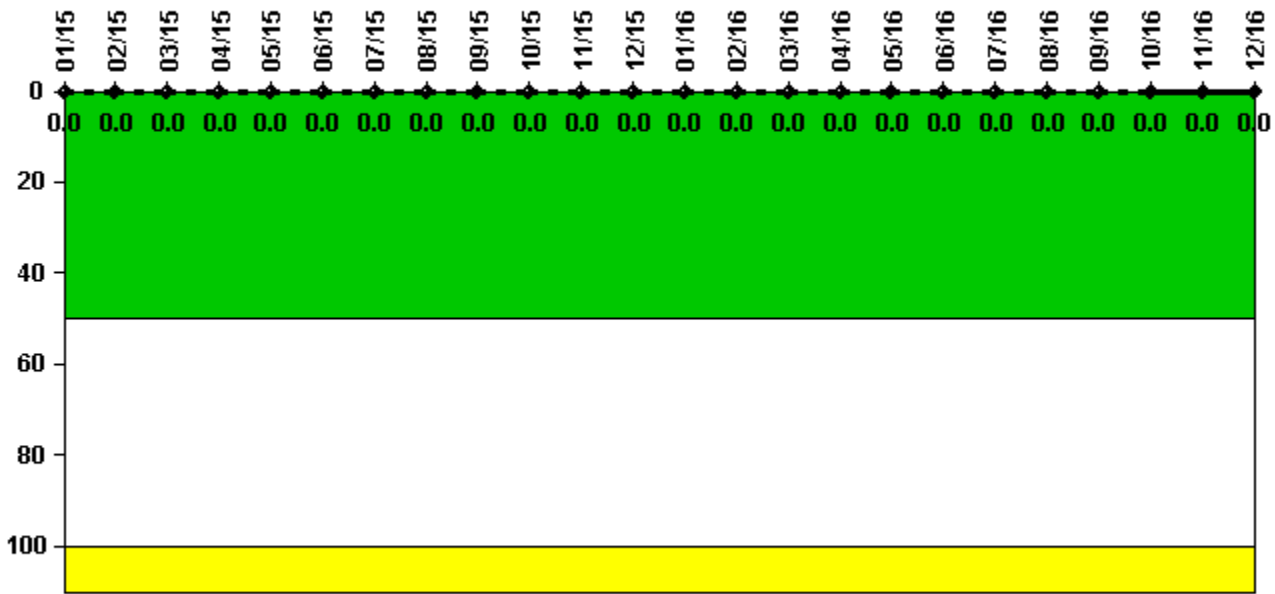
2Q/15: MSPI Cooling Water corrections to include unavailability of pump while supply breaker is unavailable and characterize loss of bearing water pressure as unplanned pump unavailability.

1Q/15: Changed PRA Parameter(s). The PINGP PRA Model Revision 5.1 was approved on 11/21/2014 with a corresponding MSPI Basis Document Revision 16 approved on 2/26/2015. The PRA model revision was a maintenance update to the model which included an update to incorporate newly installed Unit 1 RCP Seals and PRA specific success criteria for cooling water trains on both units. / MSPI Cooling Water corrections to include unavailability of pump while supply breaker is unavailable.

1Q/15: Changed PRA Parameter(s). The PINGP PRA Model Revision 5.1 was approved on 11/21/2014 with a corresponding MSPI Basis Document Revision 16 approved on 2/26/2015. The PRA model revision was a maintenance update to the model which included an update to incorporate newly installed Unit 1 RCP Seals and PRA specific success criteria for cooling water trains on both units.

1Q/15: Changed PRA Parameter(s). The PINGP PRA Model Revision 5.1 was approved on 11/21/2014 with a corresponding MSPI Basis Document Revision 16 approved on 2/26/2015. The PRA model revision was a maintenance update to the model which included an update to incorporate newly installed Unit 1 RCP Seals and PRA specific success criteria for cooling water trains on both units.

Reactor Coolant System Activity



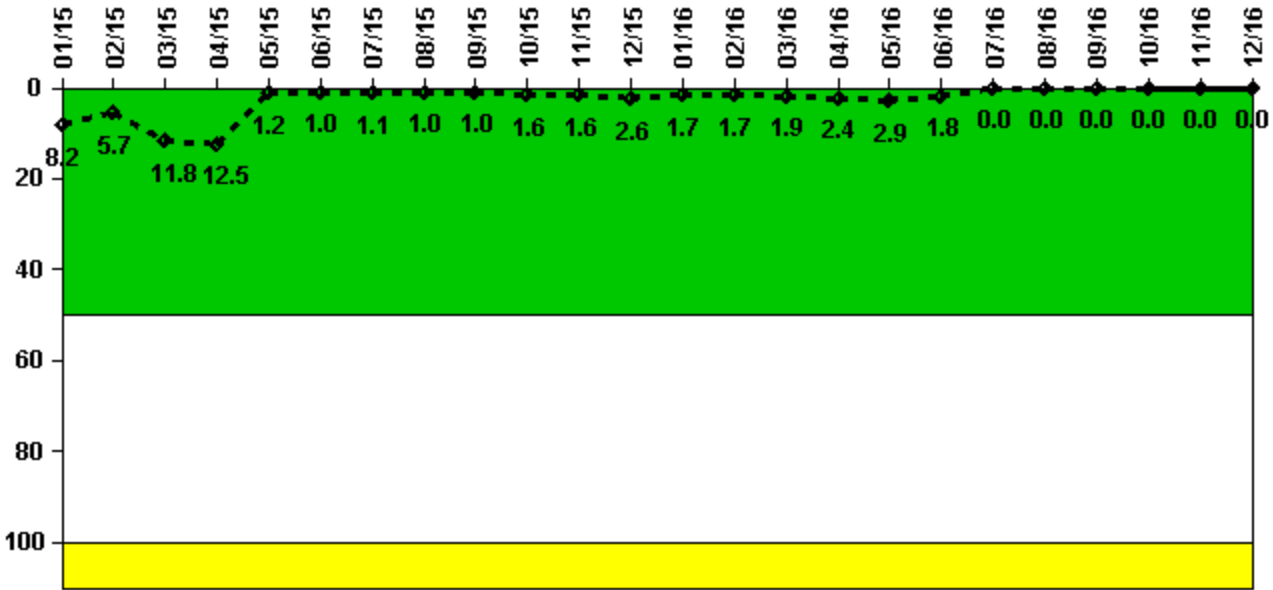
Thresholds: White > 50.0 Yellow > 100.0

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	0.000032	0.000031	0.000051	0.000034	0.000040	0.000035	0.000042	0.000040	0.000039	0.000040	0.000041	0.000042
Technical specification limit	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
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	0.000043	0.000044	0.000049	0.000047	0.000054	0.000052	0.000052	0.000129	0.000057	0.000050	0.000028	0.000038
Technical specification limit	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Indicator value	0	0	0	0	0	0	0	0	0	0	0	0

Licensee Comments: none

Reactor Coolant System Leakage



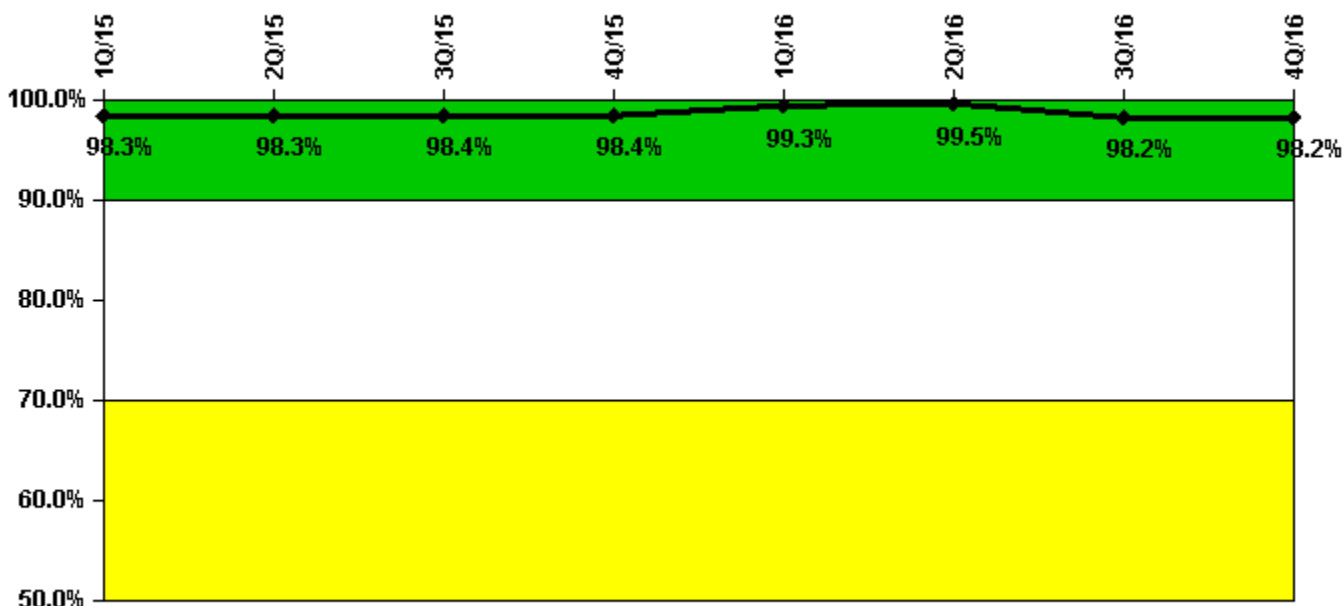
Thresholds: White > 50.0 Yellow > 100.0

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	0.819	0.565	1.179	1.247	0.115	0.101	0.112	0.096	0.096	0.156	0.163	0.260
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	8.2	5.7	11.8	12.5	1.2	1.0	1.1	1.0	1.0	1.6	1.6	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	0.165	0.172	0.188	0.237	0.291	0.178	0	0	0	0	0	0
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	1.7	1.7	1.9	2.4	2.9	1.8	0	0	0	0	0	0

Licensee Comments: none

Drill/Exercise Performance



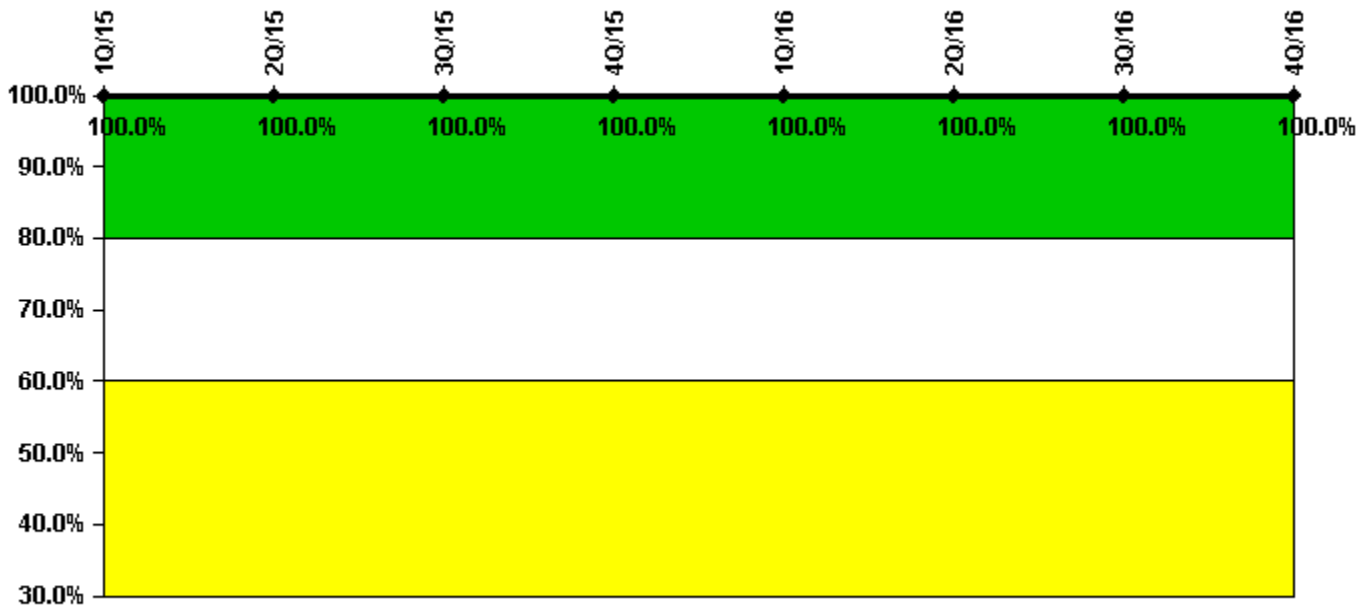
Thresholds: White < 90.0% Yellow < 70.0%

Notes

Drill/Exercise Performance	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16
Successful opportunities	32.0	28.0	2.0	4.0	40.0	33.0	18.0	10.0
Total opportunities	32.0	28.0	2.0	4.0	40.0	34.0	20.0	10.0
Indicator value	98.3%	98.3%	98.4%	98.4%	99.3%	99.5%	98.2%	98.2%

Licensee Comments: none

ERO Drill Participation



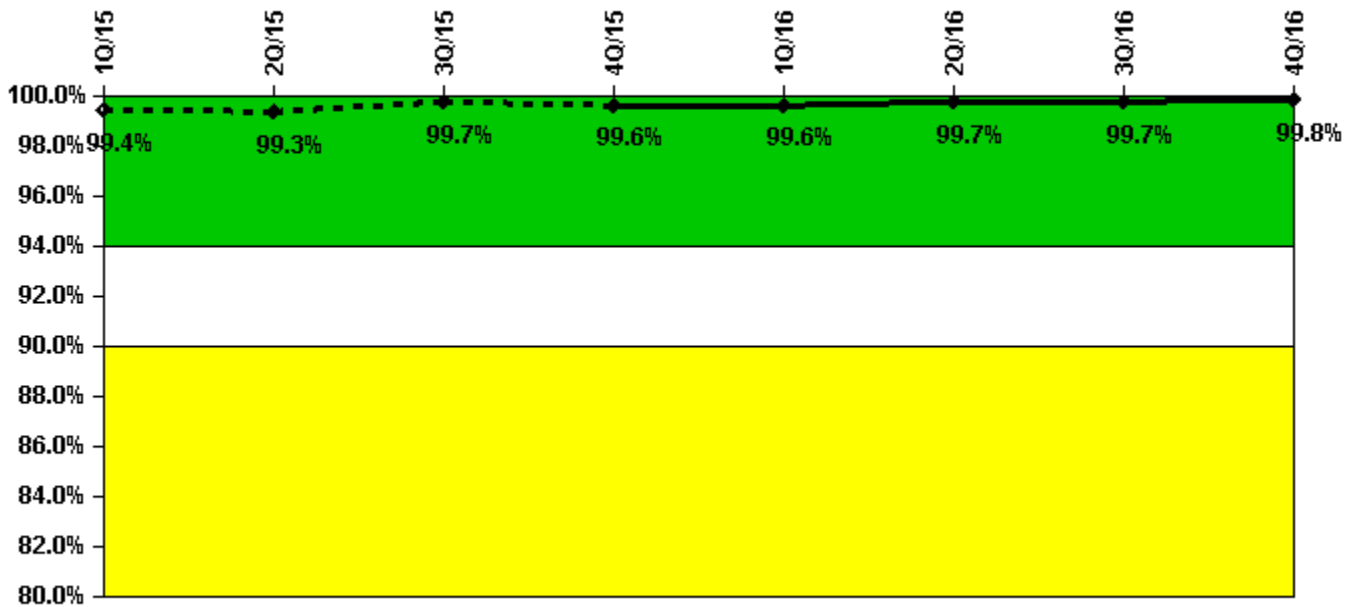
Thresholds: White < 80.0% Yellow < 60.0%

Notes

ERO Drill Participation	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16
Participating Key personnel	158.0	148.0	142.0	136.0	132.0	126.0	163.0	156.0
Total Key personnel	158.0	148.0	142.0	136.0	132.0	126.0	163.0	156.0
Indicator value	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Licensee Comments: none

Alert & Notification System



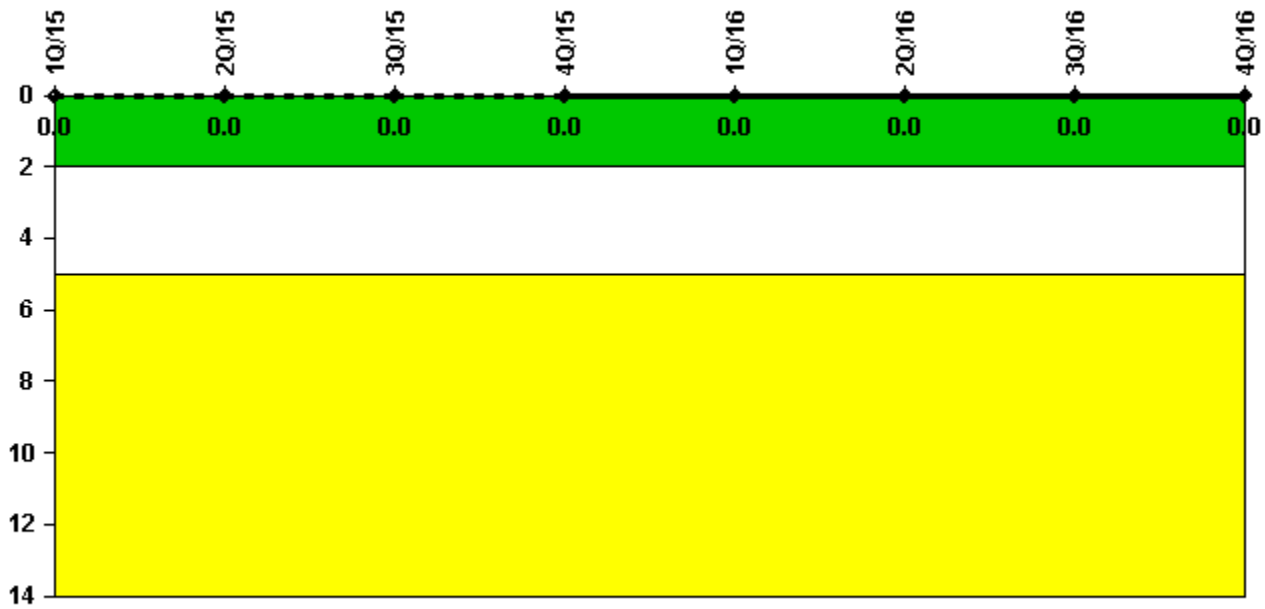
Thresholds: White < 94.0% Yellow < 90.0%

Notes

Alert & Notification System	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16
Successful siren-tests	1469	1587	1722	1591	1596	1271	1595	1597
Total sirens-tests	1476	1599	1722	1599	1599	1276	1599	1599
Indicator value	99.4%	99.3%	99.7%	99.6%	99.6%	99.7%	99.7%	99.8%

Licensee Comments: none

Occupational Exposure Control Effectiveness



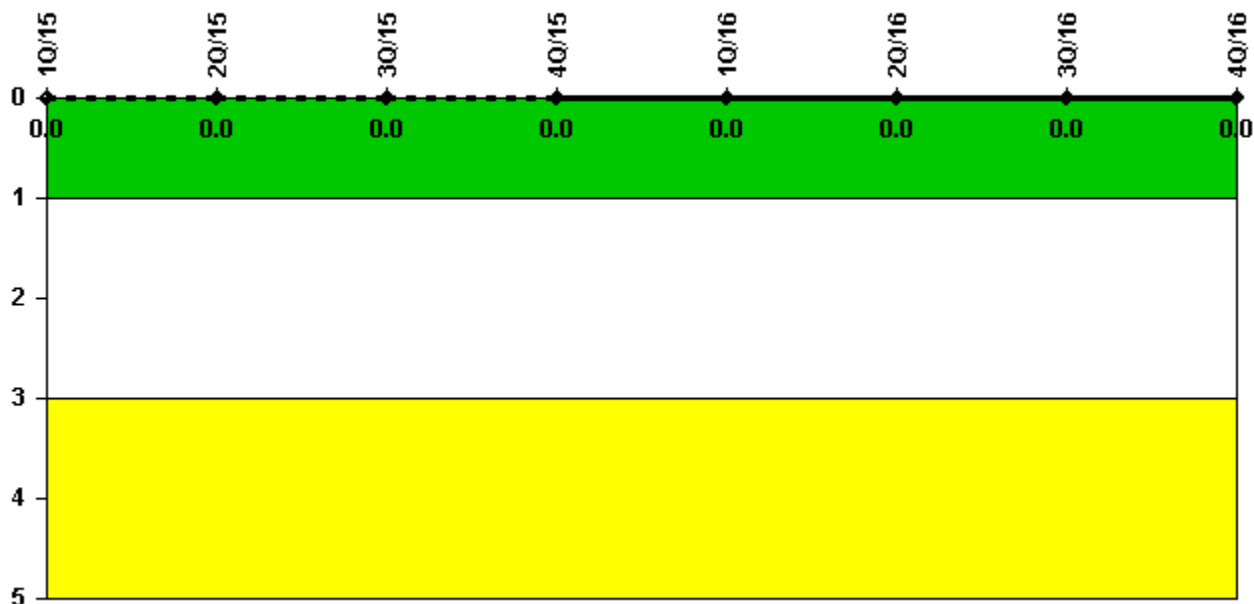
Thresholds: White > 2.0 Yellow > 5.0

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