

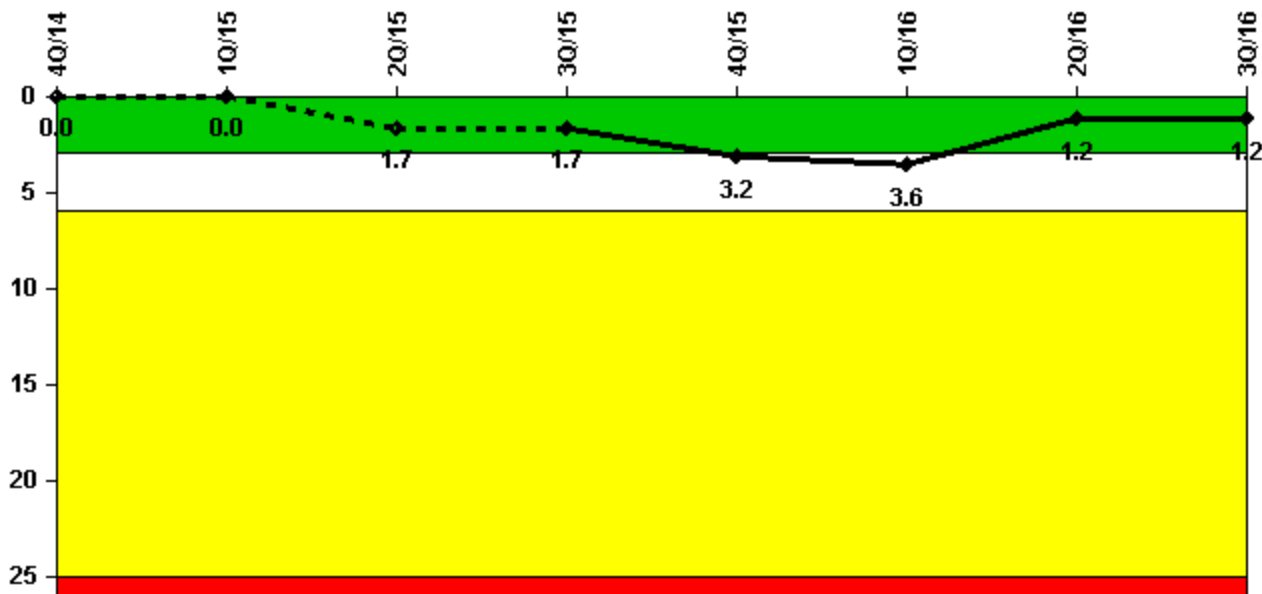
Prairie Island 2

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

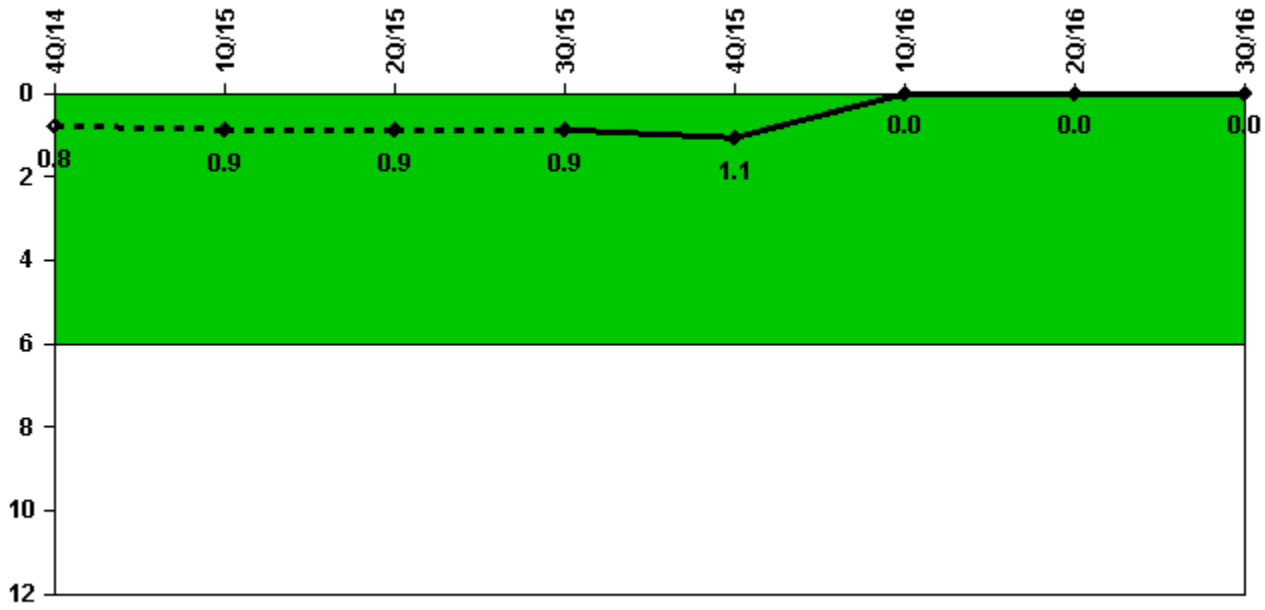
Notes

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	2.0	0	1.0	0	0	0
Critical hours	2209.0	1682.8	2035.8	2208.0	718.8	921.2	2184.0	2208.0
Indicator value	0	0	1.7	1.7	3.2	3.6	1.2	1.2

Licensee Comments:

4Q/15: The Green-White threshold has been exceeded for this indicator due to three unplanned scrams in 2015 (April, June & December).

Unplanned Power Changes per 7000 Critical Hrs



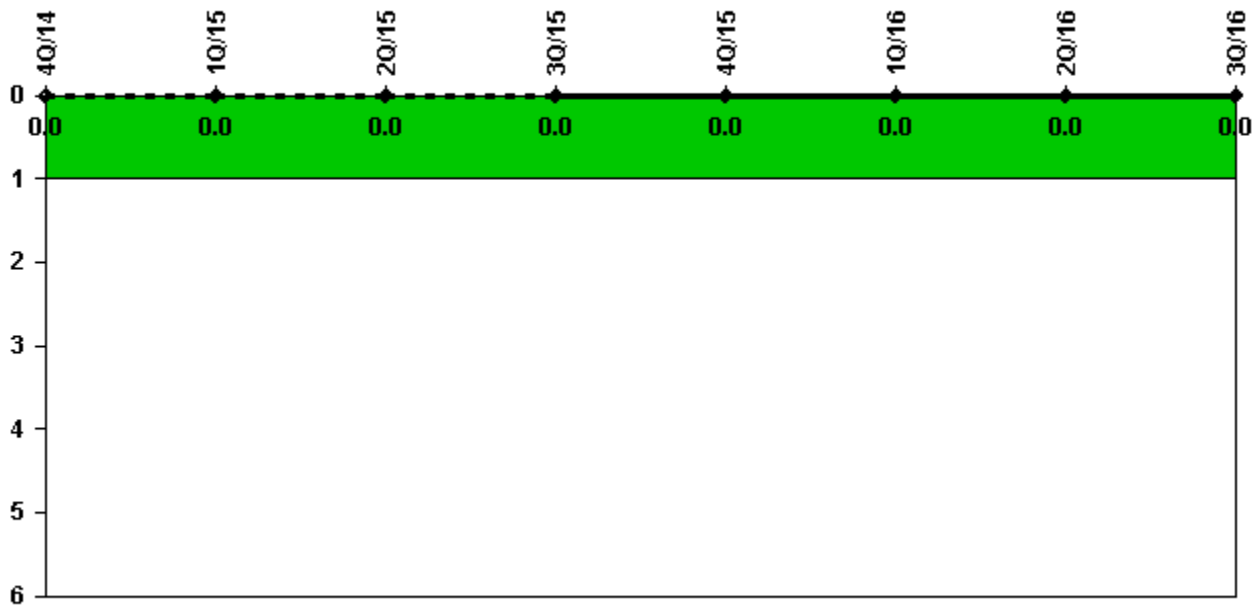
Thresholds: White > 6.0

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	0	1.0	0	0	0	0	0	0
Critical hours	2209.0	1682.8	2035.8	2208.0	718.8	921.2	2184.0	2208.0
Indicator value	0.8	0.9	0.9	0.9	1.1	0	0	0

Licensee Comments: none

Unplanned Scrams with Complications



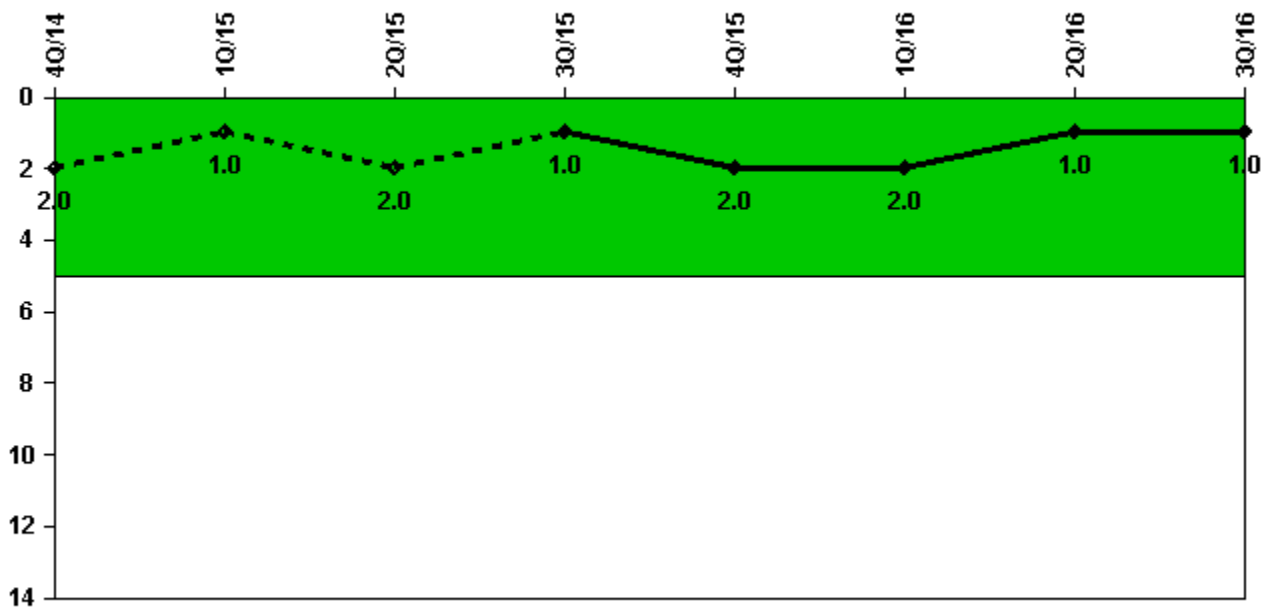
Thresholds: White > 1.0

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
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

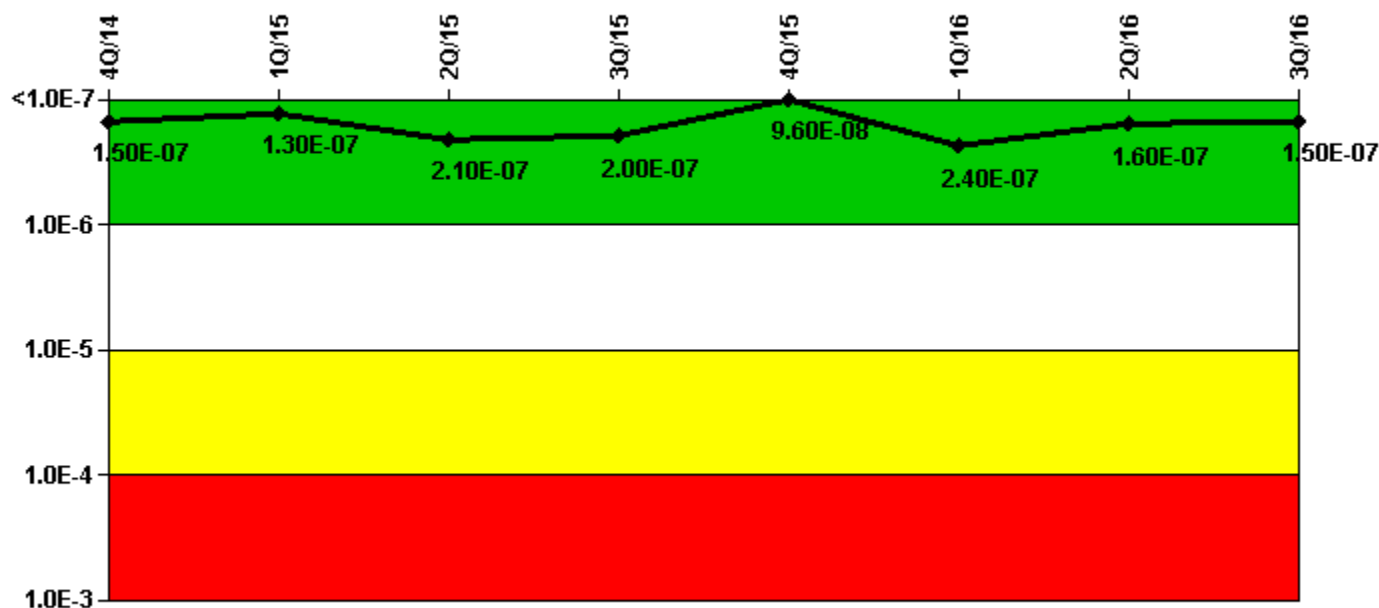
Safety System Functional Failures (PWR)	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16
Safety System Functional Failures	0	0	1	0	1	0	0	0
Indicator value	2	1	2	1	2	2	1	1

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 50-306/2015-001-00, 5/4/2015, 21 Fan Coil Unit Leak - Containment Declared 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 (Δ CDF)	6.08E-08	5.16E-08	6.17E-08	4.98E-08	1.03E-07	2.20E-07	1.47E-07	1.33E-07
URI (Δ CDF)	9.37E-08	8.02E-08	1.52E-07	1.53E-07	-6.87E-09	1.53E-08	1.53E-08	1.53E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	1.50E-07	1.30E-07	2.10E-07	2.00E-07	9.60E-08	2.40E-07	1.60E-07	1.50E-07

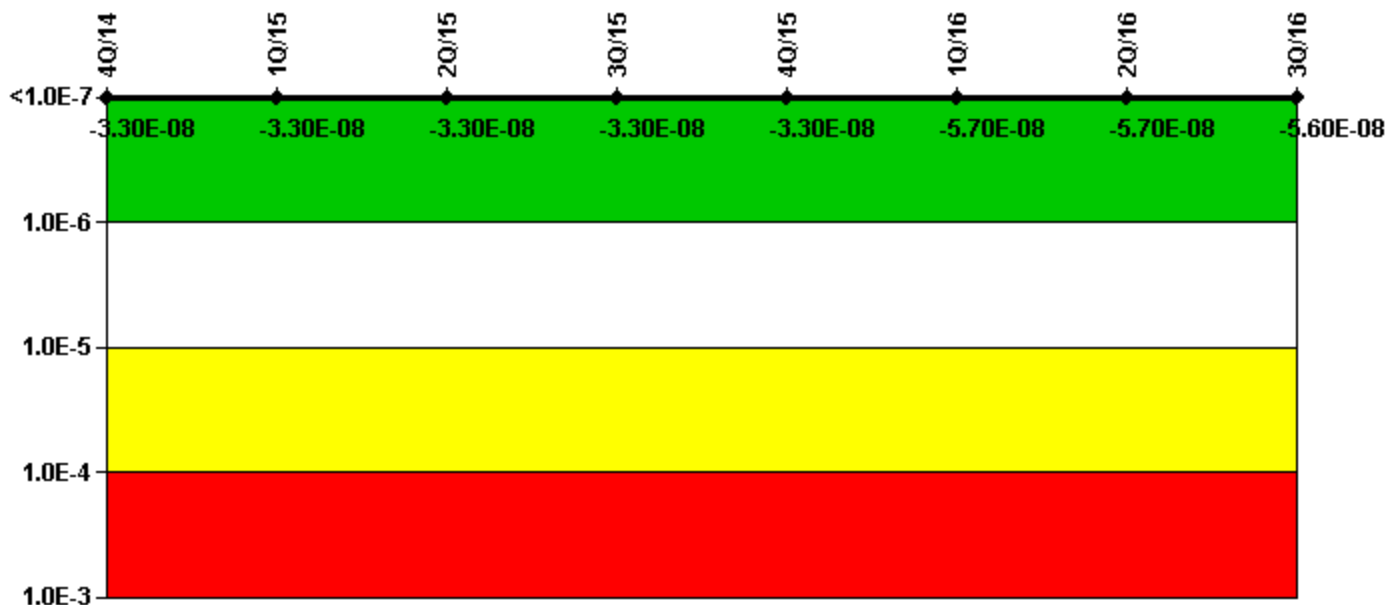
Licensee Comments:

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). 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, 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 (ΔCDF)	-8.63E-09	-8.51E-09	-8.51E-09	-8.25E-09	-7.89E-09	-1.68E-08	-1.68E-08	-1.59E-08
URI (ΔCDF)	-2.48E-08	-2.48E-08	-2.47E-08	-2.48E-08	-2.48E-08	-4.03E-08	-4.03E-08	-4.03E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-3.30E-08	-3.30E-08	-3.30E-08	-3.30E-08	-3.30E-08	-5.70E-08	-5.70E-08	-5.60E-08

Licensee Comments:

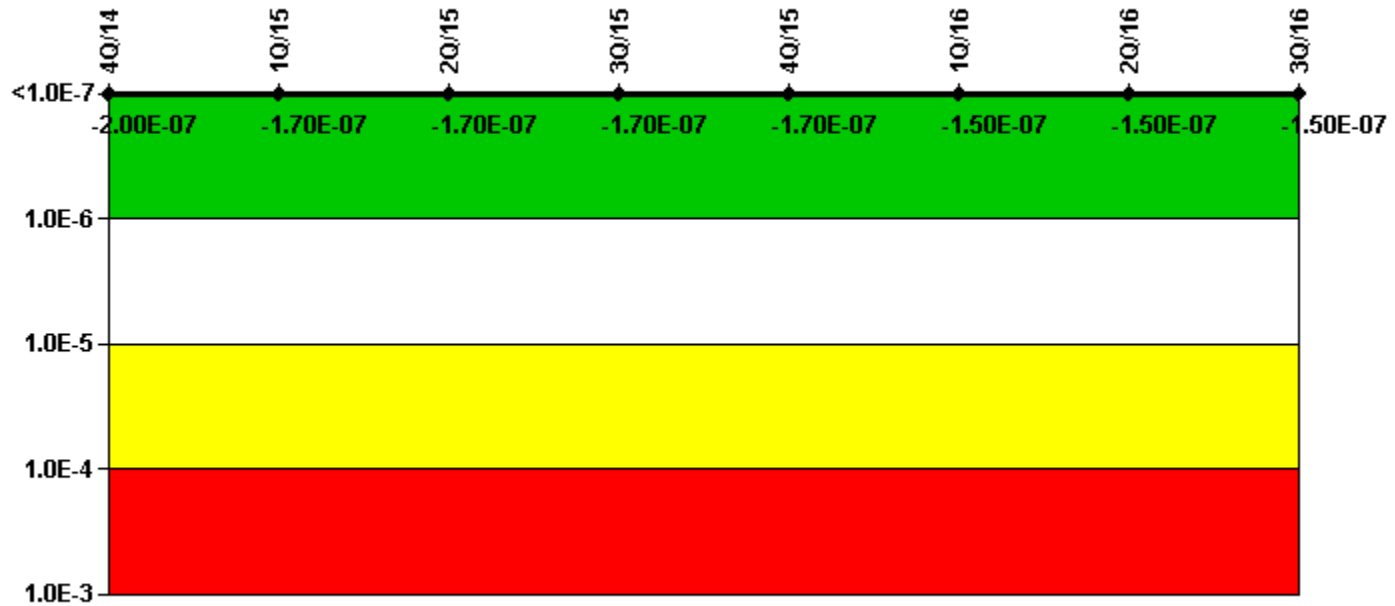
1Q/16: Changed PRA Parameter(s). The PINGP PRA Model Revision 5.2 was approved on 11/30/2015 with corresponding MSPI Basis Document Revision 20 approved 3/18/2016. This incorporates FAQ 14-01, data analysis update and plant installed Mayer Groove RCP seals.

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). 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	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16
UAI (Δ CDF)	-3.05E-08	-2.68E-08	-2.68E-08	-2.69E-08	-2.69E-08	-3.02E-08	-3.02E-08	-3.02E-08
URI (Δ CDF)	-1.68E-07	-1.44E-07	-1.44E-07	-1.44E-07	-1.45E-07	-1.18E-07	-1.18E-07	-1.18E-07
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-2.00E-07	-1.70E-07	-1.70E-07	-1.70E-07	-1.70E-07	-1.50E-07	-1.50E-07	-1.50E-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.

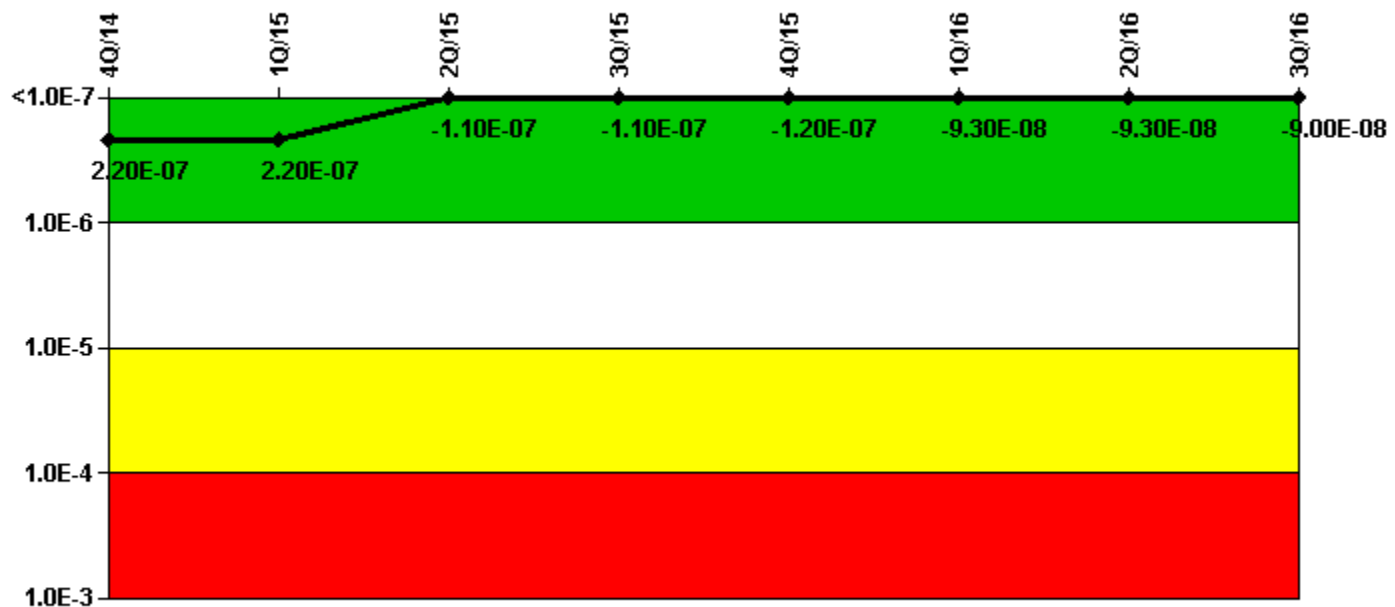
3Q/15: PINGP PRA Model Revision 5.1 was approved on 4/20/2014 with a corresponding MSPI Basis Document Revision 18 approved on 6/10/2015 and Coefficients effective 7/1/2015. The PRA model revision was to

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). 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.

4Q/14: Effective for the 4th quarter 2014, the reporting of Reliability Data for Component Cooling and Auxiliary Feedwater System MSPI Monitored Components has been changed to Estimated Operational/Alignment Demands and Estimated Operational/Alignment Run Hours. This change is coincident with an updated value of Estimated Test Demands and Estimated Test Run Hours for monitored components in these systems. This change did not require a change to the PRA model, is in accordance with NEI 99-02 requirements regarding Reporting of Estimated Data, and has basis documented in Prairie Island MSPI Basis Document Revision 15 as approved during the previous quarter.

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)	-1.82E-08	-1.73E-08	-1.73E-08	-1.73E-08	-1.73E-08	-1.46E-08	-1.46E-08	-1.46E-08
			-8.81E-	-8.83E-	-1.06E-	-7.83E-	-7.83E-	-7.56E-

URI (ΔCDF)	2.39E-07	2.39E-07	08	08	07	08	08	08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	2.20E-07	2.20E-07	-1.10E-07	-1.10E-07	-1.20E-07	-9.30E-08	-9.30E-08	-9.00E-08

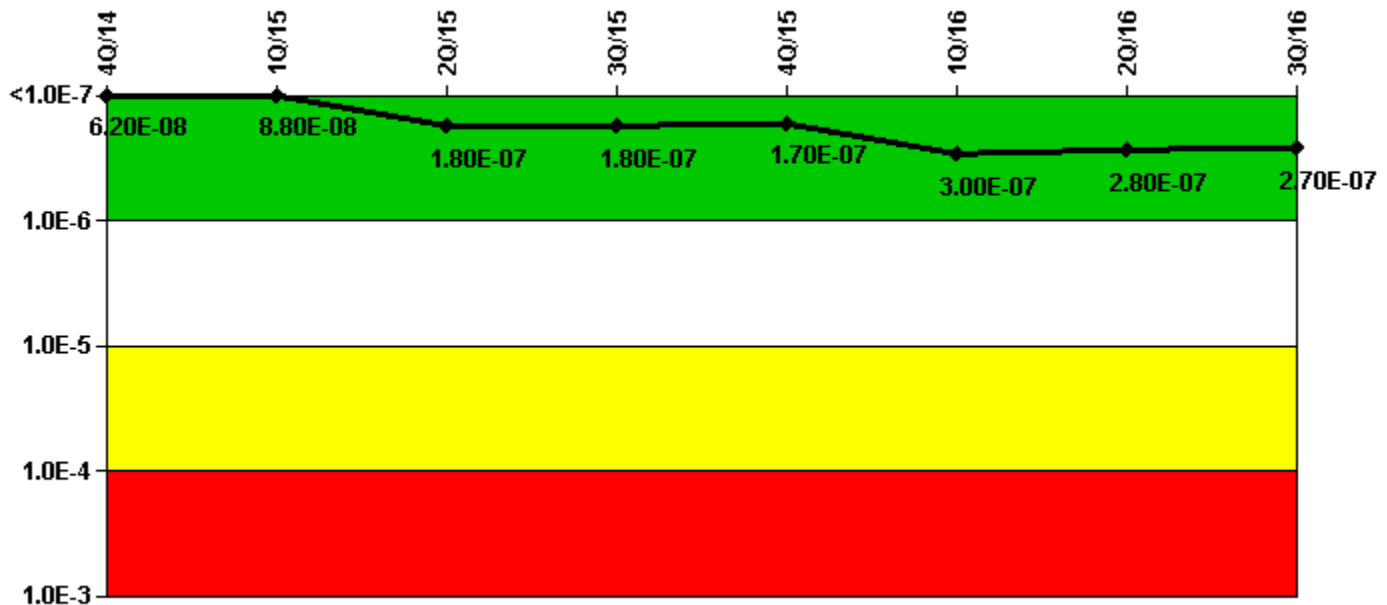
Licensee Comments:

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). 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	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16
UAI (ΔCDF)	9.26E-08	1.31E-07	2.19E-07	2.15E-07	2.09E-07	2.90E-07	2.78E-07	2.60E-07
URI (ΔCDF)	-3.04E-08	-4.35E-08	-4.20E-08	-3.78E-08	-3.75E-08	6.92E-09	6.89E-09	6.91E-09
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	6.20E-08	8.80E-08	1.80E-07	1.80E-07	1.70E-07	3.00E-07	2.80E-07	2.70E-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.

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. 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.

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). 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.

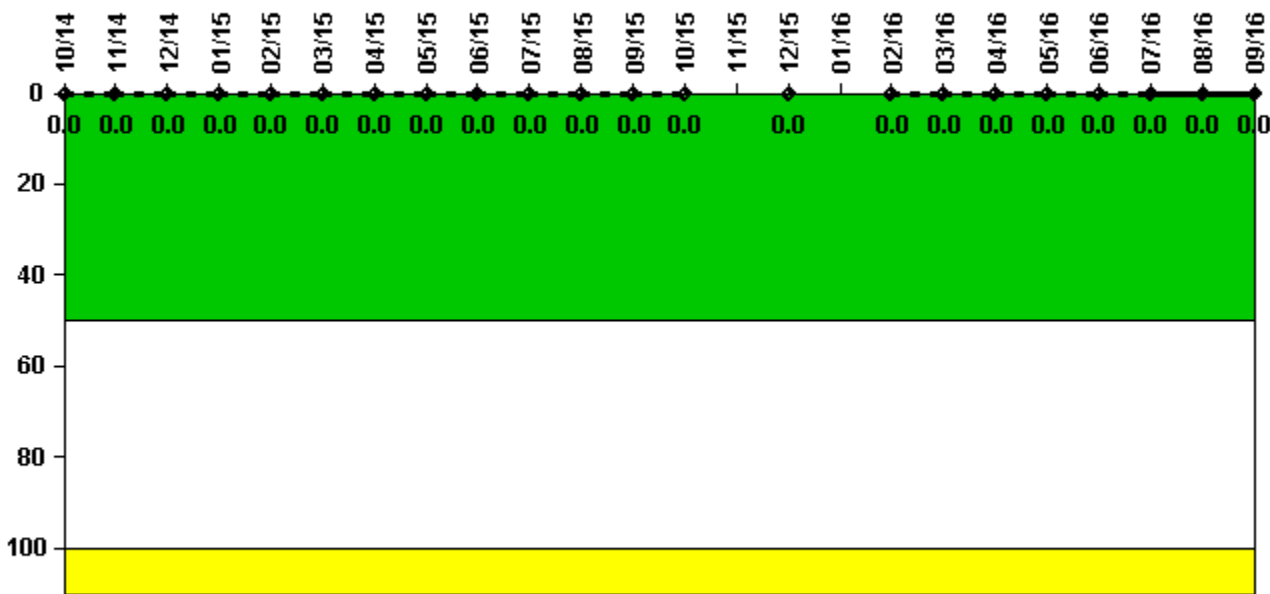
4Q/14: Effective for the 4th quarter 2014, the reporting of Reliability Data for Component Cooling and Auxiliary Feedwater System MSPI Monitored Components has been changed to Estimated Operational/Alignment Demands and Estimated Operational/Alignment Run Hours. This change is coincident with an updated value of Estimated Test Demands and Estimated Test Run Hours for monitored components in these systems. This change did not require a change to the PRA model, is in accordance with NEI 99-02 requirements regarding Reporting of Estimated Data, and has basis documented in Prairie Island MSPI Basis Document Revision 15 as approved during the previous quarter.

4Q/14: Effective for the 4th quarter 2014, the reporting of Reliability Data for Component Cooling and Auxiliary

Feedwater System MSPI Monitored Components has been changed to Estimated Operational/Alignment Demands and Estimated Operational/Alignment Run Hours. This change is coincident with an updated value of Estimated Test Demands and Estimated Test Run Hours for monitored components in these systems. This change did not require a change to the PRA model, is in accordance with NEI 99-02 requirements regarding Reporting of Estimated Data, and has basis documented in Prairie Island MSPI Basis Document Revision 15 as approved during the previous quarter. / MSPI Cooling Water corrections to include unavailability of pump while supply breaker is unavailable.

4Q/14: Effective for the 4th quarter 2014, the reporting of Reliability Data for Component Cooling and Auxiliary Feedwater System MSPI Monitored Components has been changed to Estimated Operational/Alignment Demands and Estimated Operational/Alignment Run Hours. This change is coincident with an updated value of Estimated Test Demands and Estimated Test Run Hours for monitored components in these systems. This change did not require a change to the PRA model, is in accordance with NEI 99-02 requirements regarding Reporting of Estimated Data, and has basis documented in Prairie Island MSPI Basis Document Revision 15 as approved during the previous quarter.

Reactor Coolant System Activity



Thresholds: White > 50.0 Yellow > 100.0

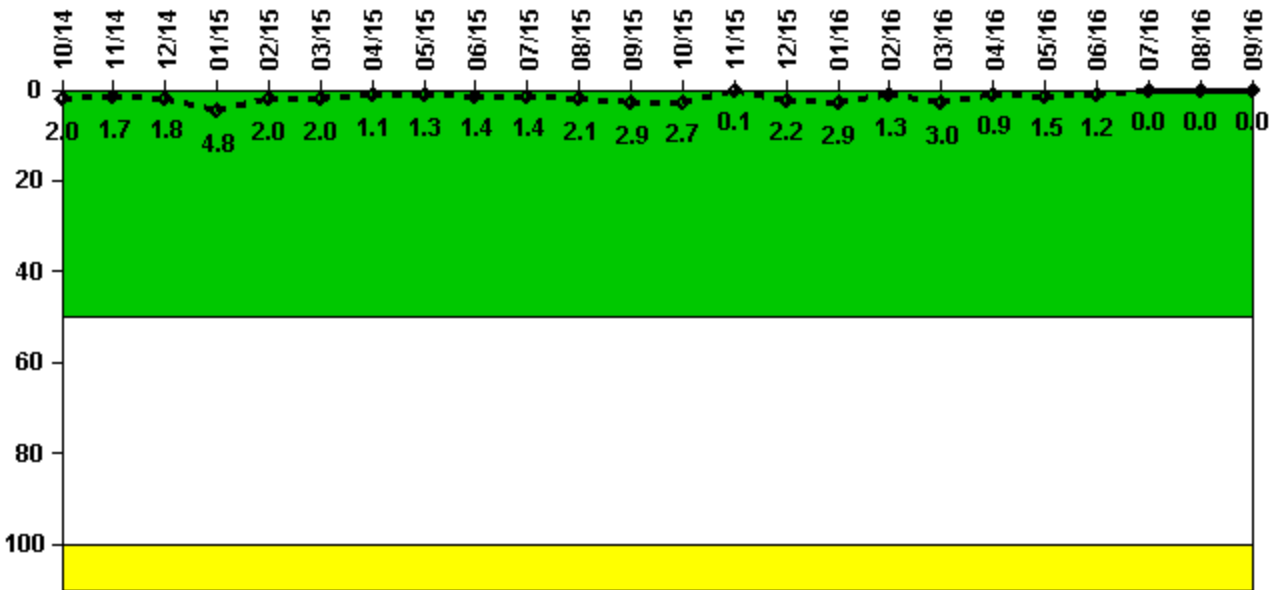
Notes

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	0.000051	0.000054	0.000054	0.000049	0.000056	0.000041	0.000055	0.000059	0.000061	0.000061	0.000063	0.000068
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	0.5
Indicator value	0	0	0	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	0.000065	N/A	0.000015	N/A	0.000042	0.000037	0.000042	0.000048	0.000044	0.000044	0.000047	0.000047	
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	N/A	0	N/A	0	0	0	0	0	0	0	0	0

Licensee Comments: none

Reactor Coolant System Leakage



Thresholds: White > 50.0 Yellow > 100.0

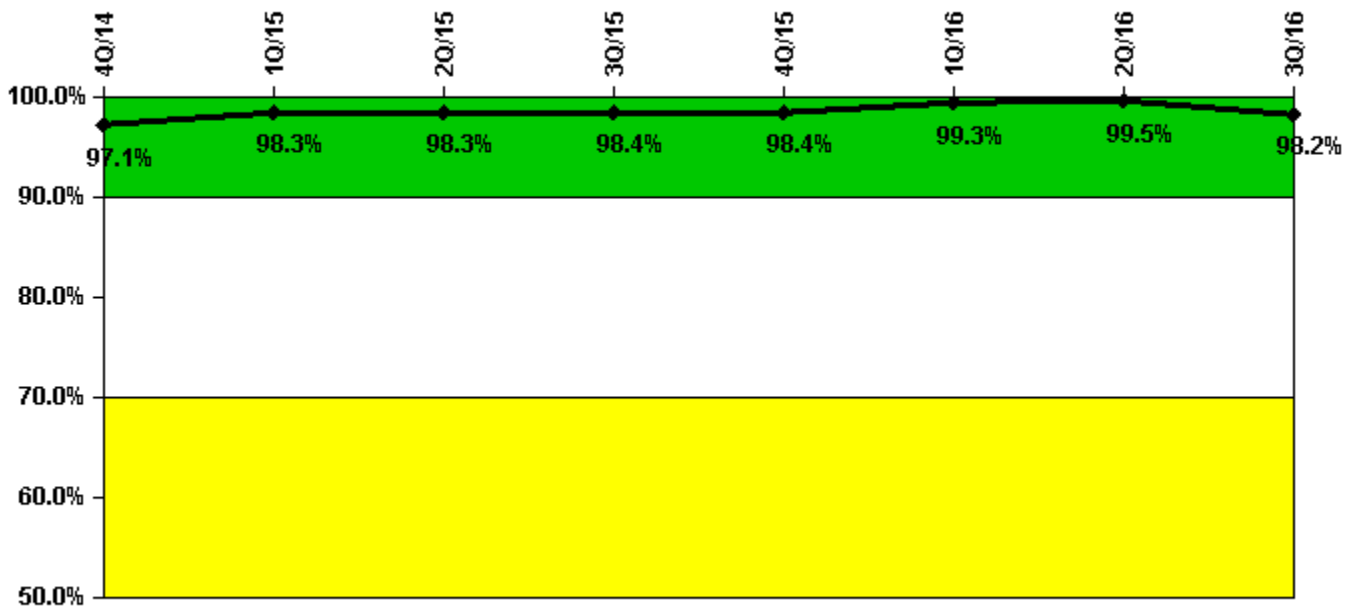
Notes

Reactor Coolant System Leakage	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	0.202	0.165	0.182	0.479	0.197	0.203	0.110	0.128	0.136	0.143	0.206	0.288
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	2.0	1.7	1.8	4.8	2.0	2.0	1.1	1.3	1.4	1.4	2.1	2.9

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	0.267	0.006	0.221	0.292	0.131	0.304	0.087	0.147	0.120	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	2.7	0.1	2.2	2.9	1.3	3.0	0.9	1.5	1.2	0	0	0

Licensee Comments: none

Drill/Exercise Performance



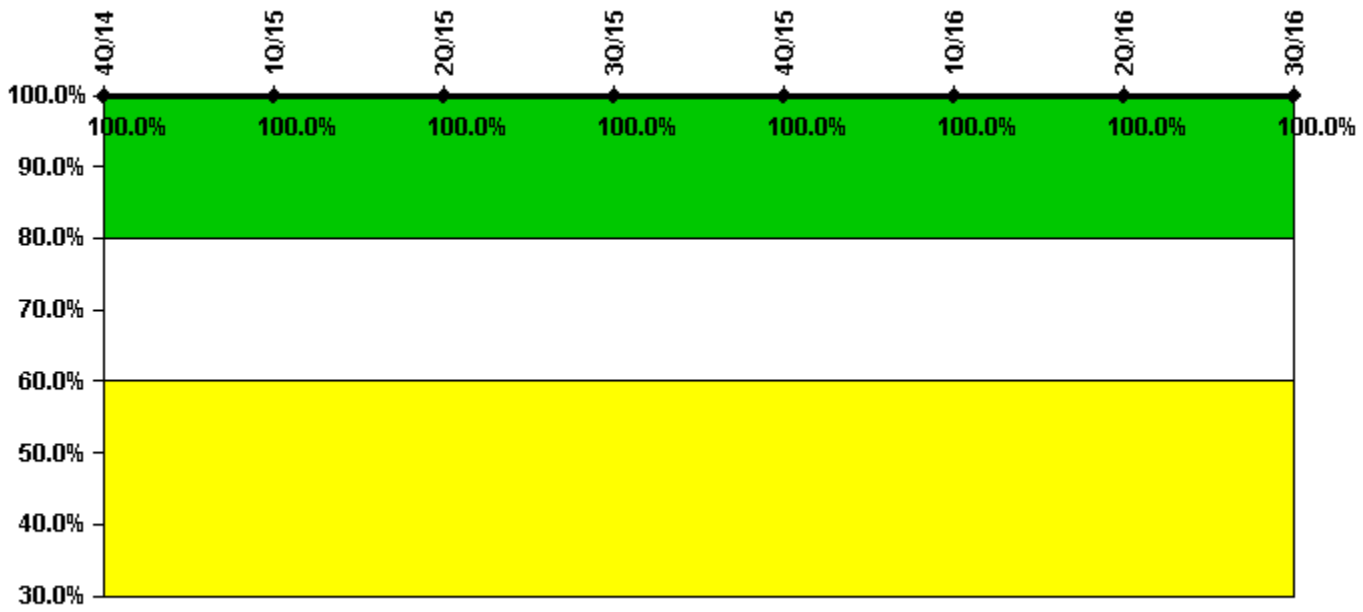
Thresholds: White < 90.0% Yellow < 70.0%

Notes

Drill/Exercise Performance	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16
Successful opportunities	8.0	32.0	28.0	2.0	4.0	40.0	33.0	18.0
Total opportunities	8.0	32.0	28.0	2.0	4.0	40.0	34.0	20.0
Indicator value	97.1%	98.3%	98.3%	98.4%	98.4%	99.3%	99.5%	98.2%

Licensee Comments: none

ERO Drill Participation



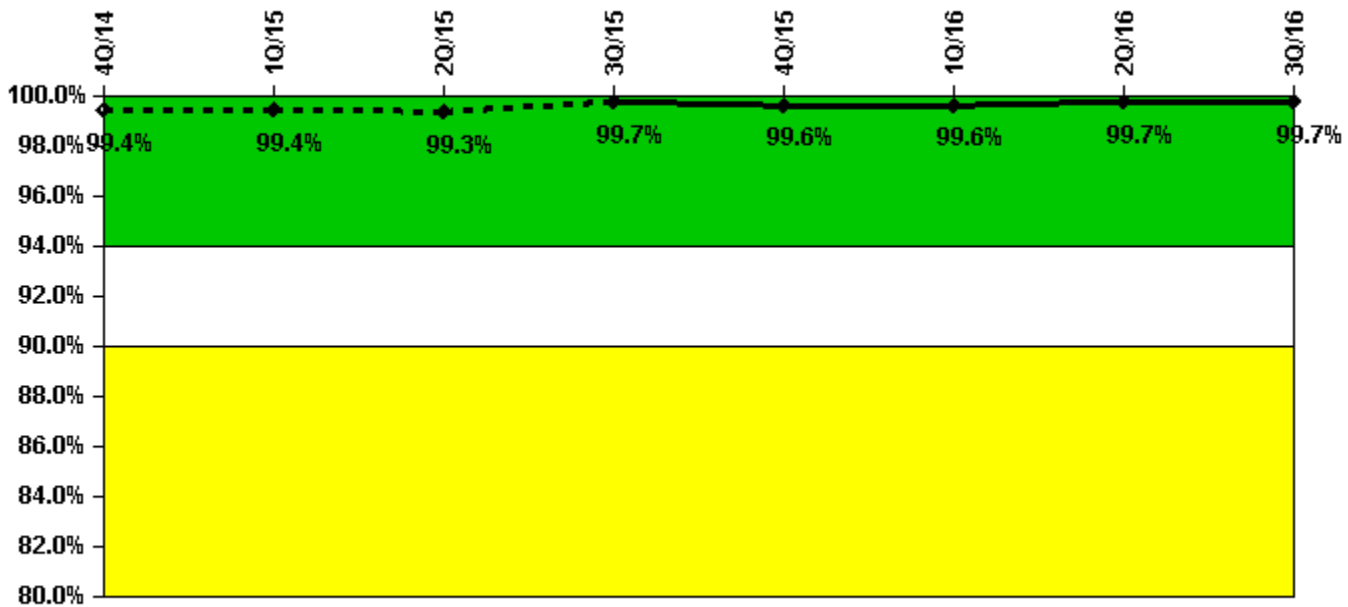
Thresholds: White < 80.0% Yellow < 60.0%

Notes

ERO Drill Participation	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16
Participating Key personnel	156.0	158.0	148.0	142.0	136.0	132.0	126.0	163.0
Total Key personnel	156.0	158.0	148.0	142.0	136.0	132.0	126.0	163.0
Indicator value	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Licensee Comments: none

Alert & Notification System



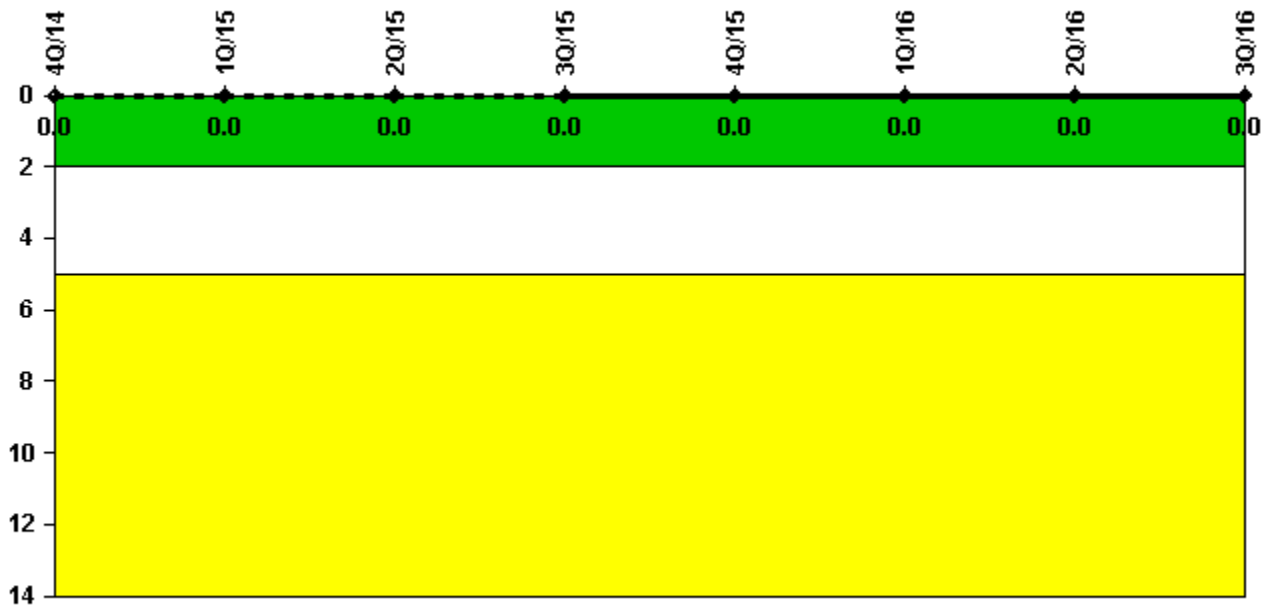
Thresholds: White < 94.0% Yellow < 90.0%

Notes

Alert & Notification System	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16
Successful siren-tests	1719	1469	1587	1722	1591	1596	1271	1595
Total sirens-tests	1722	1476	1599	1722	1599	1599	1276	1599
Indicator value	99.4%	99.4%	99.3%	99.7%	99.6%	99.6%	99.7%	99.7%

Licensee Comments: none

Occupational Exposure Control Effectiveness



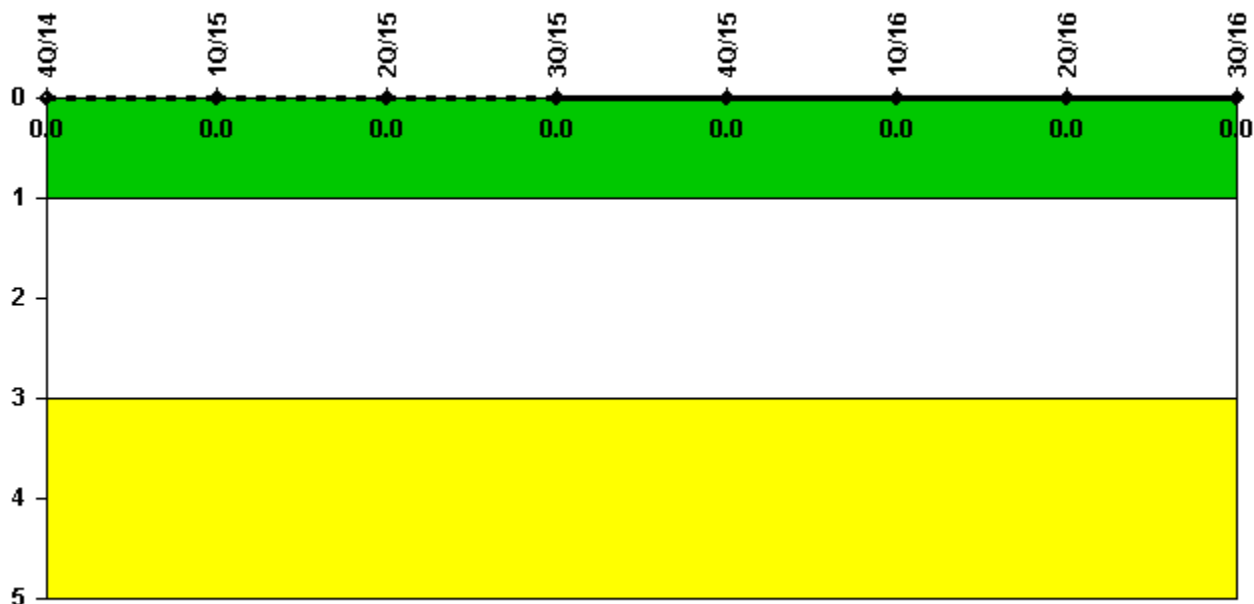
Thresholds: White > 2.0 Yellow > 5.0

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
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	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