

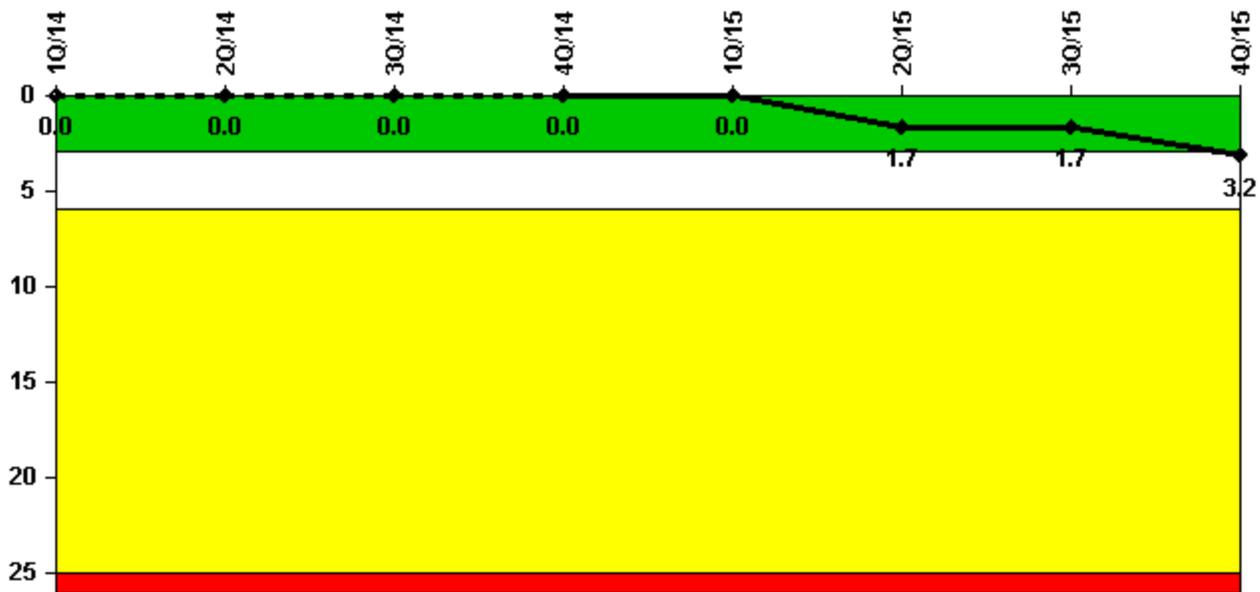
Prairie Island 2

4Q/2015 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

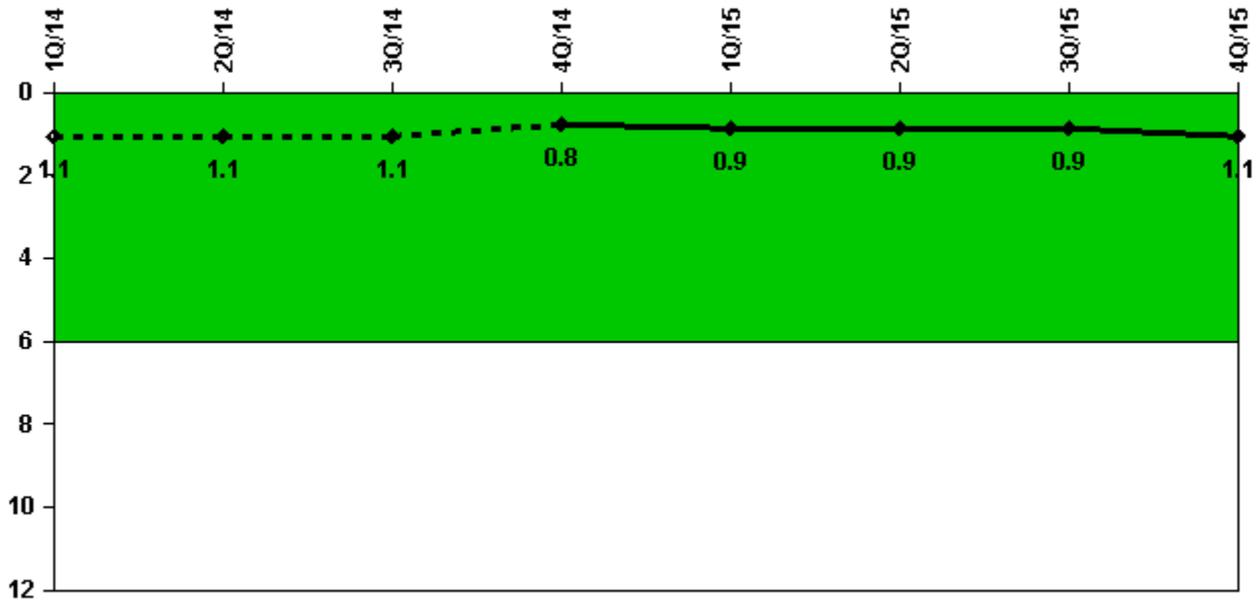
Notes

Unplanned Scrams per 7000 Critical Hrs	1Q/14	2Q/14	3Q/14	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15
Unplanned scrams	0	0	0	0	0	2.0	0	1.0
Critical hours	2141.3	2080.6	2208.0	2209.0	1682.8	2035.8	2208.0	718.8
Indicator value	0	0	0	0	0	1.7	1.7	3.2

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



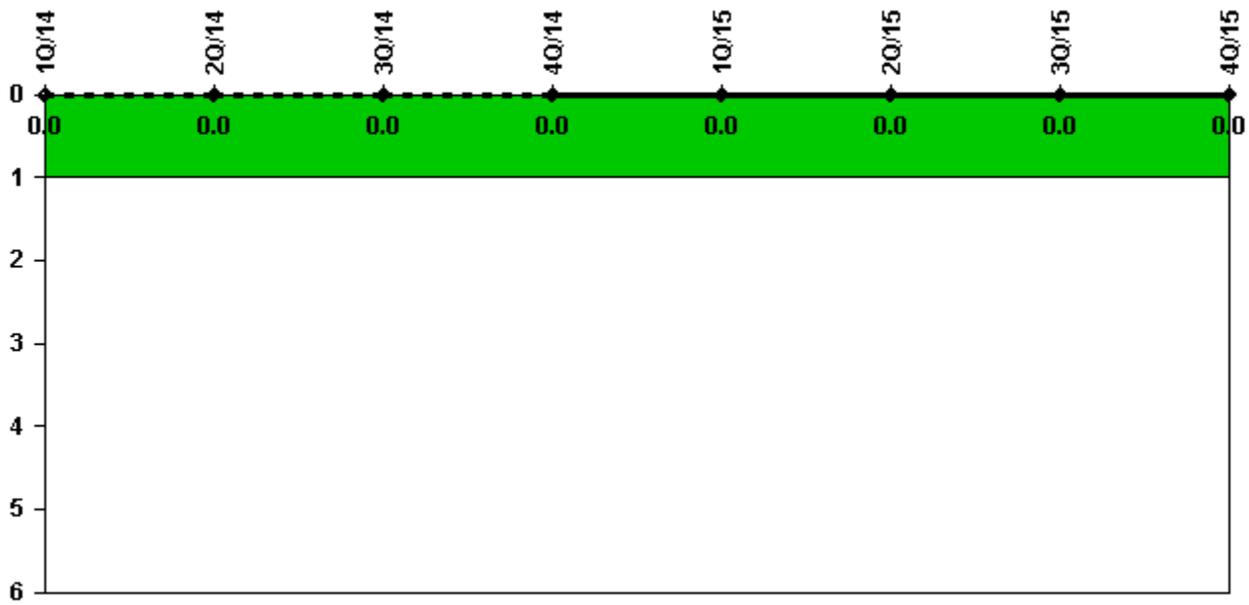
Thresholds: White > 6.0

Notes

Unplanned Power Changes per 7000 Critical Hrs	1Q/14	2Q/14	3Q/14	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15
Unplanned power changes	1.0	0	0	0	1.0	0	0	0
Critical hours	2141.3	2080.6	2208.0	2209.0	1682.8	2035.8	2208.0	718.8
Indicator value	1.1	1.1	1.1	0.8	0.9	0.9	0.9	1.1

Licensee Comments: none

Unplanned Scrams with Complications



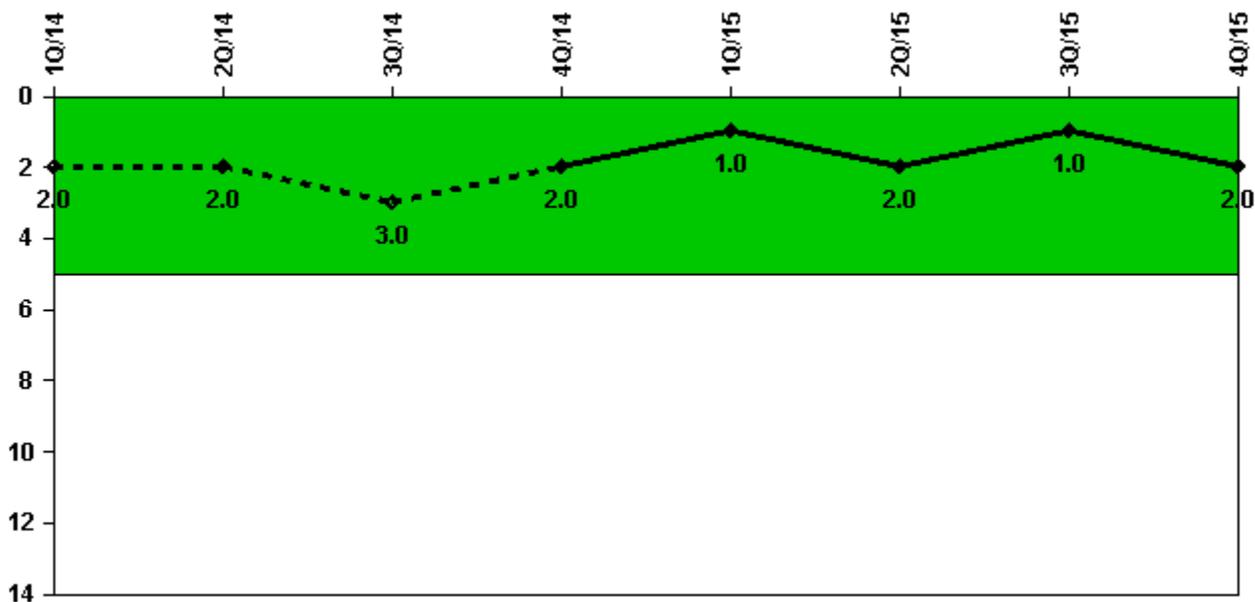
Thresholds: White > 1.0

Notes

Unplanned Scrams with Complications	1Q/14	2Q/14	3Q/14	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15
Scrams with complications	0	0	0	0	0	0	0	0
Indicator value	0.0							

Licensee Comments: none

Safety System Functional Failures (PWR)



Thresholds: White > 5.0

Notes

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

Licensee Comments:

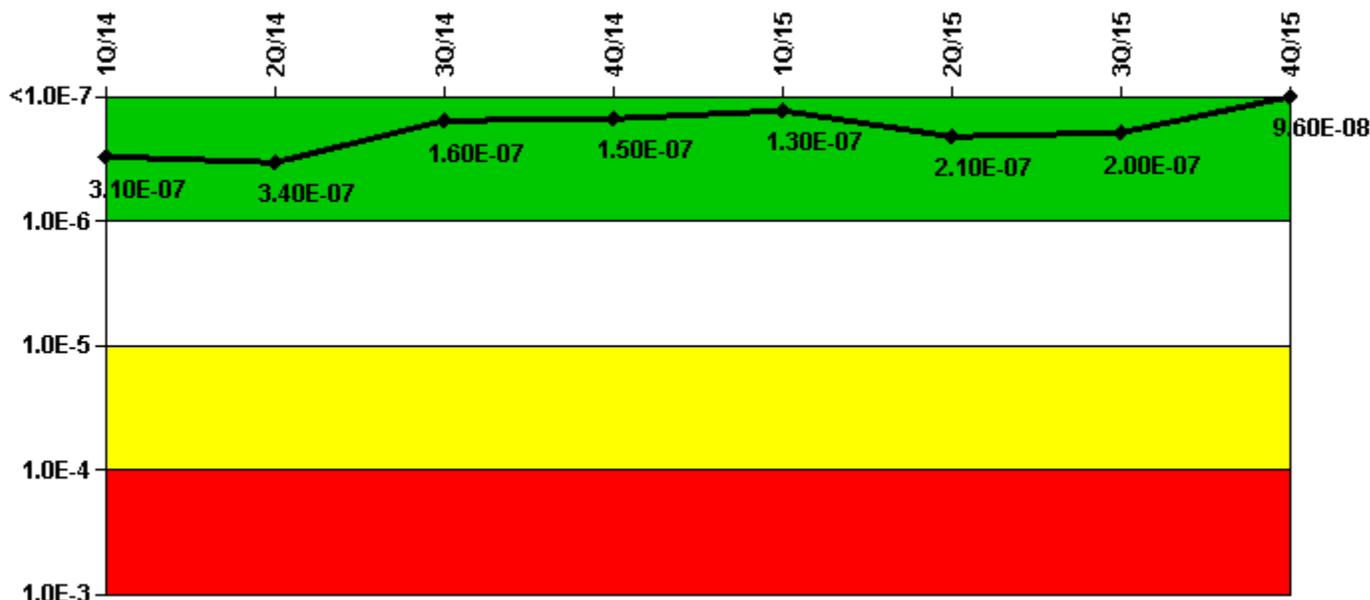
4Q/15: LER 50-282/2015-006-00, reported on 10/5/15 for Quarterly Containment Spray Pump Surveillance Test Methodology

2Q/15: LER 50-306/2015-001-00, 5/4/2015, 21 Fan Coil Unit Leak - Containment Declared Inoperable

3Q/14: LER 50-306/2014-002-00, 7/15/14 23 Fan Coil Unit Lower Northeast Face Corner Gasket Leaking

1Q/14: LER 50-306/2014-001-00, March 3, 2014, Unanalyzed Condition Due to Removal of Multiple Steam Generator Lateral Support Shims and Bumpers

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/14	2Q/14	3Q/14	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15
UAI (Δ CDF)	2.86E-08	5.50E-08	6.82E-08	6.08E-08	5.16E-08	6.17E-08	4.98E-08	1.03E-07
URI (Δ CDF)	2.83E-07	2.87E-07	9.20E-08	9.37E-08	8.02E-08	1.52E-07	1.53E-07	-6.87E-09
PLE	NO							
Indicator value	3.10E-07	3.40E-07	1.60E-07	1.50E-07	1.30E-07	2.10E-07	2.00E-07	9.60E-08

Licensee Comments:

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.

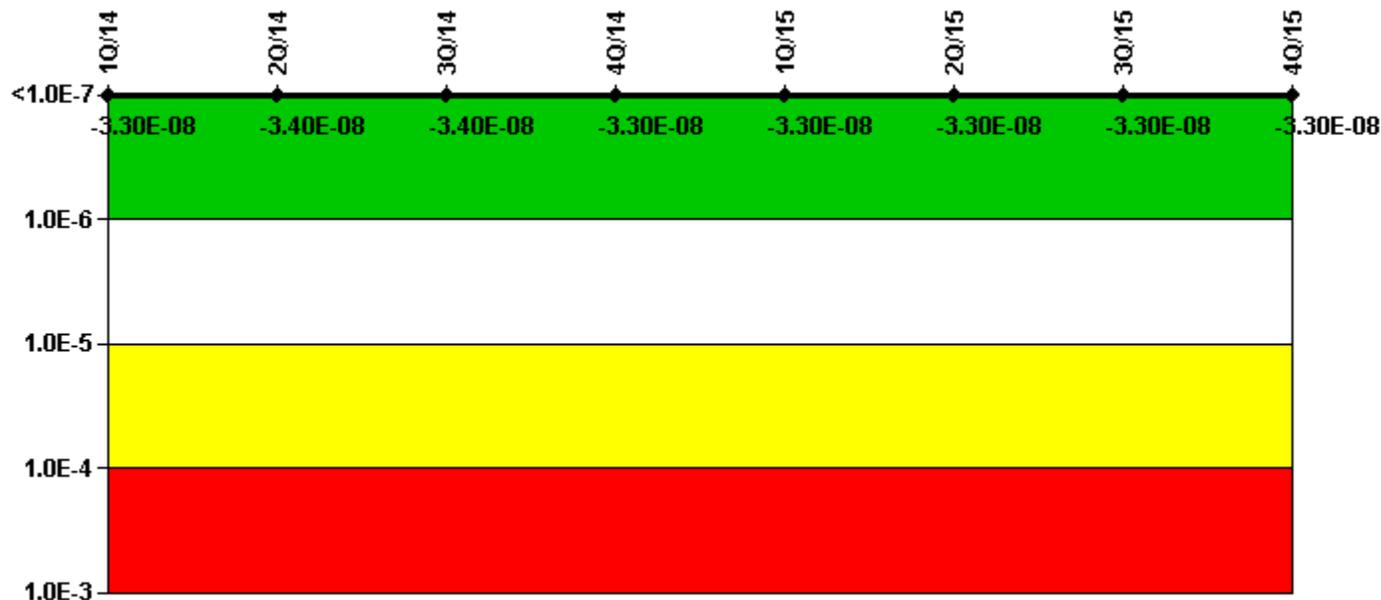
1Q/15: Changed PRA Parameter(s). Changed PRA Parameter(s). The PINGP PRA Model Revision 5.1 was approved on 11/21/2014 with a corresponding MSPI Basis Document Revision 16 approved on 2/26/2015. The PRA model revision was a maintenance update to the model which included an update to incorporate newly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

3Q/14: The D5 & D6 EDGs had a Planned Unavailability Baseline change that went into effect for the 3rd Quarter of 2014 (3Q2014). This change reflects current plant maintenance philosophy.

1Q/14: Changed PRA Parameter(s). The PINGP PRA Model Revision 5.0 was approved on 12/20/2013 with a corresponding MSPI Basis Document Revision 13 approved on 4/3/2014. The PRA model revision was a periodic

update to the model which included an update to incorporate newly installed Unit 2 RCP Seals. As a result of the PRA model change, both units CDF and Fussel-Vesely values for all monitored trains and components were revised, and Auxiliary Feedwater monitored components were added.

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/14	2Q/14	3Q/14	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15
UAI (ΔCDF)	-8.63E-09	-8.63E-09	-8.63E-09	-8.63E-09	-8.51E-09	-8.51E-09	-8.25E-09	-7.89E-09
URI (ΔCDF)	-2.48E-08	-2.49E-08	-2.50E-08	-2.48E-08	-2.48E-08	-2.47E-08	-2.48E-08	-2.48E-08
PLE	NO							
Indicator value	-3.30E-08	-3.40E-08	-3.40E-08	-3.30E-08	-3.30E-08	-3.30E-08	-3.30E-08	-3.30E-08

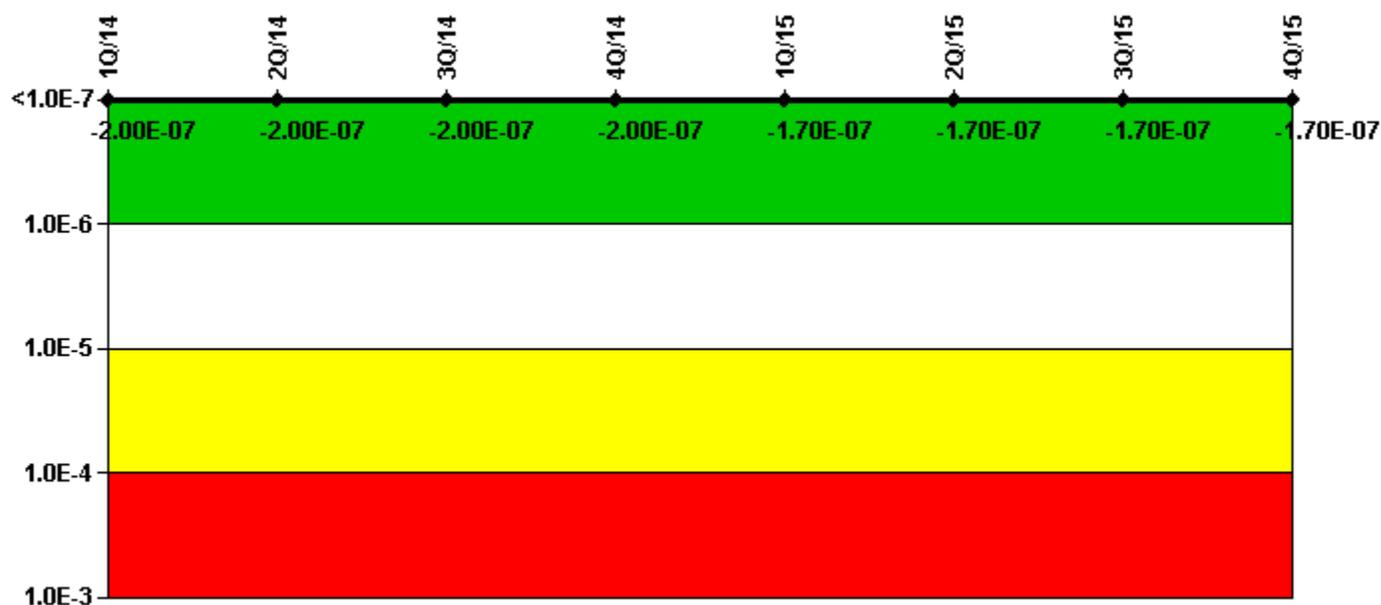
Licensee Comments:

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.

1Q/14: Changed PRA Parameter(s). The PINGP PRA Model Revision 5.0 was approved on 12/20/2013 with a corresponding MSPI Basis Document Revision 13 approved on 4/3/2014. The PRA model revision was a periodic update to the model which included an update to incorporate newly installed Unit 2 RCP Seals. As a result of the PRA model change, both units CDF and Fussel-Vesely values for all monitored trains and components were revised, and Auxiliary Feedwater monitored components were added.

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/14	2Q/14	3Q/14	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15
UAI (ΔCDF)	-3.05E-08	-3.05E-08	-3.05E-08	-3.05E-08	-2.68E-08	-2.68E-08	-2.69E-08	-2.69E-08
URI (ΔCDF)	-1.71E-07	-1.69E-07	-1.69E-07	-1.68E-07	-1.44E-07	-1.44E-07	-1.44E-07	-1.45E-07
PLE	NO							
Indicator value	-2.00E-07	-2.00E-07	-2.00E-07	-2.00E-07	-1.70E-07	-1.70E-07	-1.70E-07	-1.70E-07

Licensee Comments:

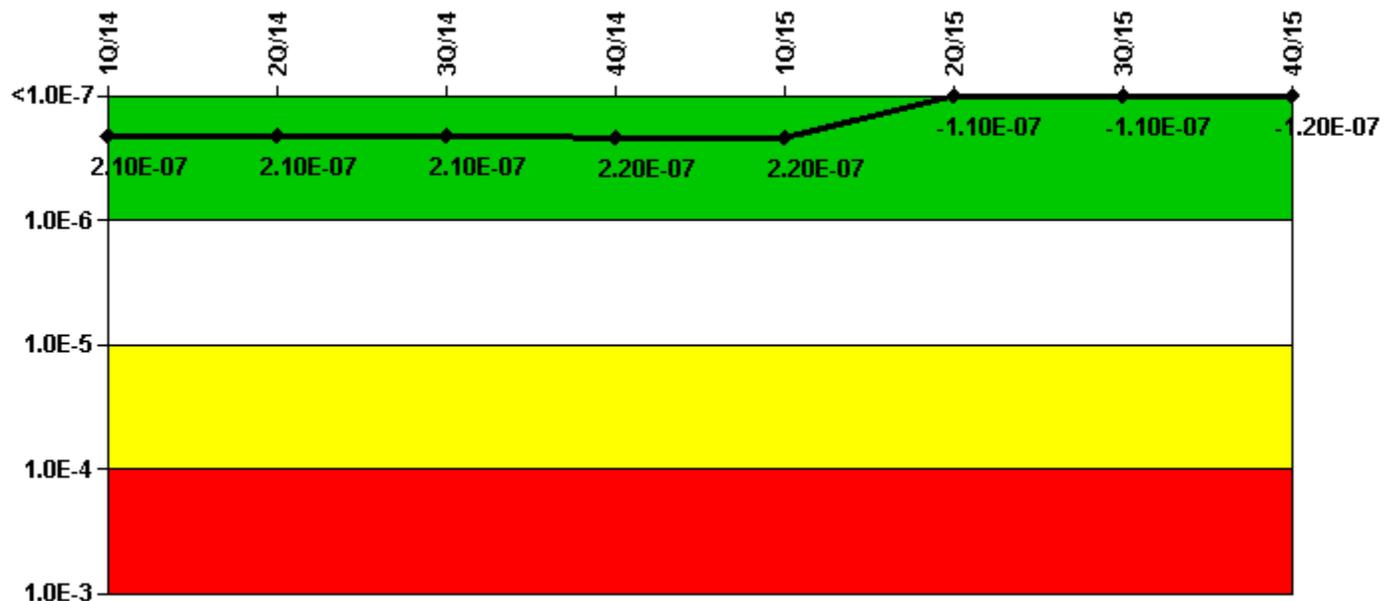
3Q/15: PINGP PRA Model Revision 5.1 was approved on 4/20/2014 with a corresponding MSPI Basis Document Revision 18 approved on 6/10/2015 and Coefficients effective 7/1/2015. The PRA model revision was to incorporate Mayer Groove RCP seals installed on Unit 1 and minor updates identified in the PRA Change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

1Q/14: Changed PRA Parameter(s). The PINGP PRA Model Revision 5.0 was approved on 12/20/2013 with a corresponding MSPI Basis Document Revision 13 approved on 4/3/2014. The PRA model revision was a periodic update to the model which included an update to incorporate newly installed Unit 2 RCP Seals. As a result of the PRA model change, both units CDF and Fussel-Vesely values for all monitored trains and components were revised, and Auxiliary Feedwater monitored components were added.

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/14	2Q/14	3Q/14	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15
UAI (Δ CDF)	-1.82E-08	-1.82E-08	-1.82E-08	-1.82E-08	-1.73E-08	-1.73E-08	-1.73E-08	-1.73E-08
URI (Δ CDF)	2.24E-07	2.24E-07	2.24E-07	2.39E-07	2.39E-07	-8.81E-08	-8.83E-08	-1.06E-07
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	2.10E-07	2.10E-07	2.10E-07	2.20E-07	2.20E-07	-1.10E-07	-1.10E-07	-1.20E-07

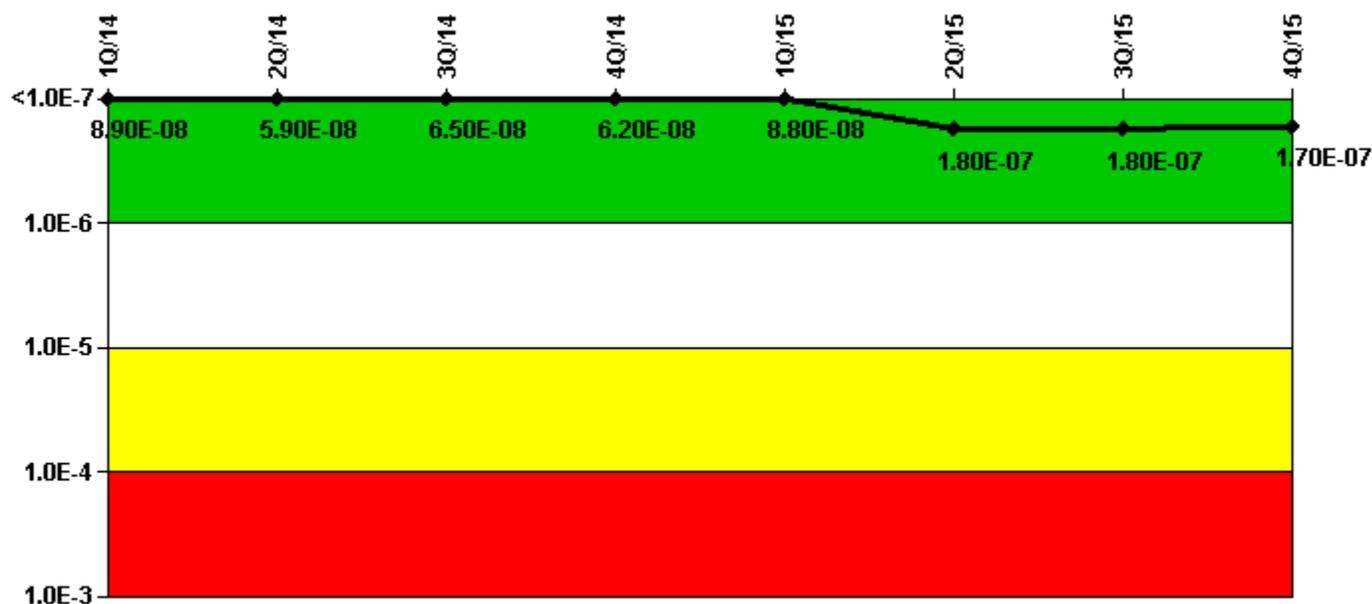
Licensee Comments:

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.

1Q/14: Changed PRA Parameter(s). The PINGP PRA Model Revision 5.0 was approved on 12/20/2013 with a corresponding MSPI Basis Document Revision 13 approved on 4/3/2014. The PRA model revision was a periodic update to the model which included an update to incorporate newly installed Unit 2 RCP Seals. As a result of the PRA model change, both units CDF and Fussel-Vesely values for all monitored trains and components were revised, and Auxiliary Feedwater monitored components were added.

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/14	2Q/14	3Q/14	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15
UAI (Δ CDF)	1.19E-07	8.93E-08	9.61E-08	9.26E-08	1.31E-07	2.19E-07	2.15E-07	2.09E-07
URI (Δ CDF)	-3.08E-08	-3.05E-08	-3.13E-08	-3.04E-08	-4.35E-08	-4.20E-08	-3.78E-08	-3.75E-08
PLE	NO							
Indicator value	8.90E-08	5.90E-08	6.50E-08	6.20E-08	8.80E-08	1.80E-07	1.80E-07	1.70E-07

Licensee Comments:

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). 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.

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.

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.

3Q/14: 22 Cooling Water Pump was operable at time of replacement in April 2014. At time of third quarter submittal, vendor analysis of the pump which was removed is pending. If there is a question of past operability, that will be evaluated in light of vendor information.

3Q/14: 22 Cooling Water Pump was operable at time of replacement in April 2014. At time of third quarter submittal, vendor analysis of the pump which was removed is pending. If there is a question of past operability, that will be evaluated in light of vendor information.

2Q/14: Data correction to reflect diesel driven cooling water pump replacement while motor driven pump was aligned. 22 Cooling Water Pump was operable at time of replacement in April 2014. At time of second quarter submittal, vendor analysis of the pump which was removed is pending. If there is a question of past operability, that will be evaluated in light of vendor information.

2Q/14: Data correction to reflect diesel driven cooling water pump replacement while motor driven pump was aligned. 22 Cooling Water Pump was operable at time of replacement in April 2014. At time of second quarter submittal, vendor analysis of the pump which was removed is pending. If there is a question of past operability,

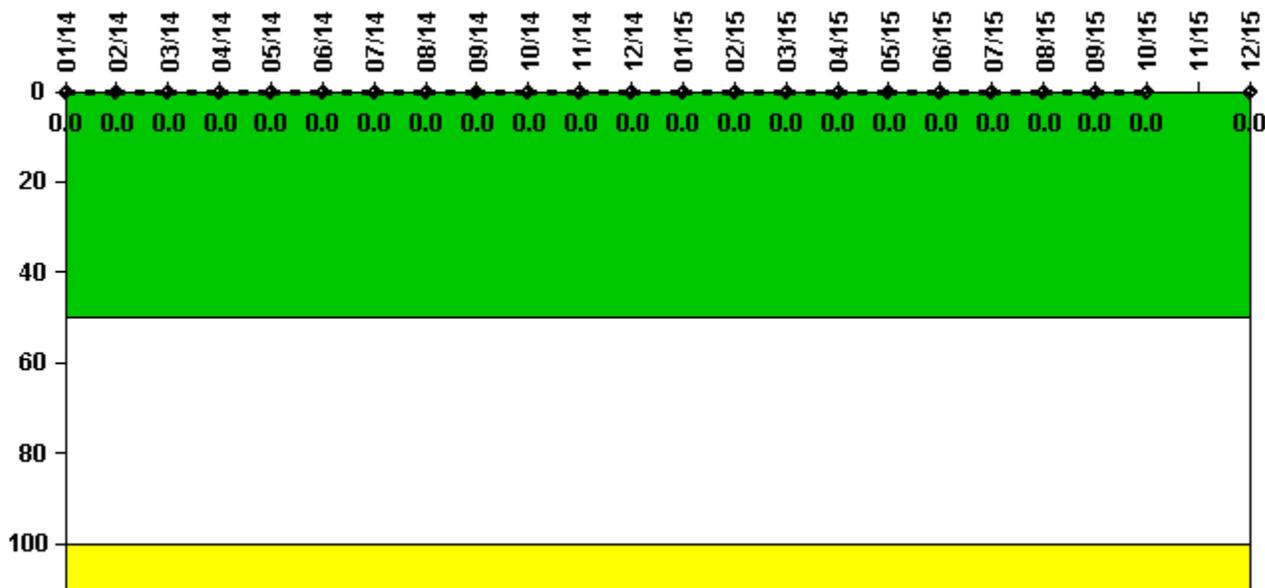
that will be evaluated in light of vendor information.

1Q/14: MSPI Unavailability corrections due to previously omitted unavailability window for swing pump when dedicated to opposite train and math error.

1Q/14: MSPI Unavailability corrections due to previously omitted unavailability window for swing pump when dedicated to opposite train and math error. (2Q2015) Correction to align with NEI 99-02 and MSPI Basis Document. Single cooling water strainer out of service does not render header unavailable for MSPI.

1Q/14: Changed PRA Parameter(s). The PINGP PRA Model Revision 5.0 was approved on 12/20/2013 with a corresponding MSPI Basis Document Revision 13 approved on 4/3/2014. The PRA model revision was a periodic update to the model which included an update to incorporate newly installed Unit 2 RCP Seals. As a result of the PRA model change, both units CDF and Fussel-Vesely values for all monitored trains and components were revised, and Auxiliary Feedwater monitored components were added.

Reactor Coolant System Activity



Thresholds: White > 50.0 Yellow > 100.0

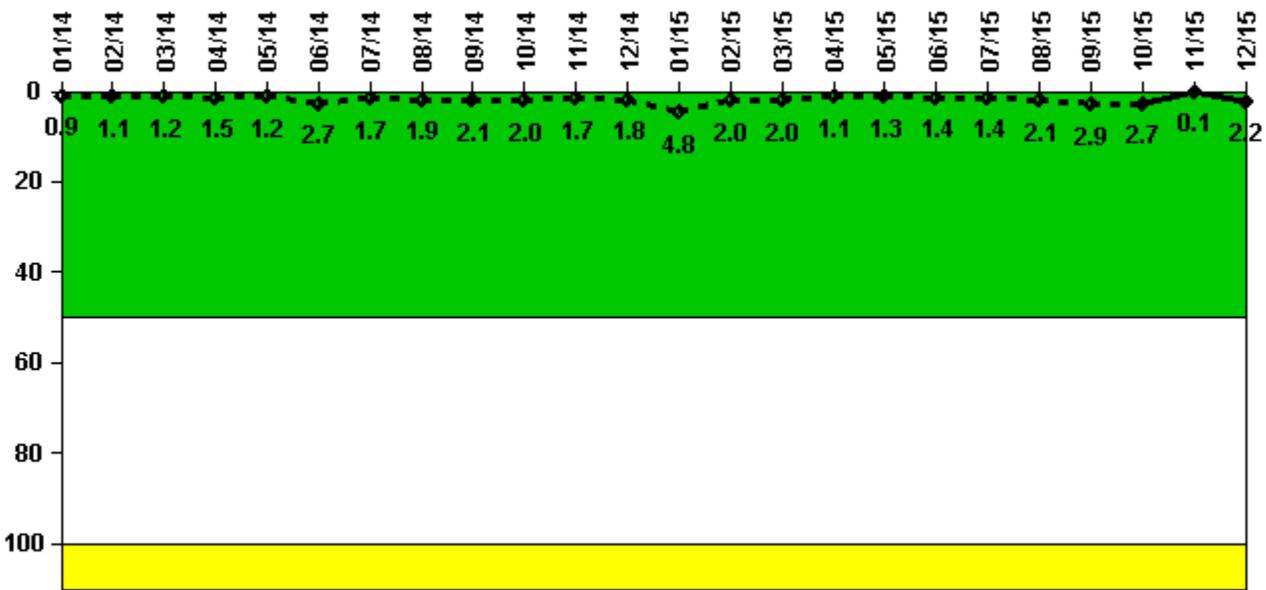
Notes

Reactor Coolant System Activity	1/14	2/14	3/14	4/14	5/14	6/14	7/14	8/14	9/14	10/14	11/14	12/14
Maximum activity	0.000034	0.000045	0.000045	0.000051	0.000041	0.000056	0.000056	0.000048	0.000050	0.000051	0.000054	0.000054
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									
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	0.000049	0.000056	0.000041	0.000055	0.000059	0.000061	0.000061	0.000063	0.000068	0.000065	N/A	0.000015
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									

Licensee Comments: none

Reactor Coolant System Leakage



Thresholds: White > 50.0 Yellow > 100.0

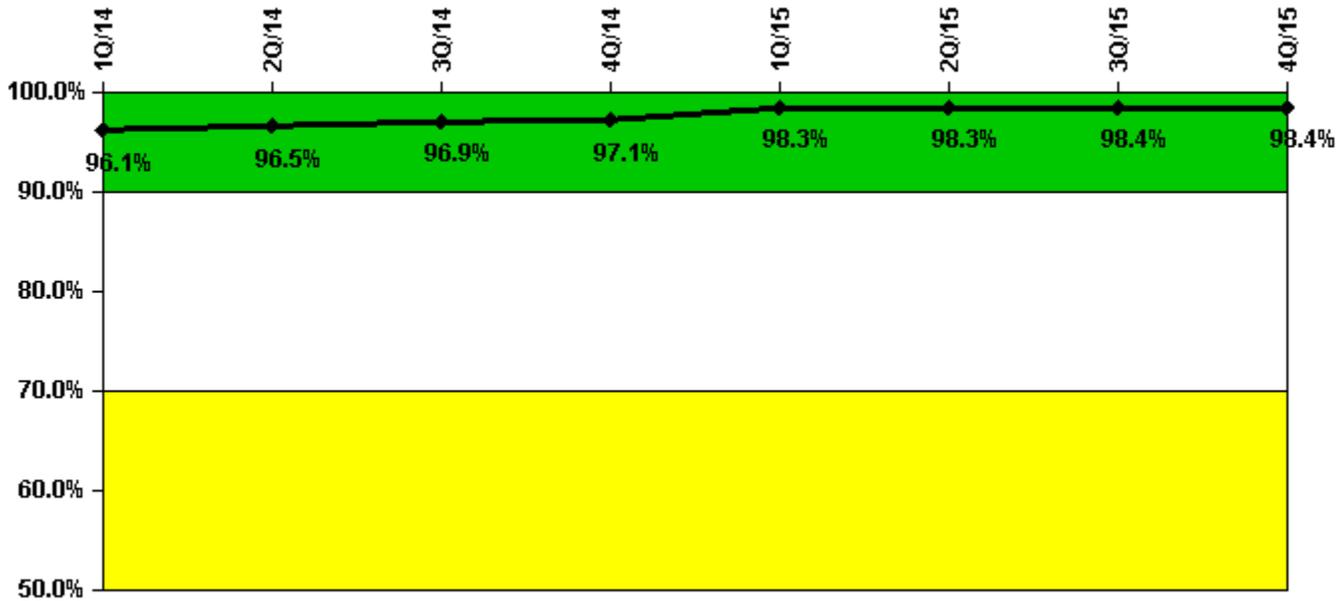
Notes

Reactor Coolant System Leakage	1/14	2/14	3/14	4/14	5/14	6/14	7/14	8/14	9/14	10/14	11/14	12/14
Maximum leakage	0.093	0.112	0.115	0.152	0.118	0.273	0.166	0.186	0.205	0.202	0.165	0.182
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	0.9	1.1	1.2	1.5	1.2	2.7	1.7	1.9	2.1	2.0	1.7	1.8

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	0.479	0.197	0.203	0.110	0.128	0.136	0.143	0.206	0.288	0.267	0.006	0.221
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	4.8	2.0	2.0	1.1	1.3	1.4	1.4	2.1	2.9	2.7	0.1	2.2

Licensee Comments: none

Drill/Exercise Performance



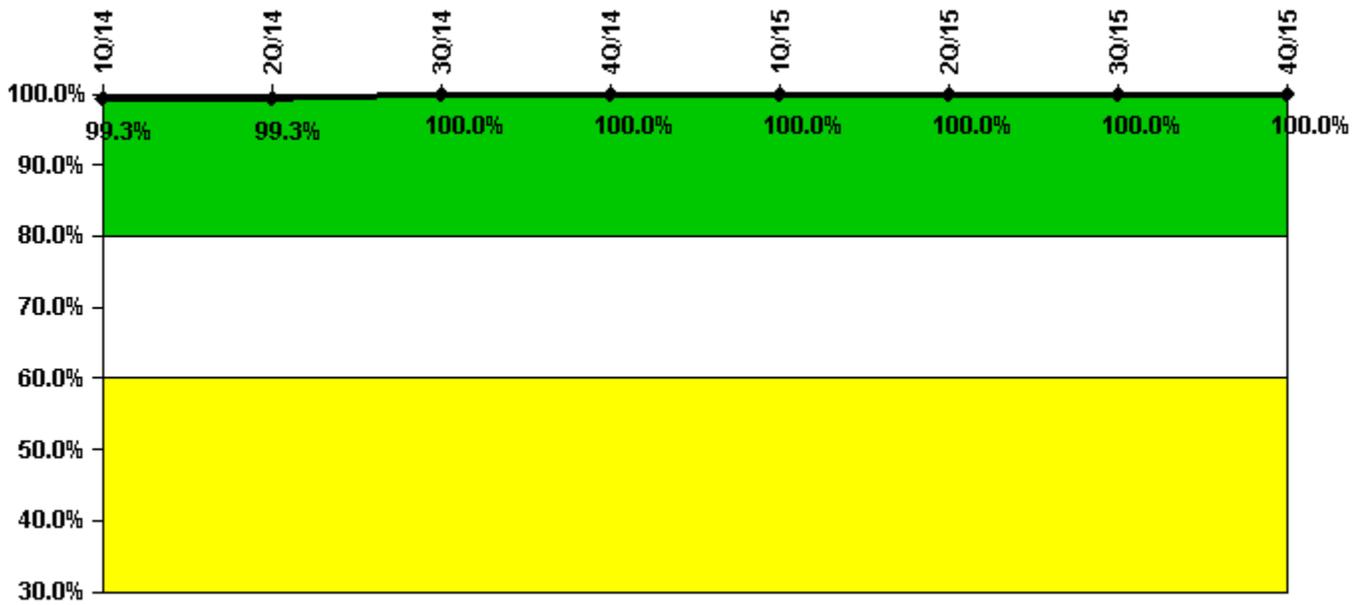
Thresholds: White < 90.0% Yellow < 70.0%

Notes

Drill/Exercise Performance	1Q/14	2Q/14	3Q/14	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15
Successful opportunities	106.0	112.0	71.0	8.0	32.0	28.0	2.0	4.0
Total opportunities	110.0	114.0	71.0	8.0	32.0	28.0	2.0	4.0
Indicator value	96.1%	96.5%	96.9%	97.1%	98.3%	98.3%	98.4%	98.4%

Licensee Comments: none

ERO Drill Participation



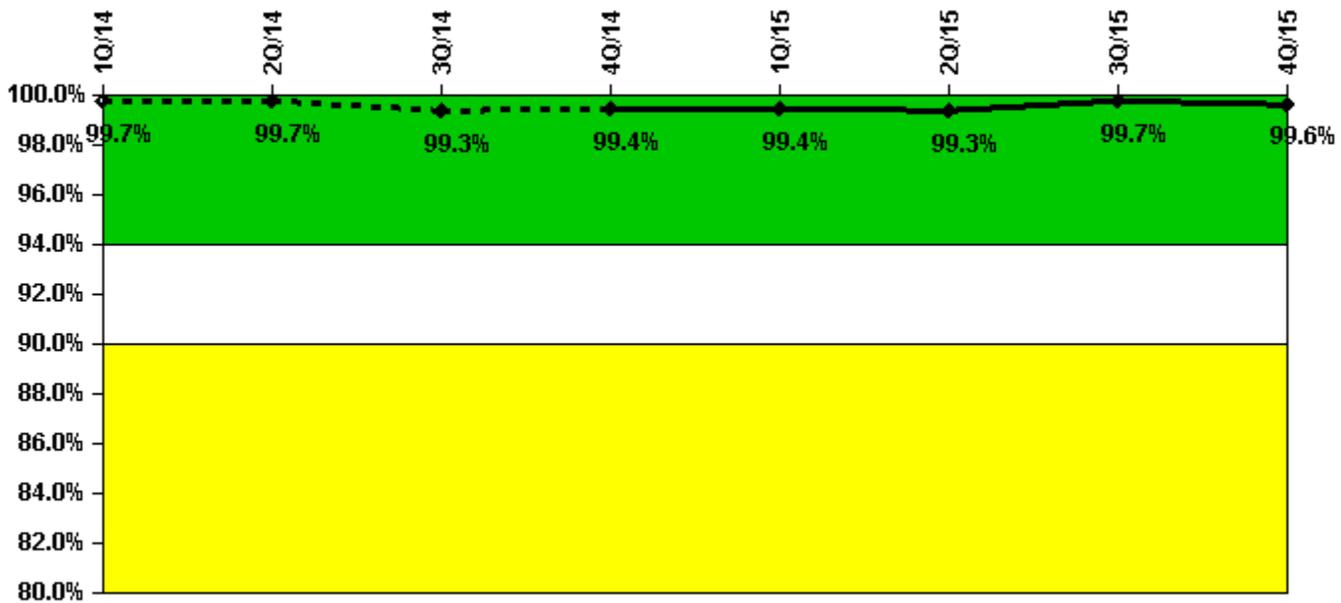
Thresholds: White < 80.0% Yellow < 60.0%

Notes

ERO Drill Participation	1Q/14	2Q/14	3Q/14	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15
Participating Key personnel	142.0	149.0	153.0	156.0	158.0	148.0	142.0	136.0
Total Key personnel	143.0	150.0	153.0	156.0	158.0	148.0	142.0	136.0
Indicator value	99.3%	99.3%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Licensee Comments: none

Alert & Notification System



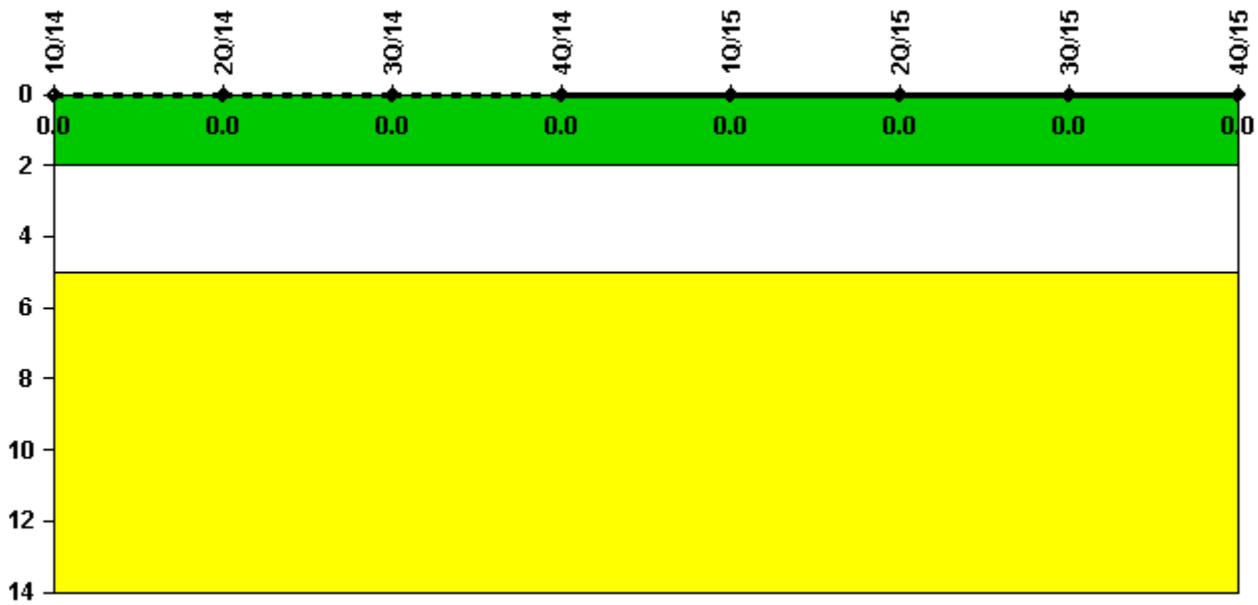
Thresholds: White < 94.0% Yellow < 90.0%

Notes

Alert & Notification System	1Q/14	2Q/14	3Q/14	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15
Successful siren-tests	1591	1596	1574	1719	1469	1587	1722	1591
Total sirens-tests	1599	1599	1599	1722	1476	1599	1722	1599
Indicator value	99.7%	99.7%	99.3%	99.4%	99.4%	99.3%	99.7%	99.6%

Licensee Comments: none

Occupational Exposure Control Effectiveness



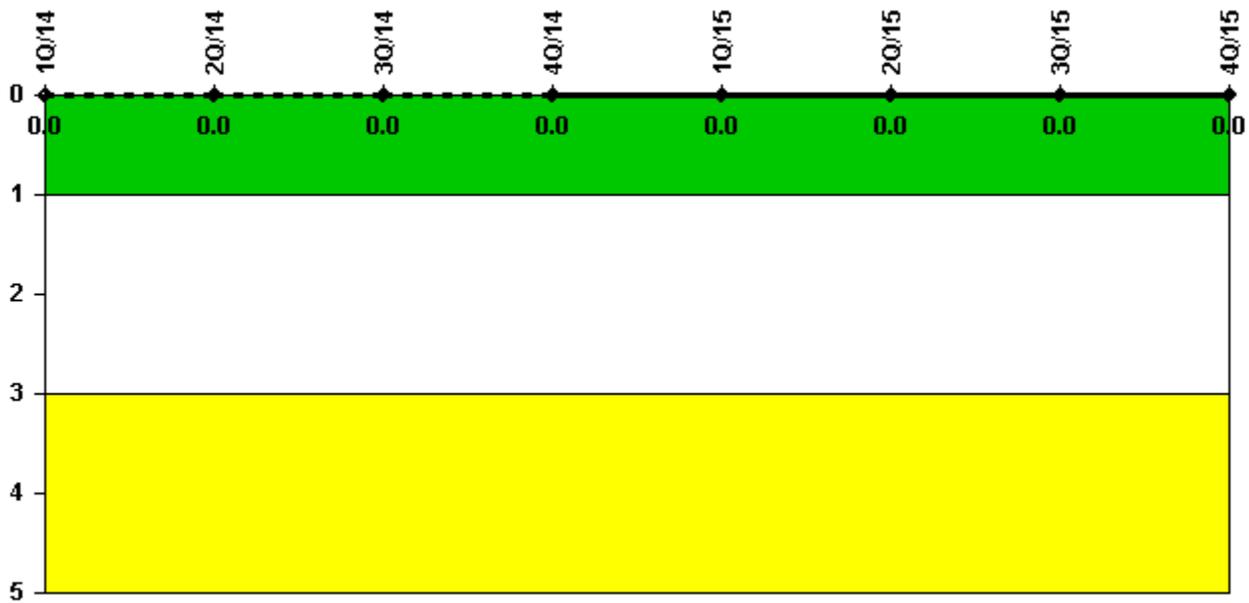
Thresholds: White > 2.0 Yellow > 5.0

Notes

Occupational Exposure Control Effectiveness	1Q/14	2Q/14	3Q/14	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15
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							

Licensee Comments: none

RETS/ODCM Radiological Effluent



Thresholds: White > 1.0 Yellow > 3.0

Notes

RETS/ODCM Radiological Effluent	1Q/14	2Q/14	3Q/14	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15
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: March 1, 2016