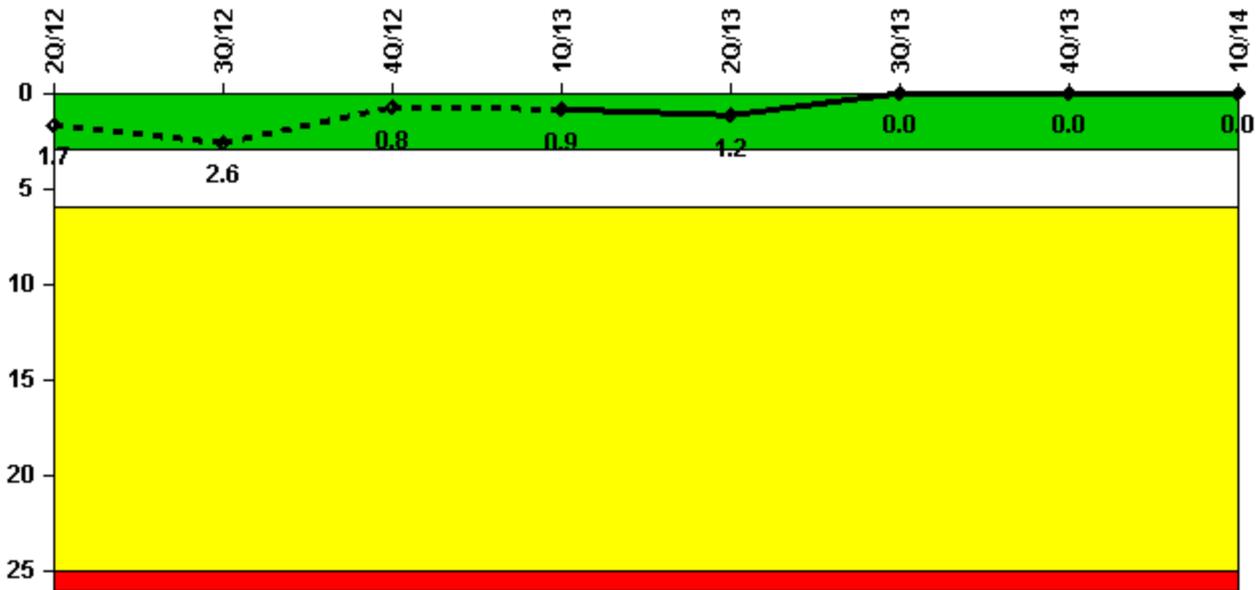# Monticello

1Q/2014 Performance Indicators

The solid trend line represents the current reporting period.

Licensee's General Comments: none

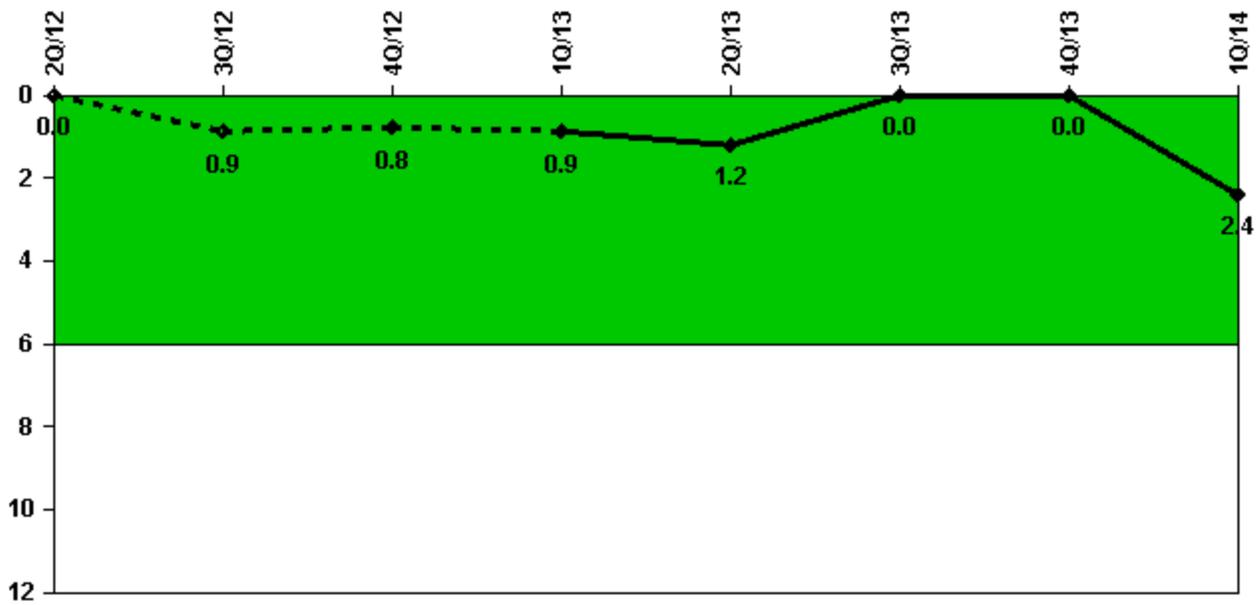**Unplanned Scrams per 7000 Critical Hrs**

Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

Notes

Unplanned Scrams per 7000 Critical Hrs	2Q/12	3Q/12	4Q/12	1Q/13	2Q/13	3Q/13	4Q/13	1Q/14
Unplanned scrams	0	1.0	0	0	0	0	0	0
Critical hours	2184.0	2082.0	2209.0	1442.6	0	1826.8	2209.0	1722.5
Indicator value	**1.7**	**2.6**	**0.8**	**0.9**	**1.2**	**0**	**0**	**0**

Licensee Comments: none

Unplanned Power Changes per 7000 Critical Hrs

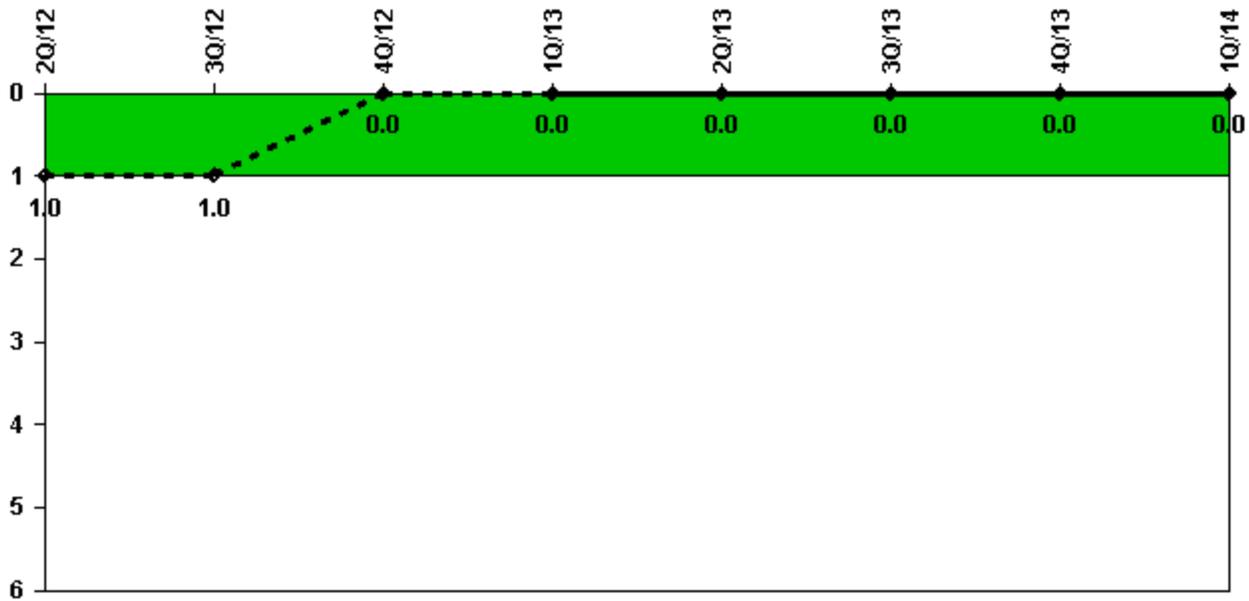
Thresholds: White > 6.0

Notes

Unplanned Power Changes per 7000 Critical Hrs	2Q/12	3Q/12	4Q/12	1Q/13	2Q/13	3Q/13	4Q/13	1Q/14
Unplanned power changes	0	1.0	0	0	0	0	0	2.0
Critical hours	2184.0	2082.0	2209.0	1442.6	0	1826.8	2209.0	1722.5
Indicator value	**0**	**0.9**	**0.8**	**0.9**	**1.2**	**0**	**0**	**2.4**

Licensee Comments: none

Unplanned Scrams with Complications

Thresholds: White > 1.0

Notes

Unplanned Scrams with Complications	2Q/12	3Q/12	4Q/12	1Q/13	2Q/13	3Q/13	4Q/13	1Q/14
Scrams with complications	0	0	0	0	0	0	0	0
Indicator value	**1.0**	**1.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Licensee Comments: none

Safety System Functional Failures (BWR)
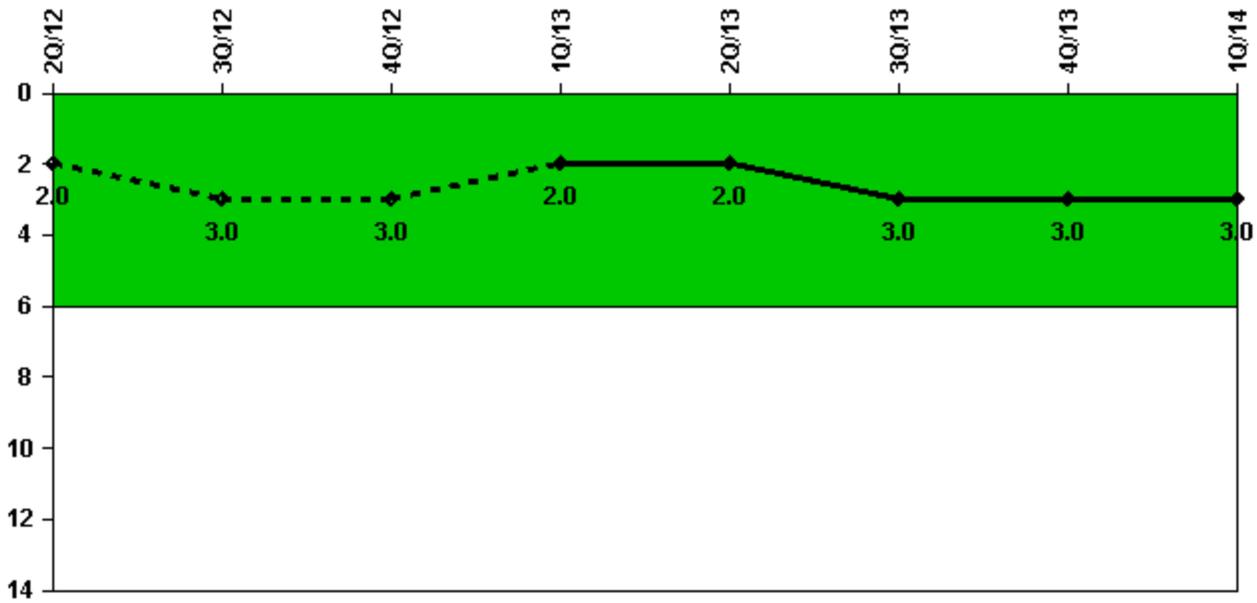
Thresholds: White > 6.0

Notes

Safety System Functional Failures (BWR)	2Q/12	3Q/12	4Q/12	1Q/13	2Q/13	3Q/13	4Q/13	1Q/14
Safety System Functional Failures	0	1	1	0	0	2	1	0
Indicator value	**2**	**3**	**3**	**2**	**2**	**3**	**3**	**3**

Licensee Comments:

1Q/14: The indicator value for the 4Q2013 was revised to remove one SSFF (LER 2013-008) based on engineering analysis. The change did not affect the color of the indicator.
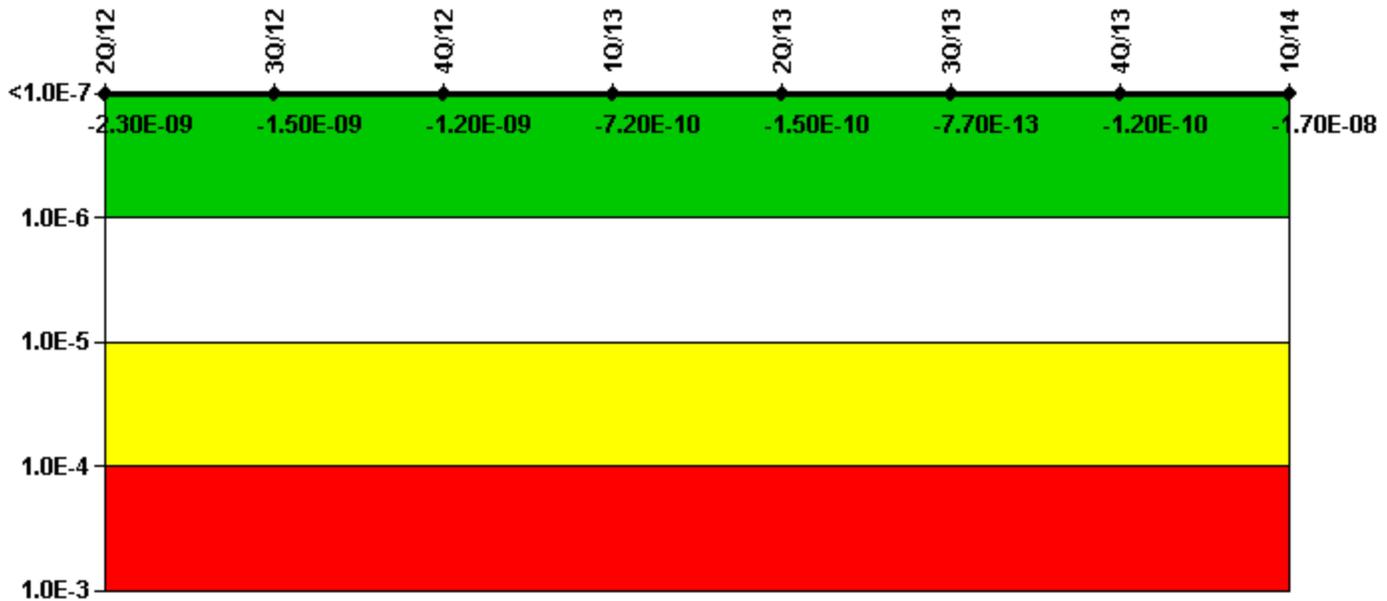
4Q/13: LER 2013-008, LER 2013-006

4Q/13: LER 2013-008, LER 2013-006 The indicator value for the 4Q2013 was revised to remove one SSFF (LER 2013-008) based on engineering analysis. The change did not affect the color of the indicator.

3Q/13: LER 2013-003-01, LER 2013-004

4Q/12: LER 2012-004

3Q/12: LER 2012-001, 7/5/2012

Mitigating Systems Performance Index, Emergency AC Power System

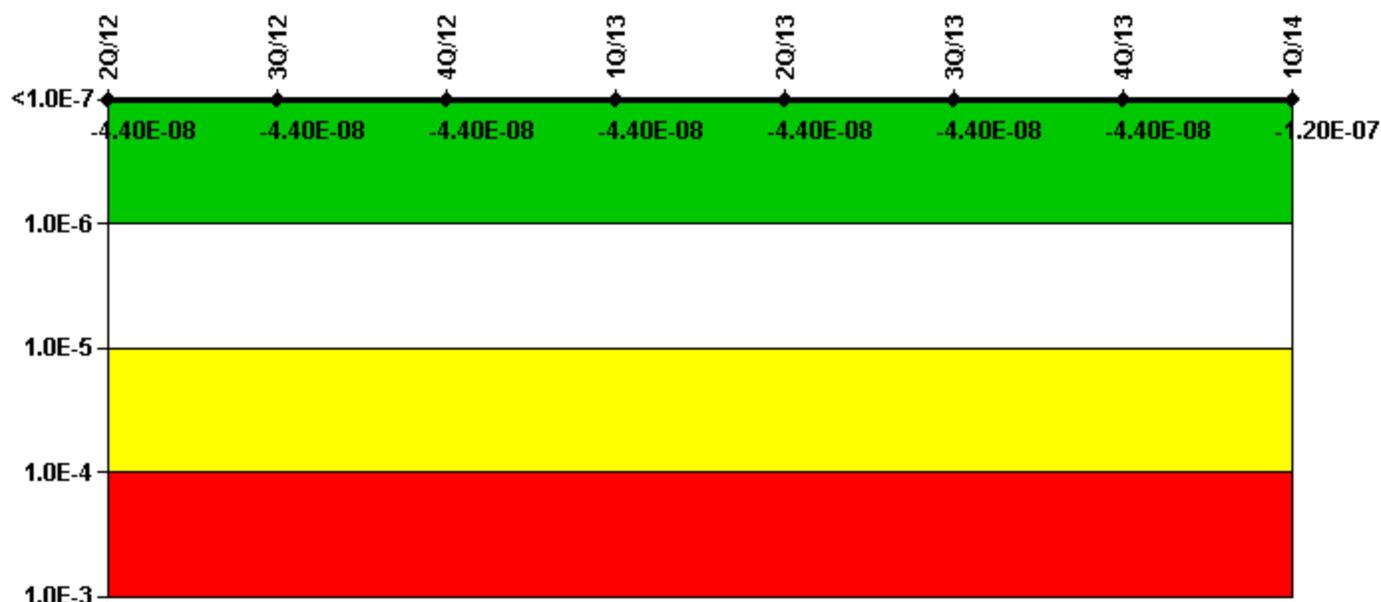Thresholds: White > 1.00E-6 Yellow > 1.00E-5 Red > 1.00E-4

Notes

Mitigating Systems Performance Index, Emergency AC Power System	2Q/12	3Q/12	4Q/12	1Q/13	2Q/13	3Q/13	4Q/13	1Q/14
UAI (ΔCDF)	-1.21E-09	-7.80E-10	-8.43E-10	-7.23E-10	-3.42E-10	-6.03E-10	-1.15E-09	-1.79E-08
URI (ΔCDF)	-1.10E-09	-7.43E-10	-3.77E-10	2.50E-12	1.94E-10	6.02E-10	1.03E-09	7.65E-10
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-2.30E-09	-1.50E-09	-1.20E-09	-7.20E-10	-1.50E-10	-7.70E-13	-1.20E-10	-1.70E-08

Licensee Comments:

1Q/14: Changed PRA Parameter(s). The Monticello Revision 3.1 model was approved October 1st, 2013 with a corresponding MSPI Basis document Revision 4 approved 4/18/2014. The PRA model revision was created to meet the RG 1.200, Rev 2 Standard. As a result of the PRA model change, the CDF, Fussell-Vesely and Basic Event Probabilities for all monitored trains and components were revised.

Mitigating Systems Performance Index, High Pressure Injection System

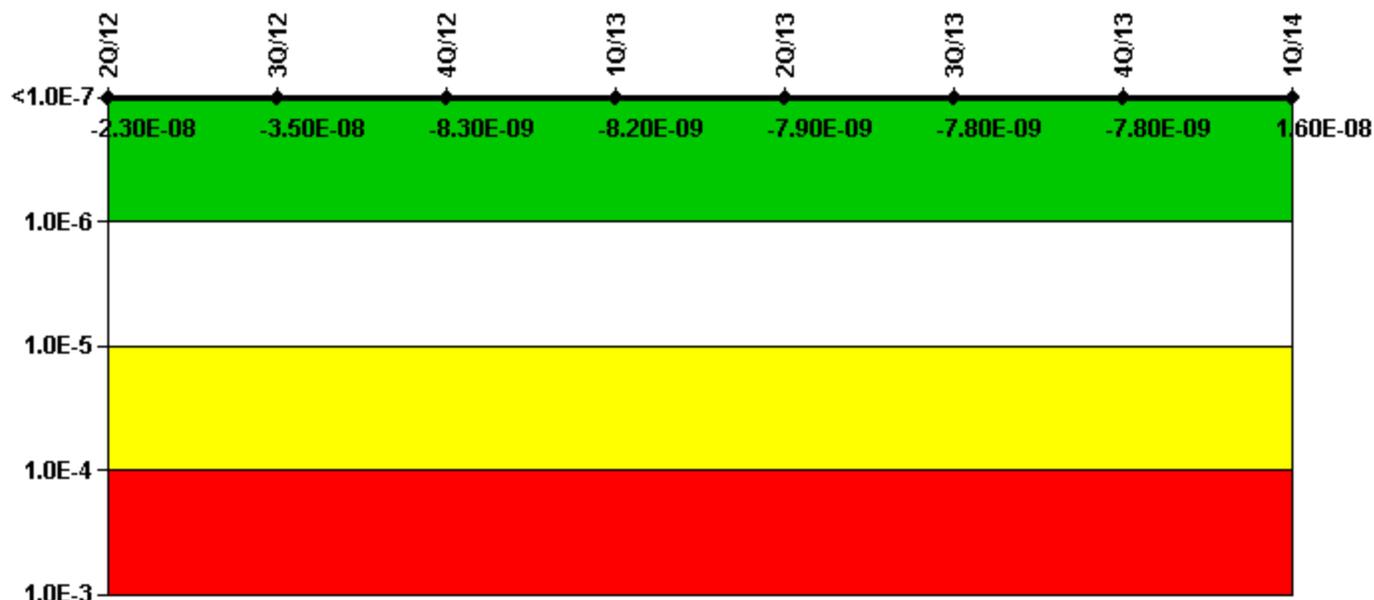Thresholds: White > 1.00E-6 Yellow > 1.00E-5 Red > 1.00E-4

Notes

Mitigating Systems Performance Index, High Pressure Injection System	2Q/12	3Q/12	4Q/12	1Q/13	2Q/13	3Q/13	4Q/13	1Q/14
UAI (ΔCDF)	-1.68E-08	-1.68E-08	-1.68E-08	-1.68E-08	-1.68E-08	-1.68E-08	-1.68E-08	-4.33E-08
URI (ΔCDF)	-2.71E-08	-2.71E-08	-2.71E-08	-2.71E-08	-2.71E-08	-2.71E-08	-2.71E-08	-7.21E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-4.40E-08**	**-4.40E-08**	**-4.40E-08**	**-4.40E-08**	**-4.40E-08**	**-4.40E-08**	**-4.40E-08**	**-1.20E-07**

Licensee Comments:

1Q/14: Changed PRA Parameter(s). The Monticello Revision 3.1 model was approved October 1st, 2013 with a corresponding MSPI Basis document Revision 4 approved 4/18/2014. The PRA model revision was created to meet the RG 1.200, Rev 2 Standard. As a result of the PRA model change, the CDF, Fussell-Vesely and Basic Event Probabilities for all monitored trains and components were revised.

Mitigating Systems Performance Index, Heat Removal System

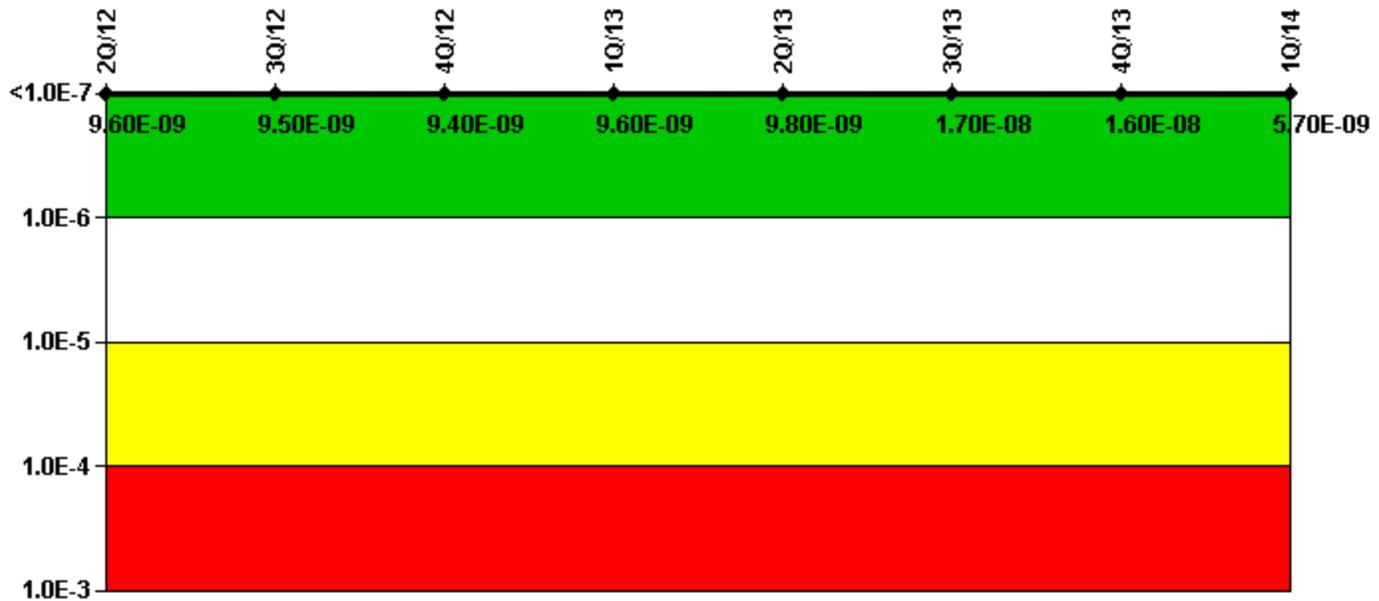**Thresholds: White > 1.00E-6 Yellow > 1.00E-5 Red > 1.00E-4**

Notes

Mitigating Systems Performance Index, Heat Removal System	2Q/12	3Q/12	4Q/12	1Q/13	2Q/13	3Q/13	4Q/13	1Q/14
UAI (ΔCDF)	-2.21E-09	-1.44E-08	-1.15E-08	-1.14E-08	-1.11E-08	-1.10E-08	-1.10E-08	-2.67E-08
URI (ΔCDF)	-2.11E-08	-2.11E-08	3.18E-09	3.18E-09	3.18E-09	3.18E-09	3.18E-09	4.25E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-2.30E-08	-3.50E-08	-8.30E-09	-8.20E-09	-7.90E-09	-7.80E-09	-7.80E-09	1.60E-08

Licensee Comments:

1Q/14: Changed PRA Parameter(s). The Monticello Revision 3.1 model was approved October 1st, 2013 with a corresponding MSPI Basis document Revision 4 approved 4/18/2014. The PRA model revision was created to meet the RG 1.200, Rev 2 Standard. As a result of the PRA model change, the CDF, Fussell-Vesely and Basic Event Probabilities for all monitored trains and components were revised.

Mitigating Systems Performance Index, Residual Heat Removal System

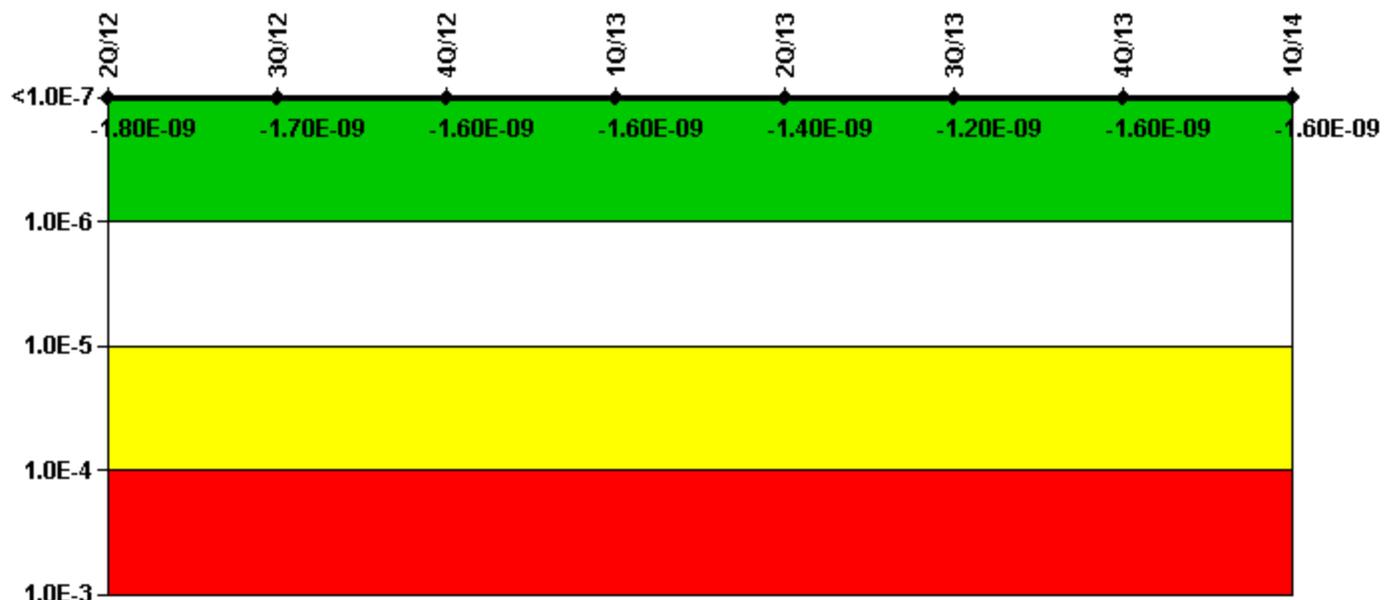
Thresholds: White > 1.00E-6 Yellow > 1.00E-5 Red > 1.00E-4

Notes

Mitigating Systems Performance Index, Residual Heat Removal System	2Q/12	3Q/12	4Q/12	1Q/13	2Q/13	3Q/13	4Q/13	1Q/14
UAI (ΔCDF)	-1.23E-10	-2.23E-10	-2.73E-10	-3.05E-11	8.66E-11	1.95E-10	-3.83E-10	-3.62E-10
URI (ΔCDF)	9.68E-09	9.68E-09	9.68E-09	9.68E-09	9.68E-09	1.67E-08	1.67E-08	6.06E-09
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	9.60E-09	9.50E-09	9.40E-09	9.60E-09	9.80E-09	1.70E-08	1.60E-08	5.70E-09

Licensee Comments:

1Q/14: Changed PRA Parameter(s). The Monticello Revision 3.1 model was approved October 1st, 2013 with a corresponding MSPI Basis document Revision 4 approved 4/18/2014. The PRA model revision was created to meet the RG 1.200, Rev 2 Standard. As a result of the PRA model change, the CDF, Fussell-Vesely and Basic Event Probabilities for all monitored trains and components were revised.

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	2Q/12	3Q/12	4Q/12	1Q/13	2Q/13	3Q/13	4Q/13	1Q/14
UAI (ΔCDF)	-1.75E-09	-1.66E-09	-1.57E-09	-1.59E-09	-1.37E-09	-1.21E-09	-1.64E-09	-1.68E-09
URI (ΔCDF)	2.55E-12	2.55E-12	2.55E-12	2.55E-12	2.55E-12	2.55E-12	1.75E-11	5.04E-11
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-1.80E-09	-1.70E-09	-1.60E-09	-1.60E-09	-1.40E-09	-1.20E-09	-1.60E-09	-1.60E-09

Licensee Comments:

1Q/14: Changed PRA Parameter(s). The Monticello Revision 3.1 model was approved October 1st, 2013 with a corresponding MSPI Basis document Revision 4 approved 4/18/2014. The PRA model revision was created to meet the RG 1.200, Rev 2 Standard. As a result of the PRA model change, the CDF, Fussell-Vesely and Basic Event Probabilities for all monitored trains and components were revised.

4Q/13: Final engineering evaluation of Dec 2013 determined MSPI failure in cooling water system. Change did not result in a color change of the indicator.

Reactor Coolant System Activity
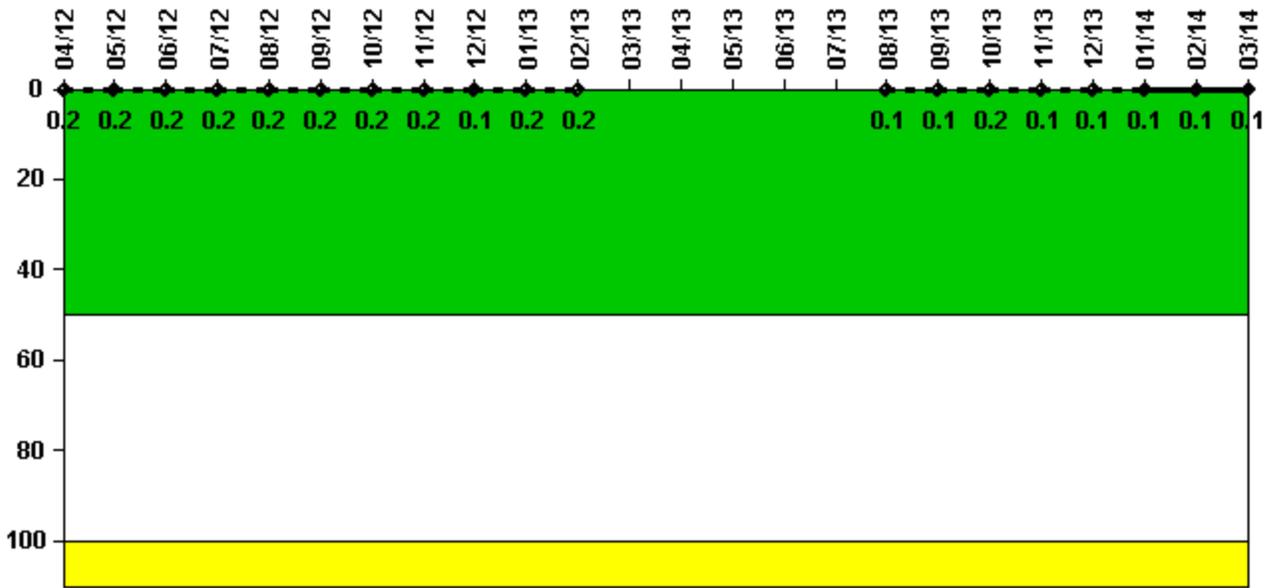
Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Activity	4/12	5/12	6/12	7/12	8/12	9/12	10/12	11/12	12/12	1/13	2/13	3/13
Maximum activity	0.000437	0.000462	0.000331	0.000344	0.000399	0.000420	0.000354	0.000316	0.000273	0.000343	0.000302	N/A
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	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.1**	**0.2**	**0.2**	**N/A**

| Reactor Coolant System Activity	4/13	5/13	6/13	7/13	8/13	9/13	10/13	11/13	12/13	1/14	2/14	3/14
Maximum activity	N/A	N/A	N/A	N/A	0.000232	0.000248	0.000339	0.000174	0.000166	0.000129	0.000252	0.000190
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	**N/A**	**N/A**	**N/A**	**N/A**	**0.1**	**0.1**	**0.2**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**

Licensee Comments:

9/13: Plant conditions were not met to calculate RCS activity for July 2013.

6/13: Plant Conditions do not require RCS activity to be calculated for April, May and June 2013.

3/13: Plant conditions were not met to calculate RCS activity for March 2013.

Reactor Coolant System Leakage
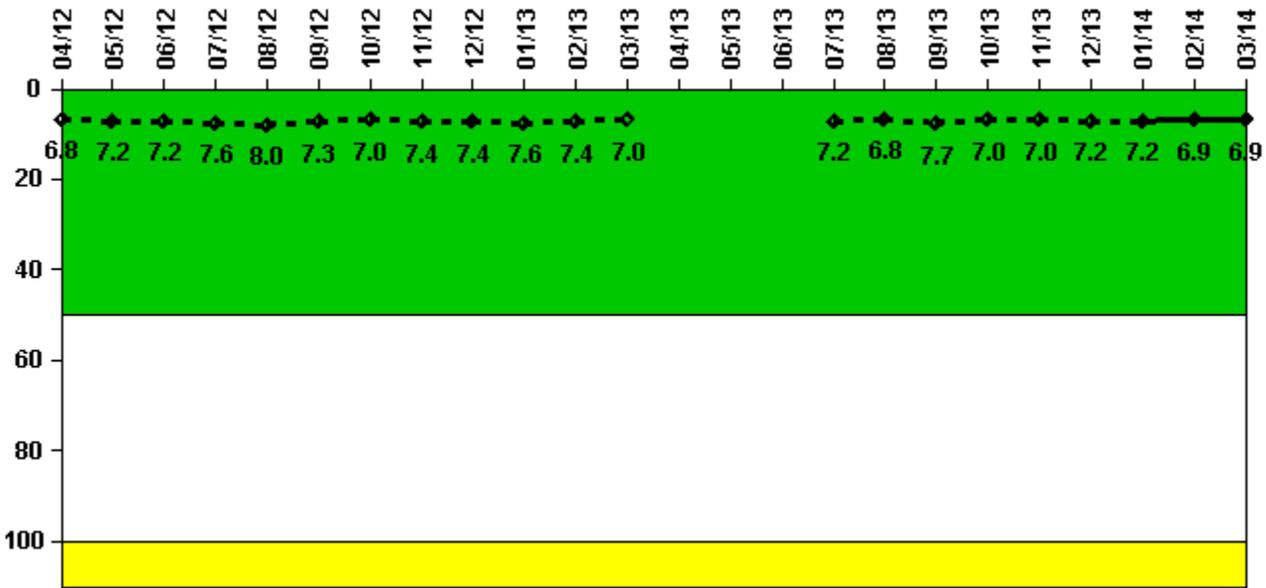
Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Leakage	4/12	5/12	6/12	7/12	8/12	9/12	10/12	11/12	12/12	1/13	2/13	3/13
Maximum leakage	1.700	1.800	1.800	1.900	2.000	1.820	1.750	1.840	1.840	1.900	1.840	1.760
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	**6.8**	**7.2**	**7.2**	**7.6**	**8.0**	**7.3**	**7.0**	**7.4**	**7.4**	**7.6**	**7.4**	**7.0**

Reactor Coolant System Leakage	4/13	5/13	6/13	7/13	8/13	9/13	10/13	11/13	12/13	1/14	2/14	3/14
Maximum leakage	N/A	N/A	N/A	1.800	1.690	1.920	1.740	1.760	1.790	1.800	1.720	1.720
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	**N/A**	**N/A**	**N/A**	**7.2**	**6.8**	**7.7**	**7.0**	**7.0**	**7.2**	**7.2**	**6.9**	**6.9**

Licensee Comments:

6/13: Plant Conditions do not require RCS Leakage to be calculated for April 2013, May 2013 and June 2013.

6/13: Plant Conditions do not require RCS Leakage to be calculated for April 2013, May 2013 and June 2013.

Drill/Exercise Performance
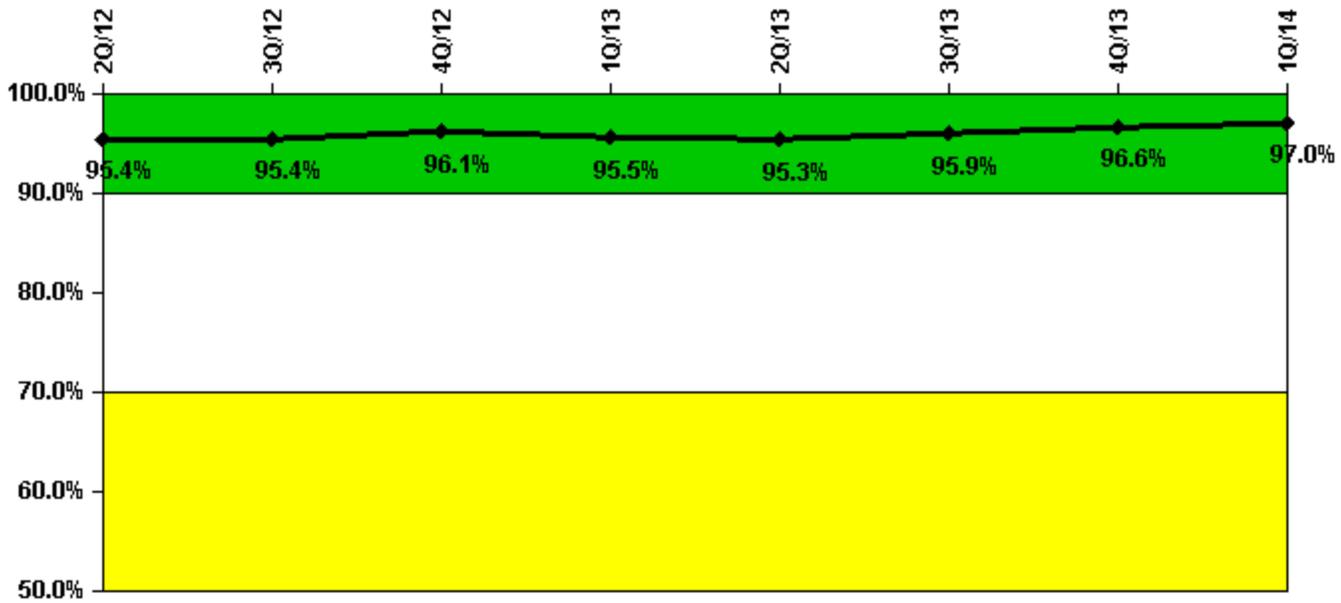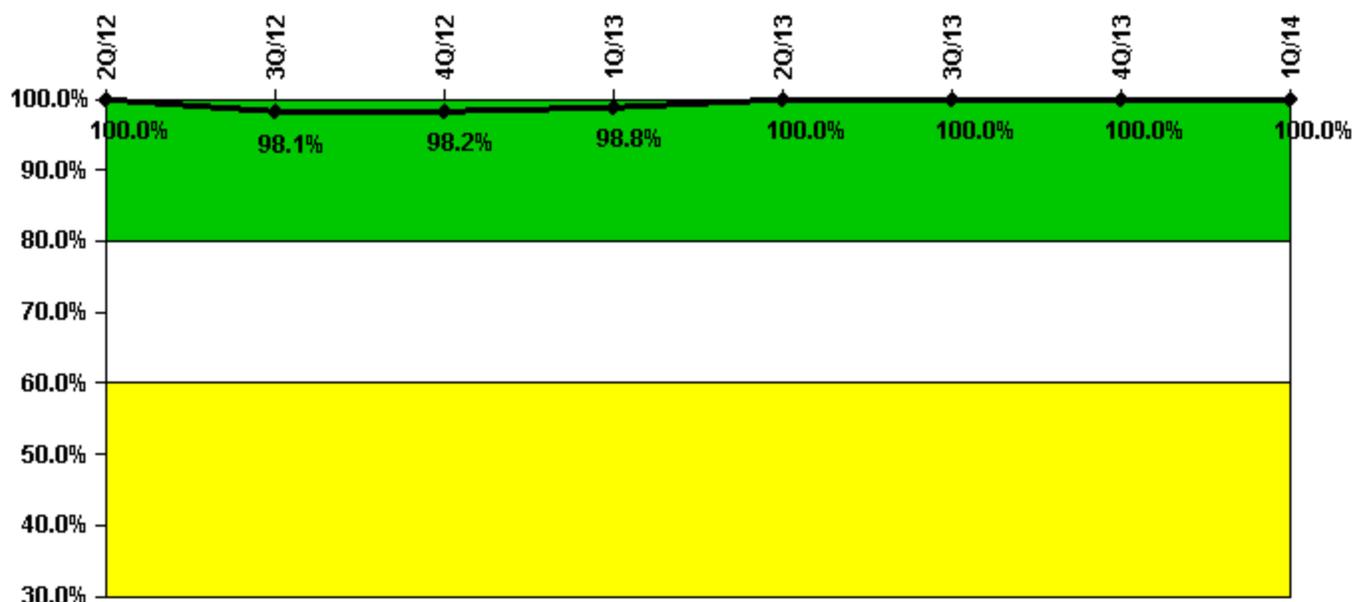

Thresholds: White < 90.0% Yellow < 70.0%

Notes

Drill/Exercise Performance	2Q/12	3Q/12	4Q/12	1Q/13	2Q/13	3Q/13	4Q/13	1Q/14
Successful opportunities	42.0	40.0	46.0	16.0	7.0	37.0	77.0	30.0
Total opportunities	42.0	42.0	46.0	19.0	7.0	39.0	79.0	30.0
Indicator value	**95.4%**	**95.4%**	**96.1%**	**95.5%**	**95.3%**	**95.9%**	**96.6%**	**97.0%**

Licensee Comments:

3Q/12: Sept 2012 ammended to include 6 successes for 6 opportunities due to licensed operator requal exam security that was unavaillable for 3rd quarter submittal. No color change.
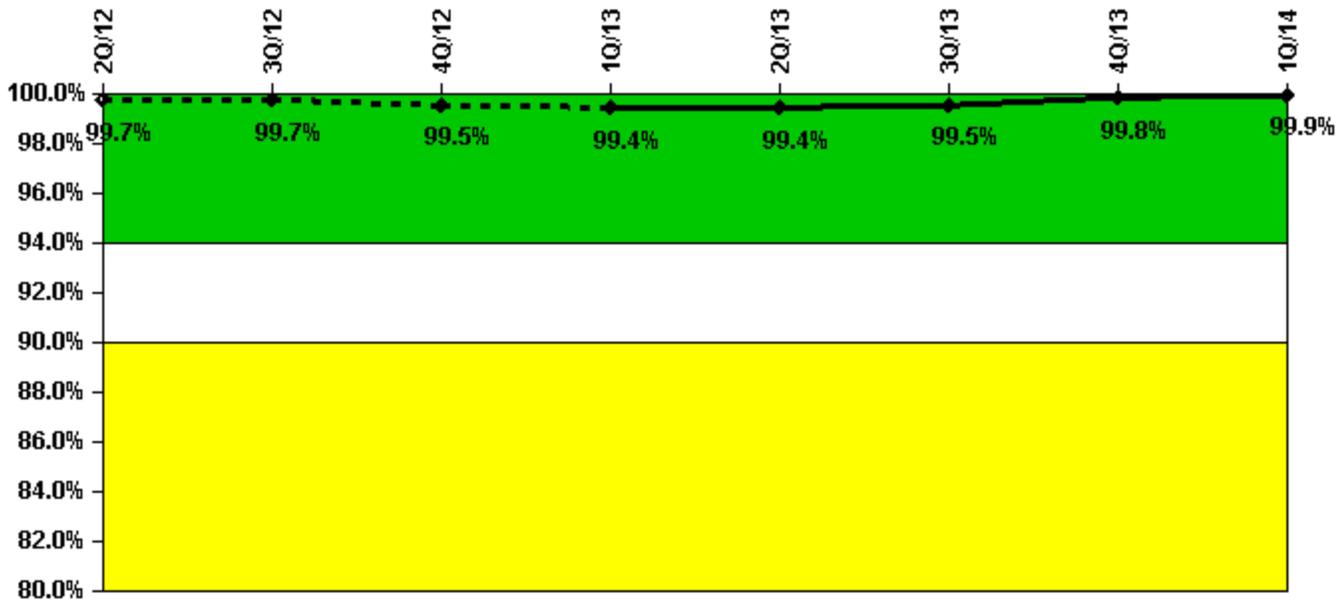
ERO Drill Participation

Thresholds: White < 80.0% Yellow < 60.0%

Notes

ERO Drill Participation	2Q/12	3Q/12	4Q/12	1Q/13	2Q/13	3Q/13	4Q/13	1Q/14
Participating Key personnel	144.0	151.0	163.0	160.0	173.0	165.0	164.0	155.0
Total Key personnel	144.0	154.0	166.0	162.0	173.0	165.0	164.0	155.0
Indicator value	**100.0%**	**98.1%**	**98.2%**	**98.8%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Licensee Comments: none

Alert & Notification System
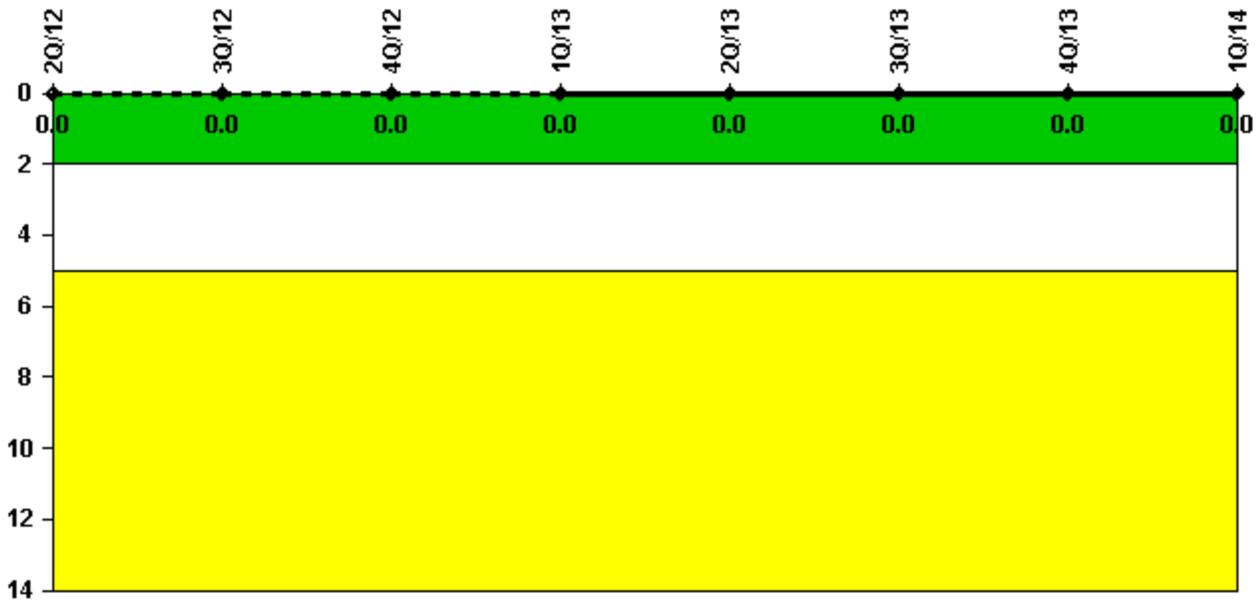

Thresholds: White < 94.0% Yellow < 90.0%

Notes

Alert & Notification System	2Q/12	3Q/12	4Q/12	1Q/13	2Q/13	3Q/13	4Q/13	1Q/14
Successful siren-tests	1373	1374	1362	1368	1377	1377	1377	1376
Total sirens-tests	1378	1378	1378	1378	1378	1378	1378	1378
Indicator value	99.7%	99.7%	99.5%	99.4%	99.4%	99.5%	99.8%	99.9%

Licensee Comments:

1Q/14: Alert and Notification System Reliability updated to reflect siren failure in July 2013. No color change.

3Q/13: Alert and Notification System Reliability updated to reflect siren failure in July 2013. No color change.

Occupational Exposure Control Effectiveness

Thresholds: White > 2.0 Yellow > 5.0

Notes

Occupational Exposure Control Effectiveness	2Q/12	3Q/12	4Q/12	1Q/13	2Q/13	3Q/13	4Q/13	1Q/14
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
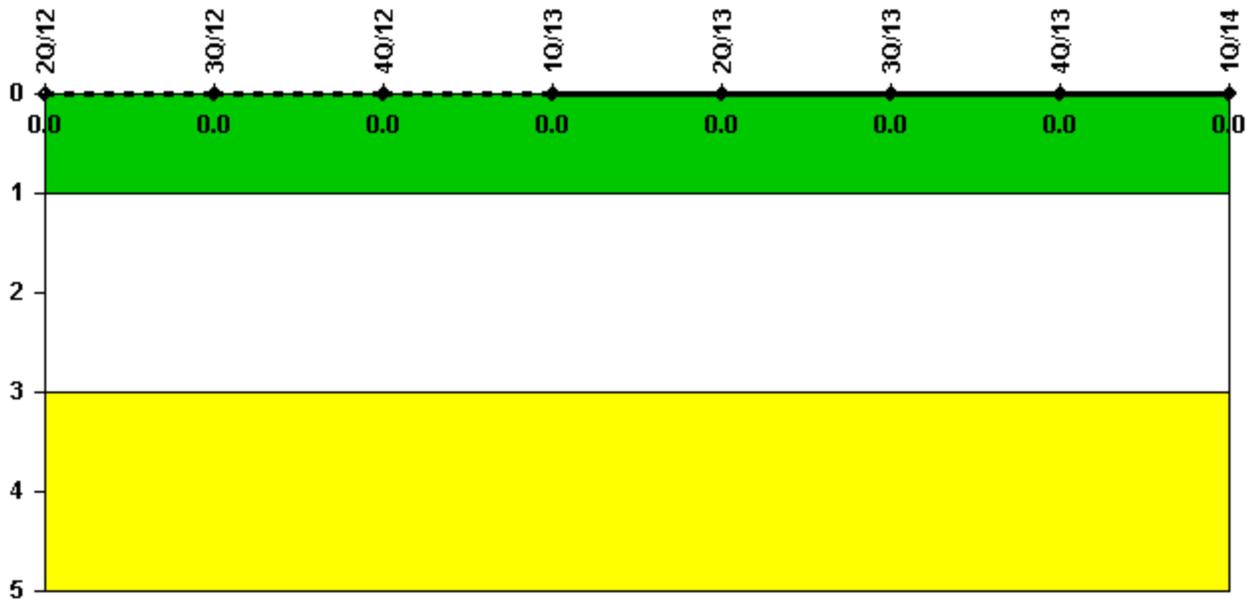
Thresholds: White > 1.0 Yellow > 3.0

Notes

RETS/ODCM Radiological Effluent	2Q/12	3Q/12	4Q/12	1Q/13	2Q/13	3Q/13	4Q/13	1Q/14
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: April 23, 2014