

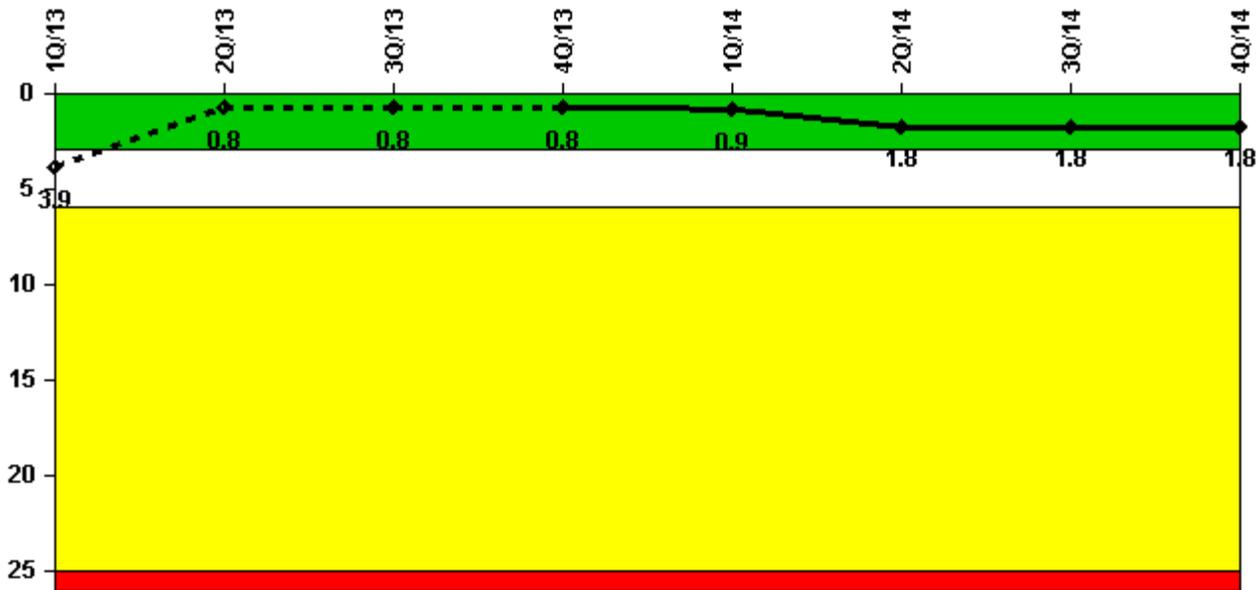
Browns Ferry 3

4Q/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	1Q/13	2Q/13	3Q/13	4Q/13	1Q/14	2Q/14	3Q/14	4Q/14
Unplanned scrams	1.0	0	0	0	1.0	1.0	0	0
Critical hours	1869.7	2184.0	2208.0	2209.0	1421.6	2130.0	2208.0	2209.0
Indicator value	3.9	0.8	0.8	0.8	0.9	1.8	1.8	1.8

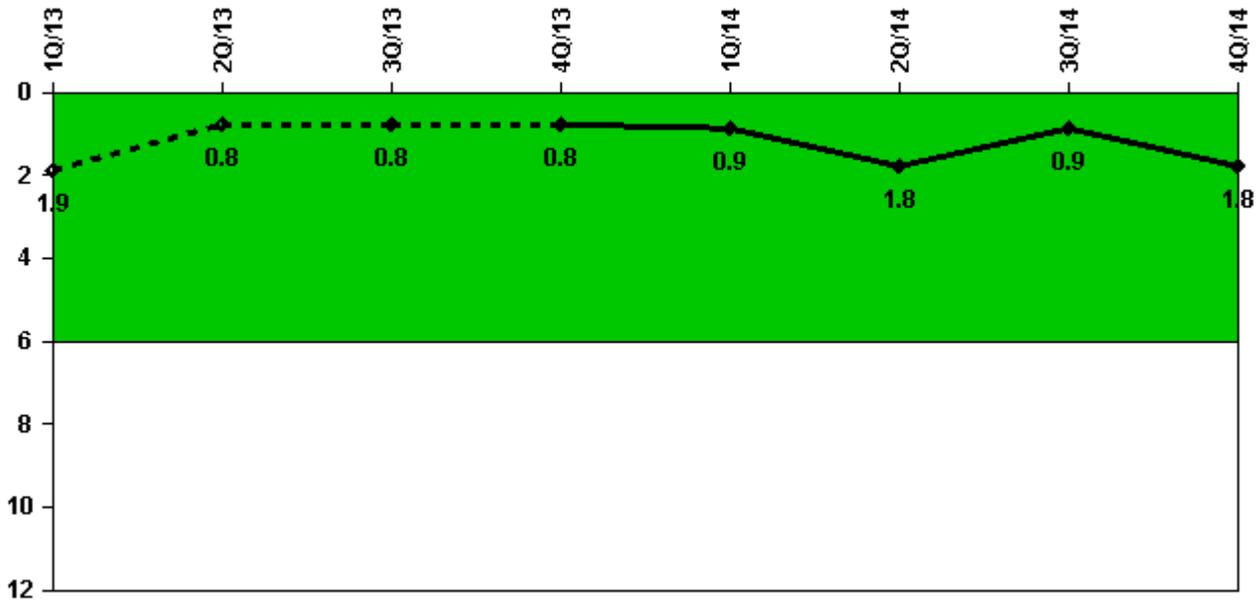
Licensee Comments:

2Q/14: Automatic scram due to ATWS Initiation and loss of recirc pumps on 05/06/2014.

1Q/13: Unplanned scrams exceeded a threshold in 1st Quarter of 2013. The following scrams caused the threshold to be exceeded: Automatic Reactor Scram Due to De-Energization of RPS from Actuation of 3A USST Differential Relay occurring on May 22, 2012, Manual Reactor Scram from Low Power During Startup Activities occurring on May 24, 2012, Automatic Reactor Scram Following Main Generator Trip Due to Main Transformer

Differential Relay Actuation occurring on May 29, 2012, and Automatic Reactor Scram due to Loss of Vacuum on February 25, 2013.

Unplanned Power Changes per 7000 Critical Hrs



Thresholds: White > 6.0

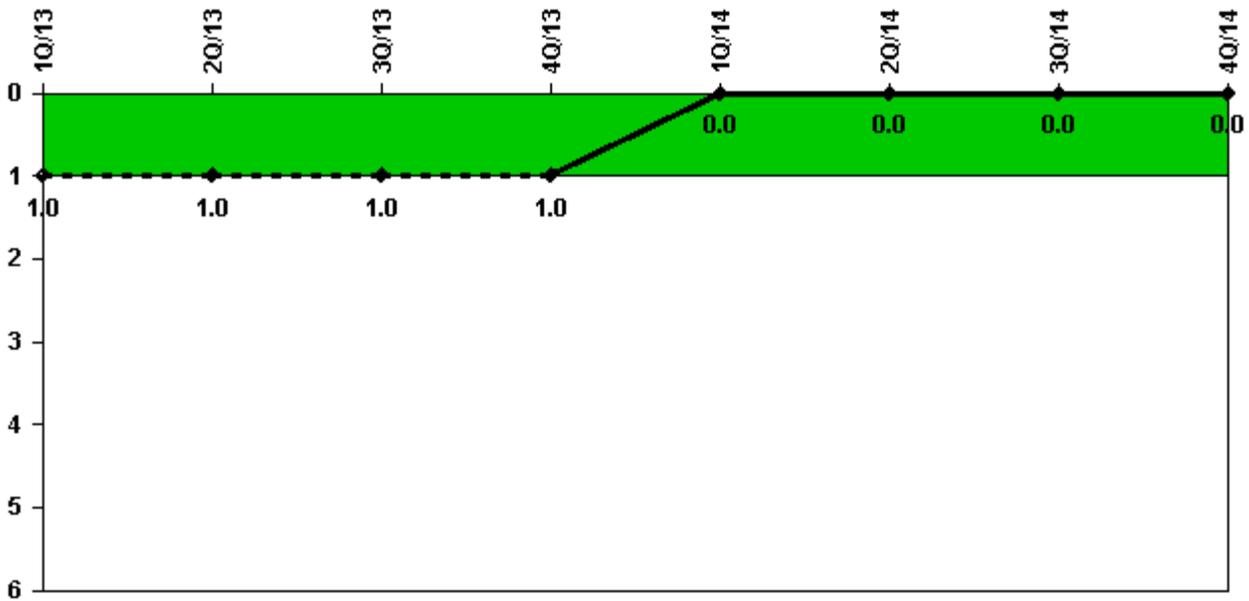
Notes

Unplanned Power Changes per 7000 Critical Hrs	1Q/13	2Q/13	3Q/13	4Q/13	1Q/14	2Q/14	3Q/14	4Q/14
Unplanned power changes	0	0	1.0	0	0	1.0	0	1.0
Critical hours	1869.7	2184.0	2208.0	2209.0	1421.6	2130.0	2208.0	2209.0
Indicator value	1.9	0.8	0.8	0.8	0.9	1.8	0.9	1.8

Licensee Comments:

2Q/14: Removed 3A Condensate Booster Pump from service on 04/09/2014 due to report of water in oil reservoir.

Unplanned Scrams with Complications



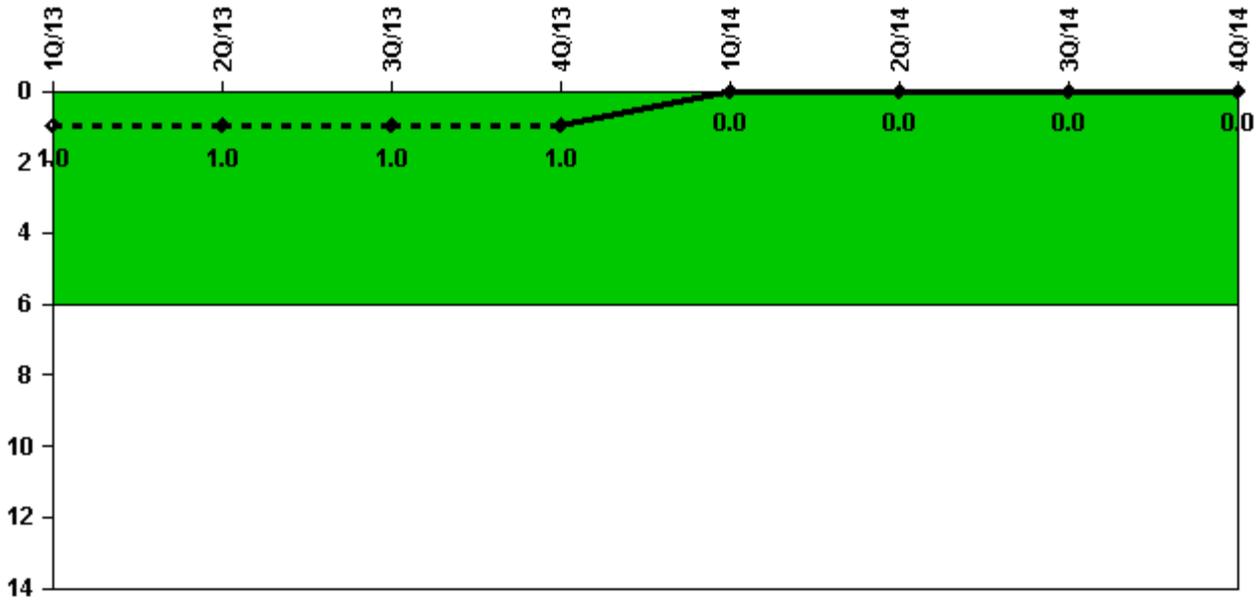
Thresholds: White > 1.0

Notes

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

Licensee Comments: none

Safety System Functional Failures (BWR)



Thresholds: White > 6.0

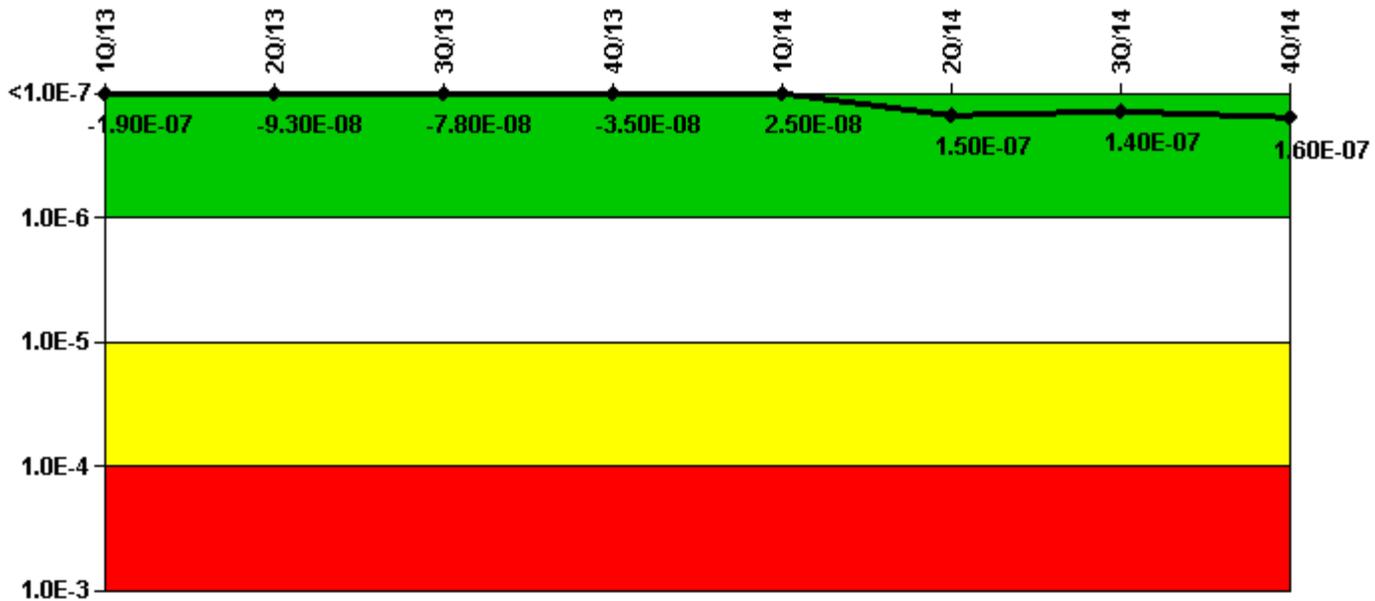
Notes

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

Licensee Comments:

1Q/13: LER 296/2013-001-00 - Inoperable Emergency Diesel Generators due to Failed or Degraded Electric Generator Casing Fan Bearings

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/13	2Q/13	3Q/13	4Q/13	1Q/14	2Q/14	3Q/14	4Q/14
UAI (Δ CDF)	5.70E-08	1.38E-07	1.39E-07	1.69E-07	2.15E-07	2.07E-07	1.58E-07	1.51E-07
URI (Δ CDF)	-2.42E-07	-2.30E-07	-2.17E-07	-2.04E-07	-1.90E-07	-5.40E-08	-2.13E-08	1.37E-08
PLE	NO	NO						
Indicator value	-1.90E-07	-9.30E-08	-7.80E-08	-3.50E-08	2.50E-08	1.50E-07	1.40E-07	1.60E-07

Licensee Comments:

4Q/14: Risk Cap Invoked. The MSPI Risk Cap is invoked. The contribution from the highest worth single failure (2.01E-06) has been replaced by a value of 5.00E-07.

3Q/14: Risk Cap Invoked. The MSPI Risk Cap is invoked. The contribution from the highest worth single failure (1.94E-06) has been replaced by a value of 5.00E-07.

2Q/14: Risk Cap Invoked. The MSPI Risk Cap is invoked. The contribution from the highest worth single failure (1.87E-06) has been replaced by a value of 5.00E-07.

1Q/14: Risk Cap Invoked. The MSPI Risk Cap is invoked. The contribution from the highest worth single failure (1.26E-06) has been replaced by a value of 5.00E-07.

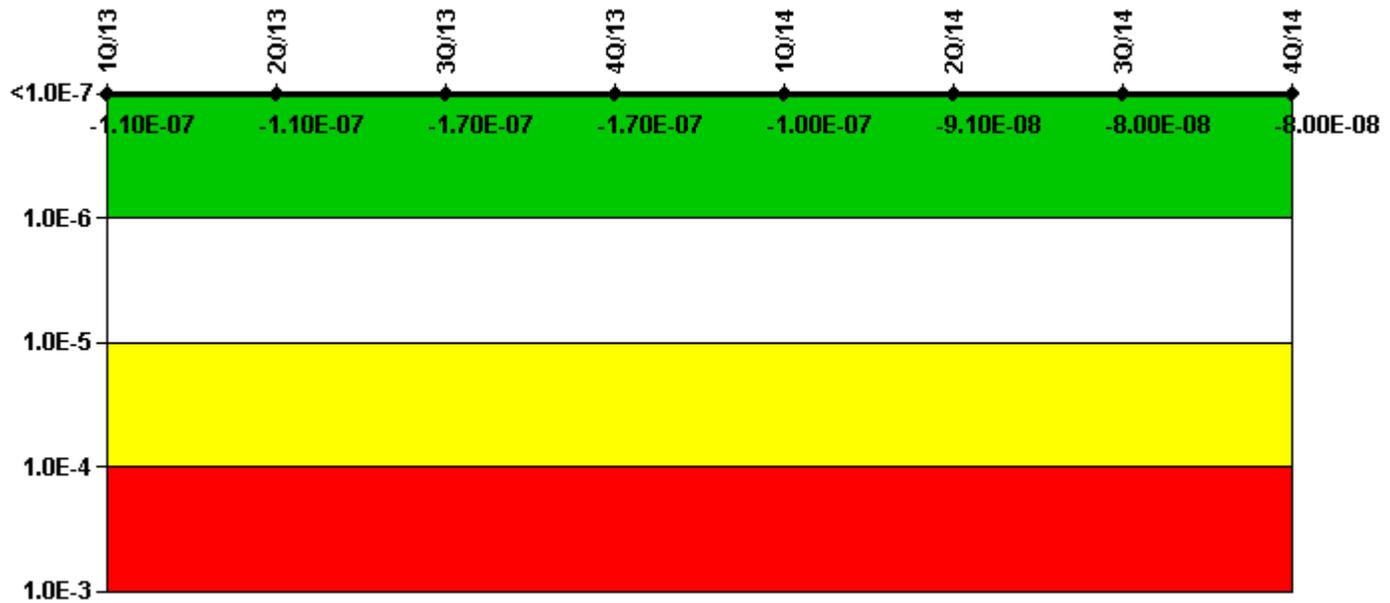
4Q/13: Risk Cap Invoked. The MSPI Risk Cap is invoked. The contribution from the highest worth single failure (1.23E-06) has been replaced by a value of 5.00E-07.

3Q/13: Risk Cap Invoked. The MSPI Risk Cap is invoked. The contribution from one Failure to Run (1.21E-06) has been replaced by a value of 5.00E-07.

2Q/13: Risk Cap Invoked. The MSPI Risk Cap is invoked. The contribution from one Failure to Run (1.18E-06) has been replaced by a value of 5.00E-07.

1Q/13: Risk Cap Invoked. Changed PRA Parameter(s). The MSPI Risk Cap is invoked. The contribution from one Failure to Run (1.16E-06) has been replaced by a value of 5.00E-07. MSPI Basis Documents and PRA Parameters were revised based on Calculation NDN-000-999-2010-003 Revision 007 to reflect Browns Ferry CAFTA PRA Model Revision 5 approved on 11/06/12. These changes are effective first quarter 2013.

Mitigating Systems Performance Index, High Pressure Injection System



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

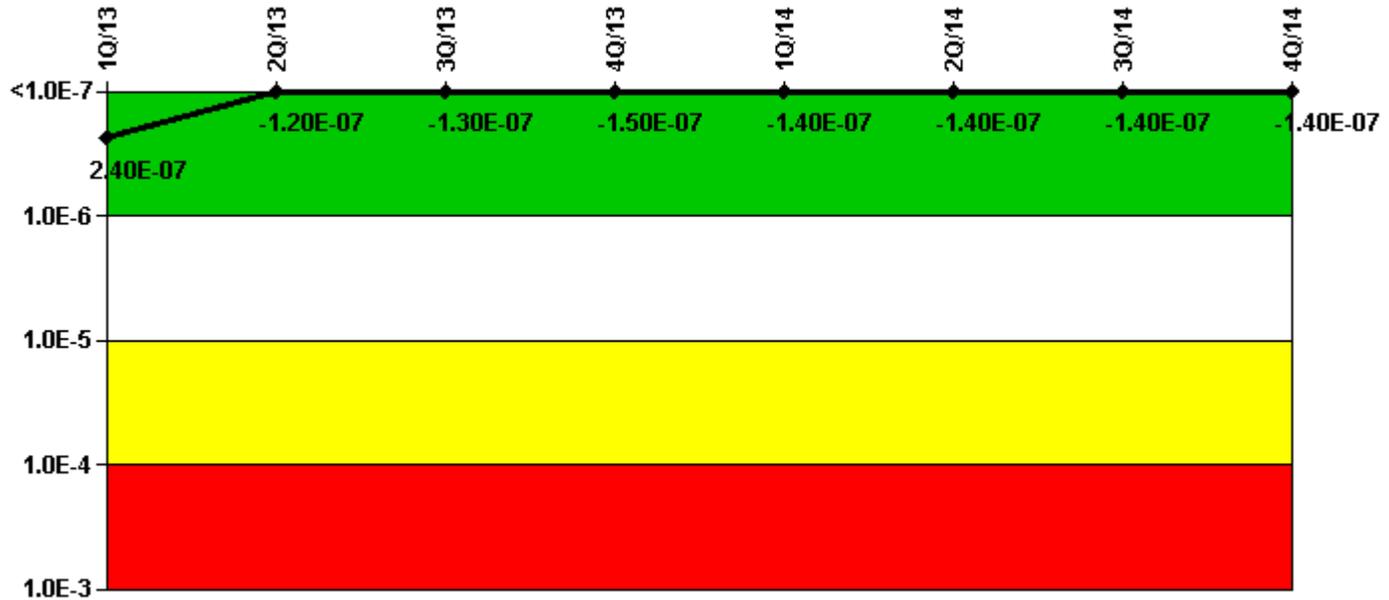
Notes

Mitigating Systems Performance Index, High Pressure Injection System	1Q/13	2Q/13	3Q/13	4Q/13	1Q/14	2Q/14	3Q/14	4Q/14
UAI (ΔCDF)	6.49E-08	6.34E-08	1.72E-09	4.90E-10	6.97E-08	6.90E-08	8.05E-08	8.04E-08
URI (ΔCDF)	-1.74E-07	-1.75E-07	-1.75E-07	-1.75E-07	-1.75E-07	-1.60E-07	-1.60E-07	-1.60E-07
PLE	NO							
Indicator value	-1.10E-07	-1.10E-07	-1.70E-07	-1.70E-07	-1.00E-07	-9.10E-08	-8.00E-08	-8.00E-08

Licensee Comments:

1Q/13: Changed PRA Parameter(s). MSPI Basis Documents and PRA Parameters were revised based on Calculation NDN-000-999-2010-003 Revision 007 to reflect Browns Ferry CAFTA PRA Model Revision 5 approved on 11/06/12. These changes are effective first quarter 2013.

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/13	2Q/13	3Q/13	4Q/13	1Q/14	2Q/14	3Q/14	4Q/14
UAI (ΔCDF)	1.94E-08	5.37E-08	4.47E-08	2.66E-08	2.91E-08	2.14E-08	2.14E-08	2.04E-08
URI (ΔCDF)	2.25E-07	-1.73E-07	-1.73E-07	-1.73E-07	-1.73E-07	-1.64E-07	-1.64E-07	-1.64E-07
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	2.40E-07	-1.20E-07	-1.30E-07	-1.50E-07	-1.40E-07	-1.40E-07	-1.40E-07	-1.40E-07

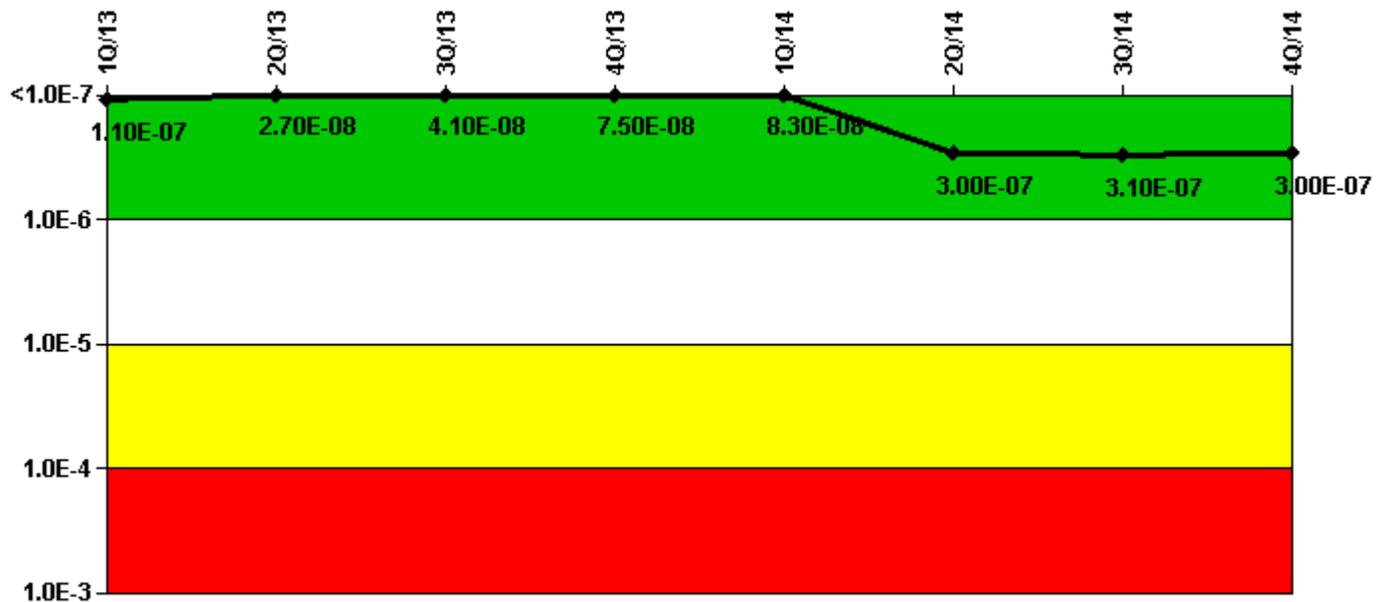
Licensee Comments:

3Q/13: Added previously uncounted RCIC injection demands. Added demand data for Unit 3 in April 2011, May 2012, and February 2013. BFNs interpretation of what RCIC demands need to be counted changed for RCIC. This did not impact the MSPI color of RCIC.

1Q/13: MSPI Basis Documents and PRA Parameters were revised based on Calculation NDN-000-999-2010-003 Revision 007 to reflect Browns Ferry CAFTA PRA Model Revision 5 approved on 11/06/12. These changes are effective first quarter 2013.

1Q/13: Changed PRA Parameter(s). MSPI Basis Documents and PRA Parameters were revised based on Calculation NDN-000-999-2010-003 Revision 007 to reflect Browns Ferry CAFTA PRA Model Revision 5 approved on 11/06/12. These changes are effective first quarter 2013.

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/13	2Q/13	3Q/13	4Q/13	1Q/14	2Q/14	3Q/14	4Q/14
UAI (ΔCDF)	3.32E-08	1.96E-08	3.38E-08	6.79E-08	7.63E-08	1.25E-07	1.30E-07	1.20E-07
URI (ΔCDF)	7.27E-08	7.23E-09	6.99E-09	6.75E-09	6.51E-09	1.79E-07	1.79E-07	1.79E-07
PLE	NO							
Indicator value	1.10E-07	2.70E-08	4.10E-08	7.50E-08	8.30E-08	3.00E-07	3.10E-07	3.00E-07

Licensee Comments:

2Q/14: Failure of the main control room handswitch for the 3-FCV-023-0052, 3D RHRSW HX Outlet Valve, discovered on 05/14/2014

1Q/14: Changed PRA Parameter(s). During the first quarter of 2014, the following changes were made to numerical values in the INPO CDE database for the Browns Ferry Nuclear Plant (BFN). 1. Common Cause Factor (CCF) for 3-FCV-023-0034 was changed to the correct value of 2.00. Effective 2011-01 to present. 2. Operational Non-test demands(D) value for 2-FCV-023-0046 was changed to the correct value of 82. Effective 2012-01 to present. 3. Operational Non-test demands(D) value for 3-FCV-023-0040 was changed to the correct value of 88. Effective 2012-01 to present. 4. Operational Non-test run-hours value for 1-PMP-074-0039 was changed to the correct value of 333.54 hours. Effective 2011-01 to present. 5. Test run-hours value for 1-PMP-074-0039 was changed to the correct value of 31.87 hours. Effective 2011-01 to present. These changes result in the BFN Residual Heat Removal System MSPI indicator values for past reporting periods to be different than previously reported, as indicated by the effective dates identified above. No MSPI color changes resulted from these changes to the numerical values. Reference BFN Problem Evaluation Report (PER) 851845.

4Q/13: Changed PRA Parameter(s).

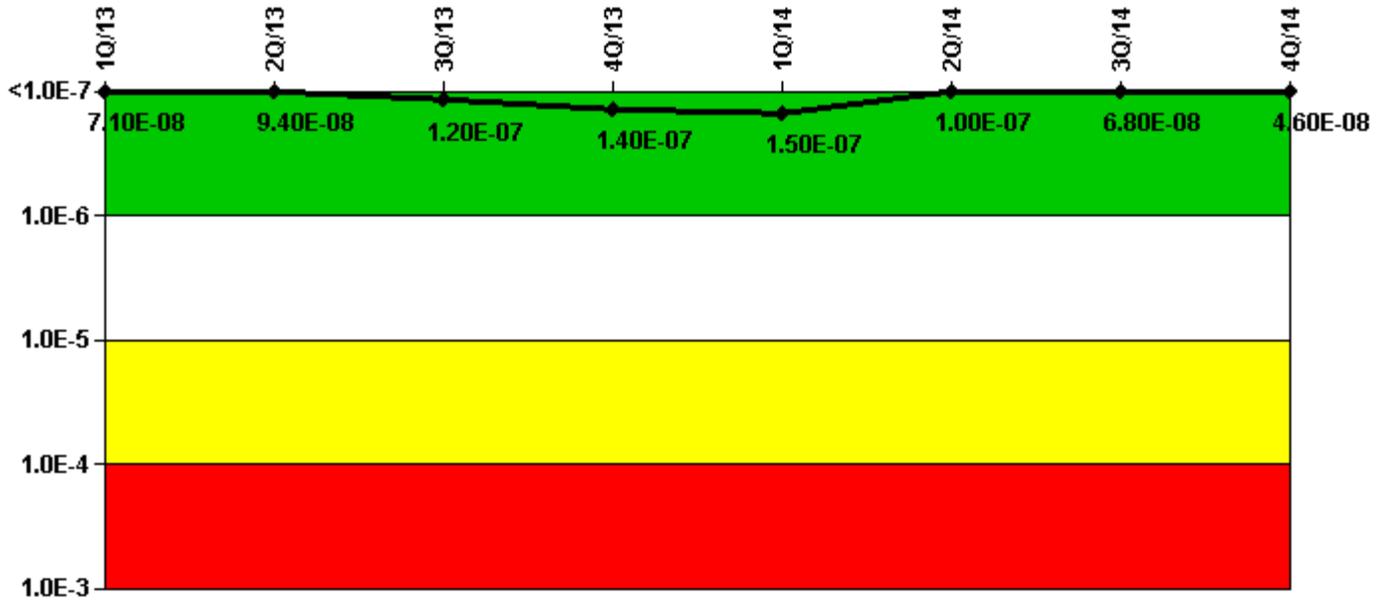
3Q/13: Changed PRA Parameter(s).

2Q/13: Changed PRA Parameter(s).

1Q/13: Changed PRA Parameter(s). MSPI Basis Documents and PRA Parameters were revised based on Calculation NDN-000-999-2010-003 Revision 007 to reflect Browns Ferry CAFTA PRA Model Revision 5 approved on 11/06/12. These changes are effective first quarter 2013.

1Q/13: Changed PRA Parameter(s). MSPI Basis Documents and PRA Parameters were revised based on Calculation NDN-000-999-2010-003 Revision 007 to reflect Browns Ferry CAFTA PRA Model Revision 5 approved on 11/06/12. These changes are effective first quarter 2013.

Mitigating Systems Performance Index, Cooling Water Systems



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

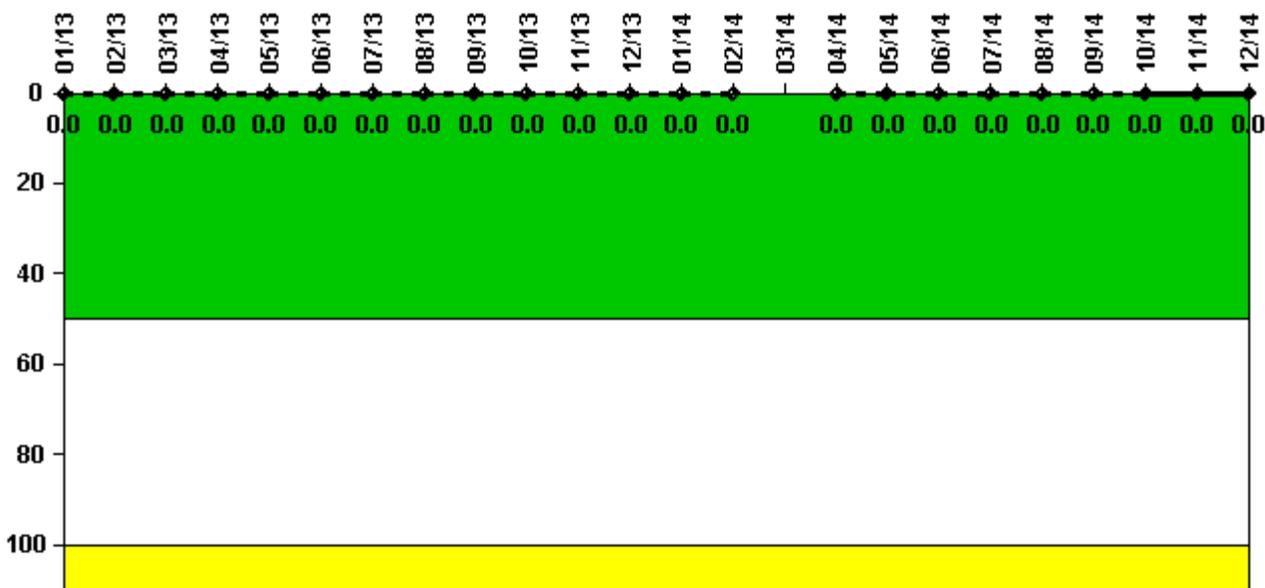
Notes

Mitigating Systems Performance Index, Cooling Water Systems	1Q/13	2Q/13	3Q/13	4Q/13	1Q/14	2Q/14	3Q/14	4Q/14
UAI (ΔCDF)	1.01E-07	1.24E-07	1.53E-07	1.69E-07	1.75E-07	1.56E-07	1.20E-07	9.82E-08
URI (ΔCDF)	-2.99E-08	-2.99E-08	-2.99E-08	-2.99E-08	-2.99E-08	-5.18E-08	-5.18E-08	-5.18E-08
PLE	NO							
Indicator value	7.10E-08	9.40E-08	1.20E-07	1.40E-07	1.50E-07	1.00E-07	6.80E-08	4.60E-08

Licensee Comments:

1Q/13: Changed PRA Parameter(s). MSPI Basis Documents and PRA Parameters were revised based on Calculation NDN-000-999-2010-003 Revision 007 to reflect Browns Ferry CAFTA PRA Model Revision 5 approved on 11/06/12. These changes are effective first quarter 2013.

Reactor Coolant System Activity



Thresholds: White > 50.0 Yellow > 100.0

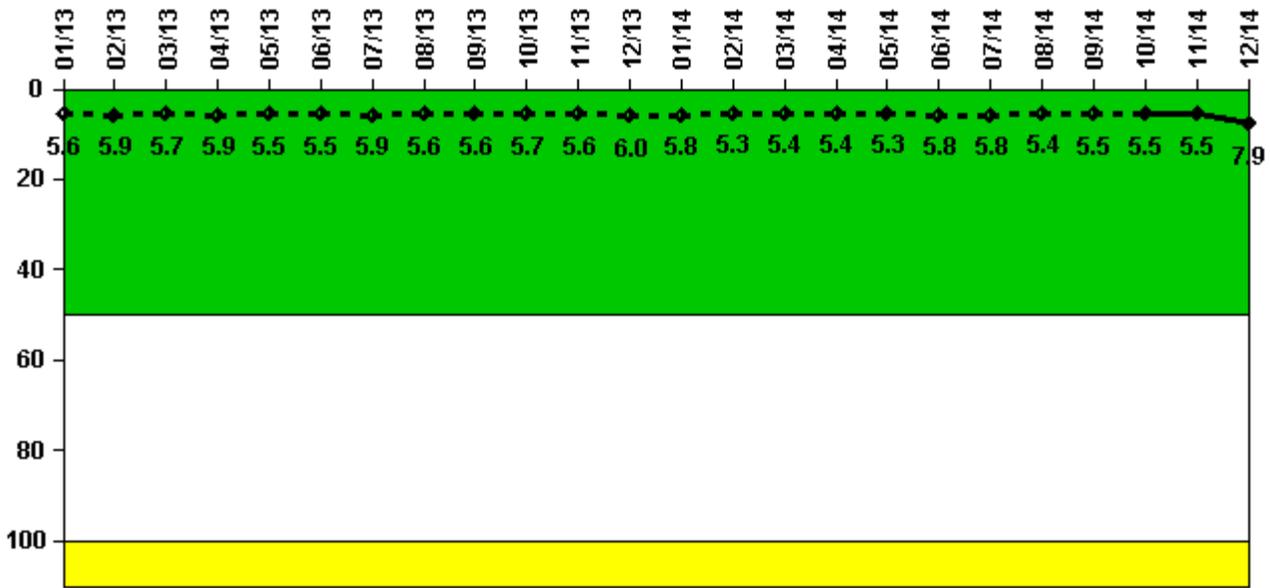
Notes

Reactor Coolant System Activity	1/13	2/13	3/13	4/13	5/13	6/13	7/13	8/13	9/13	10/13	11/13	12/13
Maximum activity	0.000116	0.000081	0.000064	0.000089	0.000244	0.000087	0.000071	0.000072	0.000127	0.000105	0.000080	0.000059
Technical specification limit	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
Indicator value	0	0	0	0	0	0	0	0	0	0	0	0

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	0.000094	0.000088	N/A	0.000080	0.000064	0.000086	0.000134	0.000084	0.000068	0.000099	0.000128	0.000124
Technical specification limit	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
Indicator value	0	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

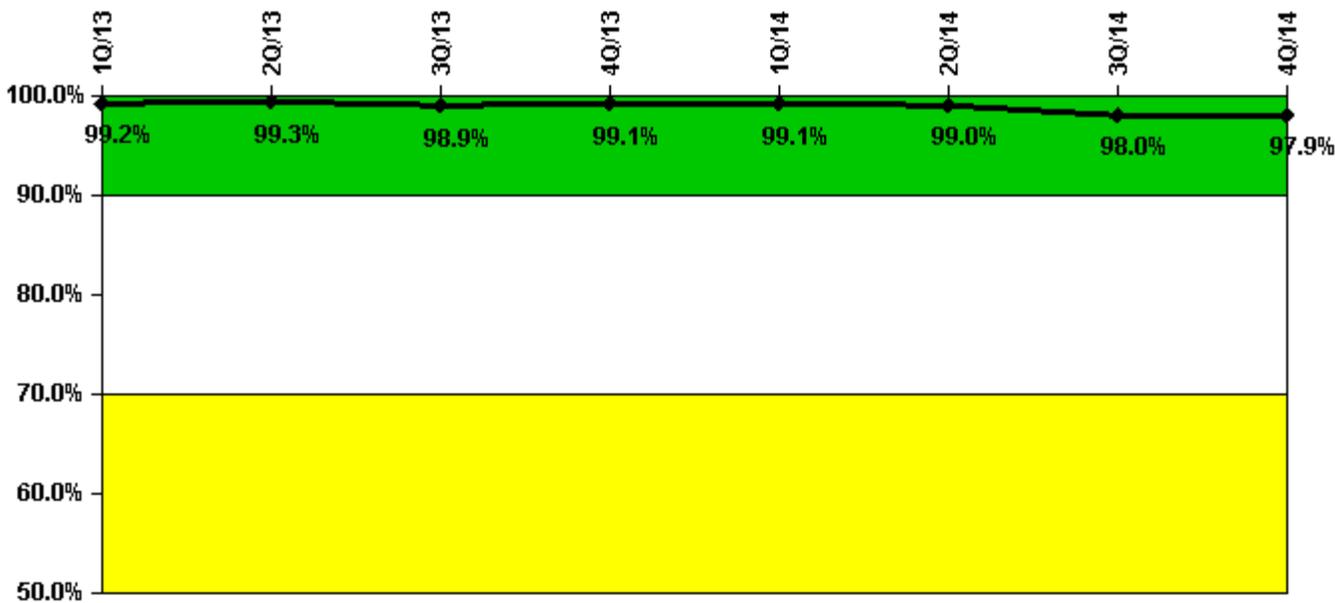
Notes

Reactor Coolant System Leakage	1/13	2/13	3/13	4/13	5/13	6/13	7/13	8/13	9/13	10/13	11/13	12/13
Maximum leakage	1.680	1.760	1.700	1.760	1.650	1.650	1.760	1.670	1.670	1.720	1.690	1.800
Technical specification limit	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0
Indicator value	5.6	5.9	5.7	5.9	5.5	5.5	5.9	5.6	5.6	5.7	5.6	6.0
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	1.750	1.580	1.610	1.610	1.580	1.750	1.740	1.630	1.650	1.660	1.660	2.370
Technical specification limit	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0
Indicator value	5.8	5.3	5.4	5.4	5.3	5.8	5.8	5.4	5.5	5.5	5.5	7.9

Licensee Comments:

6/13: The Maximum RCS Identified Leakage (gpm) was updated to reflect the correct leakage. This condition was identified in PER 694496. This affected July 2012 to December 2012. There was no color change.

Drill/Exercise Performance



Thresholds: White < 90.0% Yellow < 70.0%

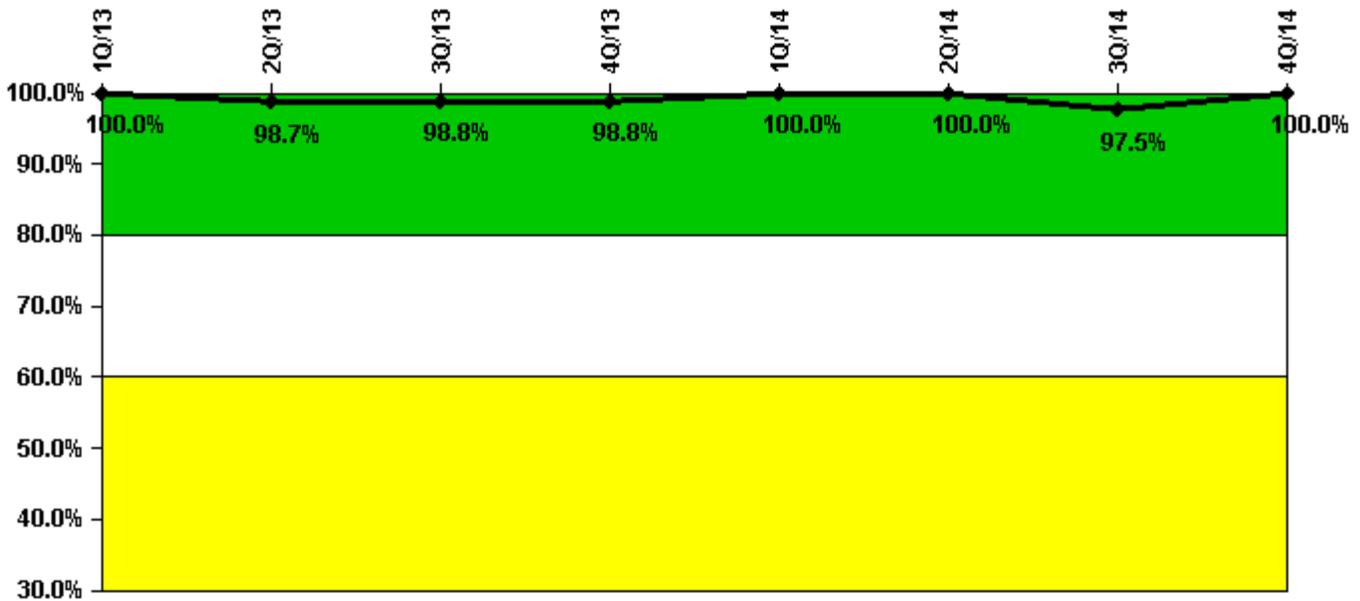
Notes

Drill/Exercise Performance	1Q/13	2Q/13	3Q/13	4Q/13	1Q/14	2Q/14	3Q/14	4Q/14
Successful opportunities	24.0	26.0	40.0	70.0	12.0	63.0	86.0	4.0
Total opportunities	24.0	26.0	42.0	70.0	12.0	64.0	90.0	4.0
Indicator value	99.2%	99.3%	98.9%	99.1%	99.1%	99.0%	98.0%	97.9%

Licensee Comments:

1Q/14: Revised Successful drill, exer & event opportunities to reflect an additional DEP failure for the September (3rd quarter) 2013 report period. This revision did not result in a color change. PER # 836157

ERO Drill Participation



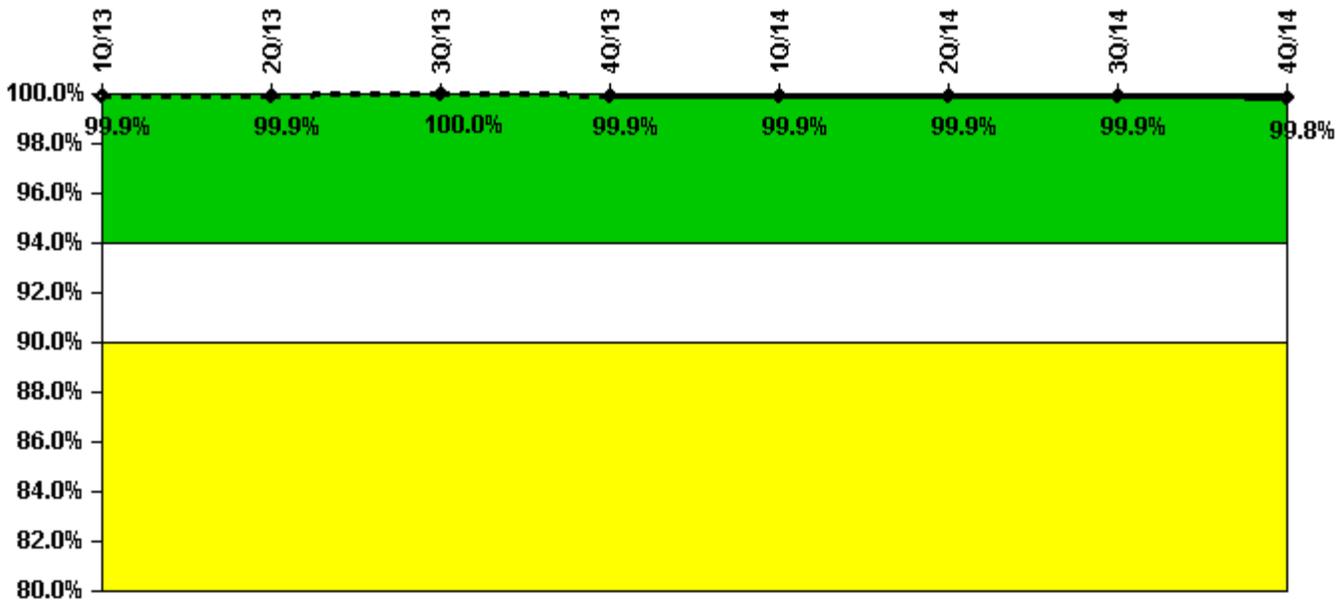
Thresholds: White < 80.0% Yellow < 60.0%

Notes

ERO Drill Participation	1Q/13	2Q/13	3Q/13	4Q/13	1Q/14	2Q/14	3Q/14	4Q/14
Participating Key personnel	76.0	76.0	79.0	81.0	76.0	78.0	77.0	76.0
Total Key personnel	76.0	77.0	80.0	82.0	76.0	78.0	79.0	76.0
Indicator value	100.0%	98.7%	98.8%	98.8%	100.0%	100.0%	97.5%	100.0%

Licensee Comments: none

Alert & Notification System



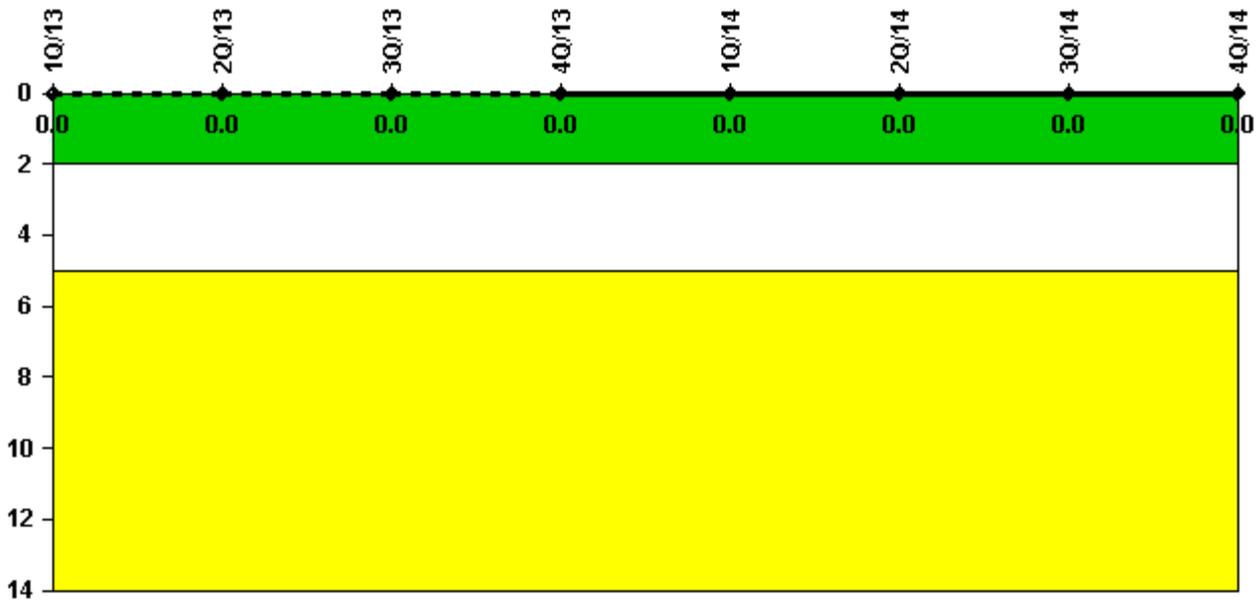
Thresholds: White < 94.0% Yellow < 90.0%

Notes

Alert & Notification System	1Q/13	2Q/13	3Q/13	4Q/13	1Q/14	2Q/14	3Q/14	4Q/14
Successful siren-tests	900	800	932	622	1040	624	1038	621
Total sirens-tests	900	800	932	624	1040	624	1040	624
Indicator value	99.9%	99.9%	100.0%	99.9%	99.9%	99.9%	99.9%	99.8%

Licensee Comments: none

Occupational Exposure Control Effectiveness



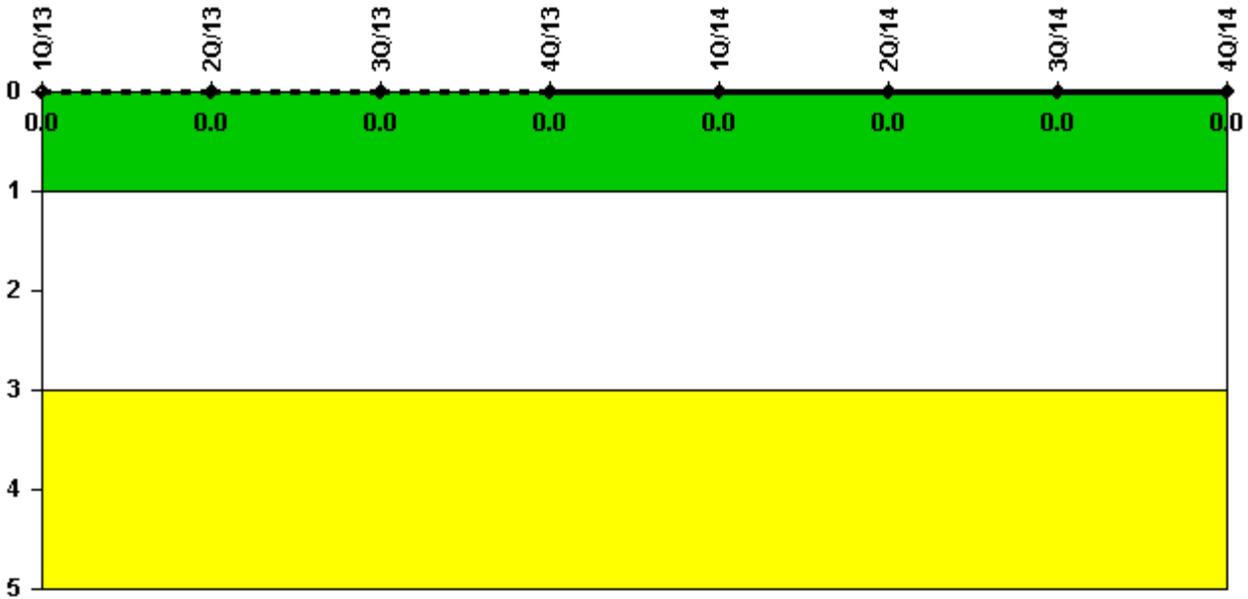
Thresholds: White > 2.0 Yellow > 5.0

Notes

Occupational Exposure Control Effectiveness	1Q/13	2Q/13	3Q/13	4Q/13	1Q/14	2Q/14	3Q/14	4Q/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							

Licensee Comments: none

RETS/ODCM Radiological Effluent



Thresholds: White > 1.0 Yellow > 3.0

Notes

RETS/ODCM Radiological Effluent	1Q/13	2Q/13	3Q/13	4Q/13	1Q/14	2Q/14	3Q/14	4Q/14
RETS/ODCM occurrences	0	0	0	0	0	0	0	0
Indicator value	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: February 3, 2015