

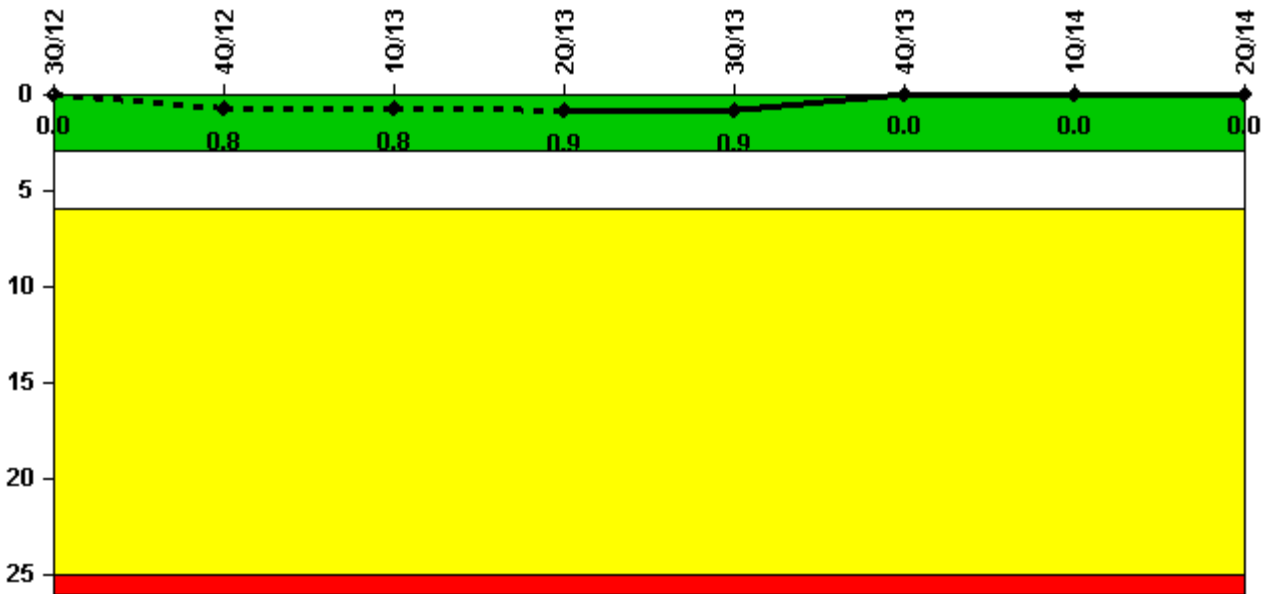
Browns Ferry 2

2Q/2014 Performance Indicators

The solid trend line represents the current reporting period.

Licensee's General Comments: none

Unplanned Scrams per 7000 Critical Hrs



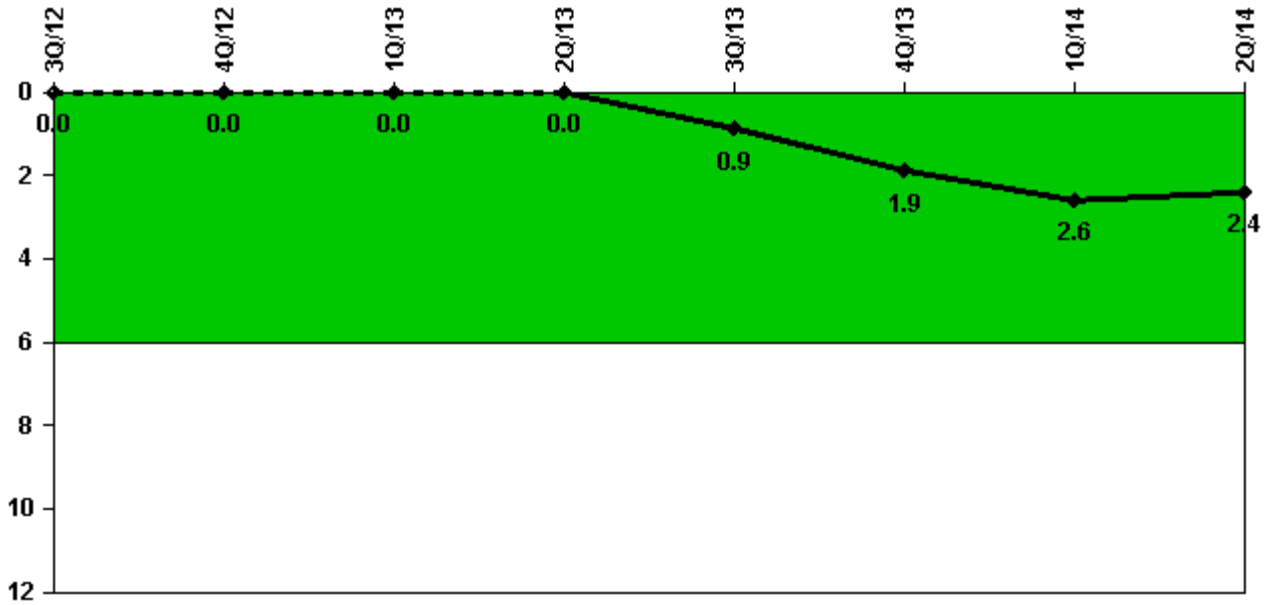
Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

Notes

Unplanned Scrams per 7000 Critical Hrs	3Q/12	4Q/12	1Q/13	2Q/13	3Q/13	4Q/13	1Q/14	2Q/14
Unplanned scrams	0	1.0	0	0	0	0	0	0
Critical hours	2208.0	2137.2	1748.1	1383.3	2208.0	2209.0	2159.0	2184.0
Indicator value	0	0.8	0.8	0.9	0.9	0	0	0

Licensee Comments: none

Unplanned Power Changes per 7000 Critical Hrs



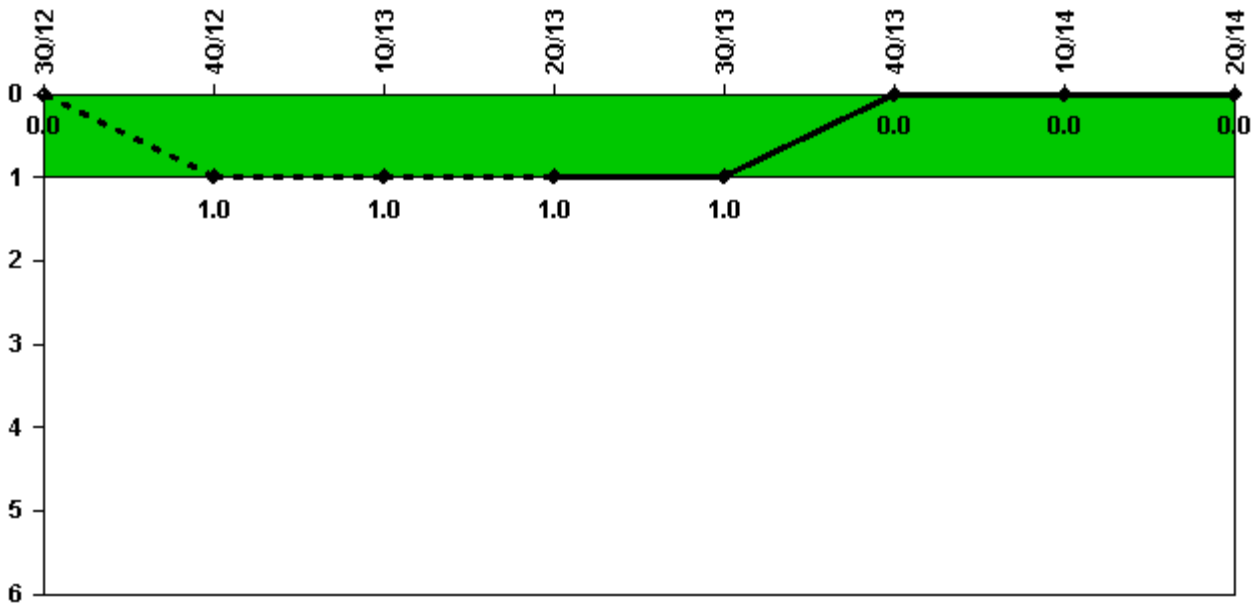
Thresholds: White > 6.0

Notes

Unplanned Power Changes per 7000 Critical Hrs	3Q/12	4Q/12	1Q/13	2Q/13	3Q/13	4Q/13	1Q/14	2Q/14
Unplanned power changes	0	0	0	0	1.0	1.0	1.0	0
Critical hours	2208.0	2137.2	1748.1	1383.3	2208.0	2209.0	2159.0	2184.0
Indicator value	0	0	0	0	0.9	1.9	2.6	2.4

Licensee Comments: none

Unplanned Scrams with Complications



Thresholds: White > 1.0

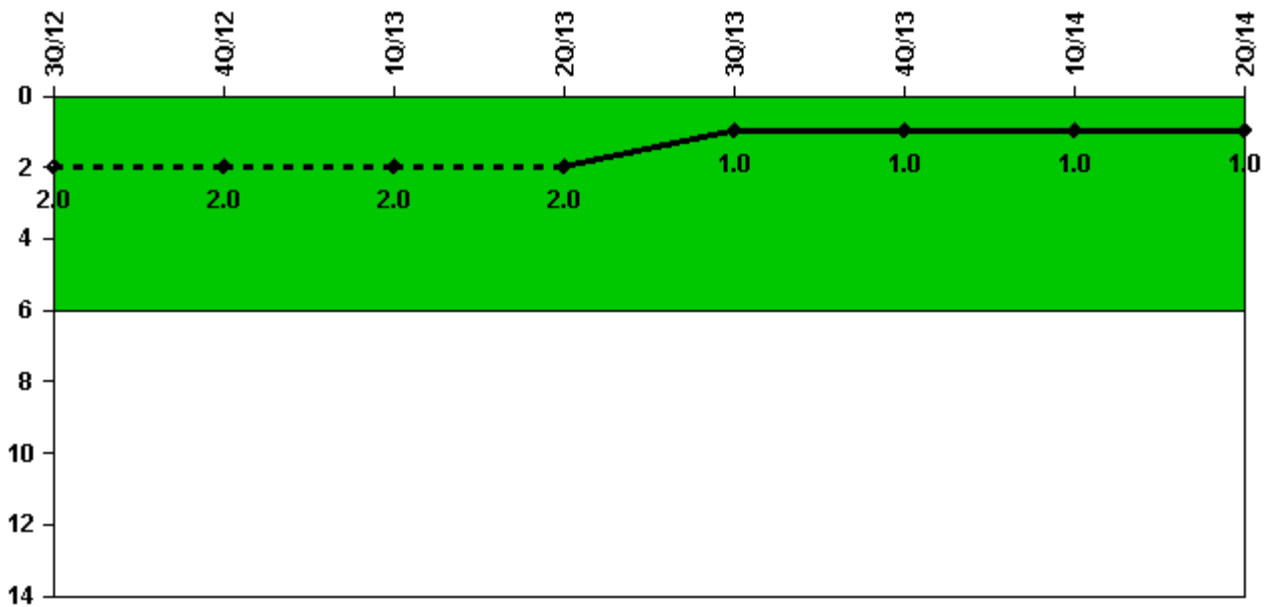
Notes

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

Licensee Comments:

1Q/13: Further analysis on the December 22, 2012, reactor scram, due to loss of power to RPS, determined that the reactor scram was complicated. December 2012 Unplanned Scrams with Complications data was revised from 0 to 1.

Safety System Functional Failures (BWR)



Thresholds: White > 6.0

Notes

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

Licensee Comments:

4Q/13: LER 50-260/2013-002-00, High Pressure Coolant Injection System Declared Inoperable Due to an Unqualified Electrical Splice

4Q/12: LER 260/2012-004-00, High Pressure Coolant Injection System Rendered Inoperable Due to an Inadvertent Actuation of Primary Containment Isolation System. The following LERs were once considered Safety System Functional Failures (SSFFs) that were identified as a result of the NFWA 805 Transition and counted as a single SSFF: LER 259/2012-001-00, LER 259/2012-002-00, LER 259/2012-003-00, LER 259/2012-004-00, LER 259/2012-007-00, and LER 259/2012-007-01. Based on discussions with the NRC and new guidance in NUREG 1022 these LERs are no longer considered to be SSFFs. Based on this new guidance, the SSFF reported in April 2012 are removed for BFN, Units 1, 2, and 3. Changes to data were made on January 14, 2013, by BFN Licensing.

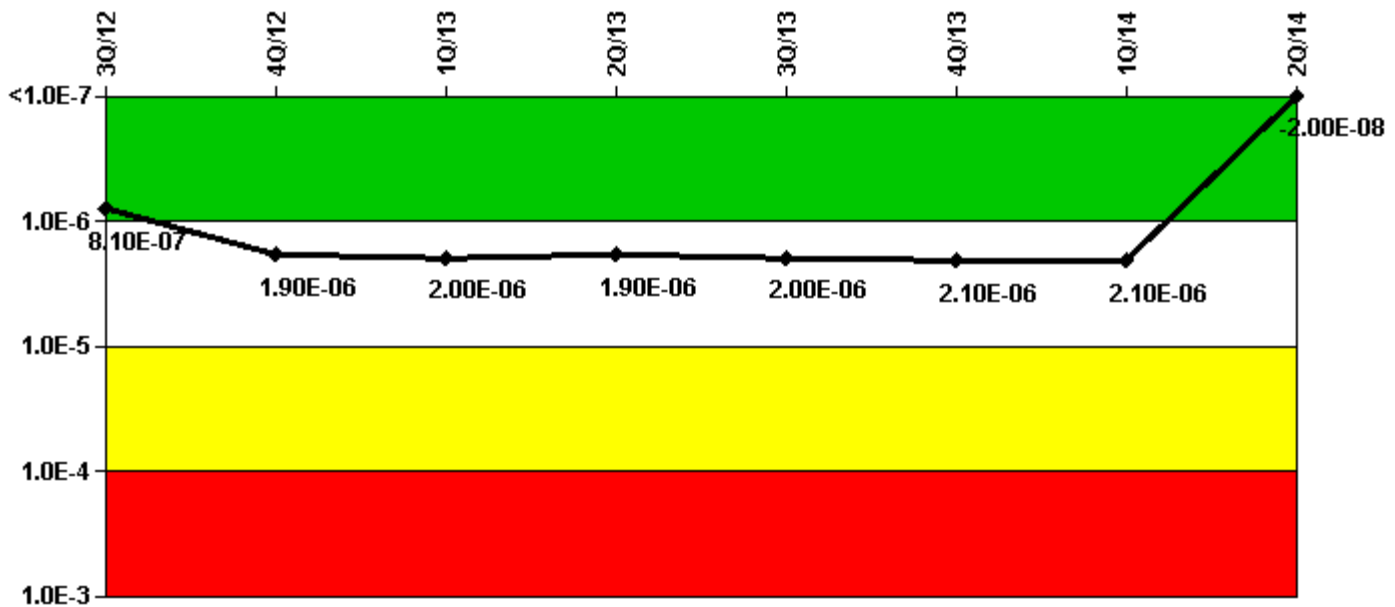
3Q/12: LER 260/2012-002-00, High Pressure Injection System Rendered Inoperable Due to an Inoperable Primary Containment Isolation Valve. NEI 99-02 section 2.2, page 29, lines 22-25, indicates that when an evaluation leads to finding additional failures, the original and subsequent failures are counted as one. The evaluation in this case is the ongoing examination of the Browns Ferry Fire Protection Program to support the transition to NFWA 805. LER 259/2012-007-00, submitted on July 31, 2012, and LER 259/2012-007-01, submitted on September 7, 2012, are Safety System Functional Failures (SSFFs) identified as a result of the NFWA 805 Transition. The following LERs are SSFFs that were identified as a result of the NFWA 805 Transition in 2nd Quarter 2012: LER 259/2012-001-00, LER 259/2012-002-00, LER 259/2012-003-00, and LER 259/2012-

004-00. Therefore, these SSFFs are accounted for in the SSFF reported 2nd Quarter of 2012.

3Q/12: LER 260/2012-002-00, High Pressure Injection System Rendered Inoperable Due to an Inoperable Primary Containment Isolation Valve. A Frequently Asked Question (FAQ) was presented at the October 17, 2012, Reactor Oversight Process Task Force Meeting related to the application of NUREG 1022 guidance for counting additional failures as a single Safety System Functional Failure (SSFF). This FAQ could impact current or previously submitted data. NUREG 1022 section 2.2, page 29, lines 22-25, indicates that when an evaluation leads to finding additional failures, the original and subsequent failures are counted as one. The evaluation in this case is the ongoing examination of the Browns Ferry Fire Protection Program to support the transition to NFPA 805. The following LERs were once considered SSFFs that were identified as a result of the NFPA 805 Transition and counted as a single SSFF: LER 259/2012-001-00, LER 259/2012-002-00, LER 259/2012-003-00, LER 259/2012-004-00, LER 259/2012-007-00, and LER 259/2012-007-01. Based on discussions with the NRC and new guidance in NUREG 1022 these LERs are no longer considered to be SSFFs.

3Q/12: LER 260/2012-002-00, High Pressure Injection System Rendered Inoperable Due to an Inoperable Primary Containment Isolation Valve. A Frequently Asked Question (FAQ) was presented at the October 17, 2012, Reactor Oversight Process Task Force Meeting related to the application of NEI 99-02 guidance for counting additional failures as a single Safety System Functional Failure (SSFF). This FAQ could impact current or previously submitted data. NEI 99-02 section 2.2, page 29, lines 22-25, indicates that when an evaluation leads to finding additional failures, the original and subsequent failures are counted as one. The evaluation in this case is the ongoing examination of the Browns Ferry Fire Protection Program to support the transition to NFPA 805. LER 259/2012-007-00, submitted on July 31, 2012, and LER 259/2012-007-01, submitted on September 7, 2012, are SSFFs identified as a result of the NFPA 805 Transition. The following LERs are SSFFs that were identified as a result of the NFPA 805 Transition in 2nd Quarter 2012: LER 259/2012-001-00, LER 259/2012-002-00, LER 259/2012-003-00, and LER 259/2012-004-00. Therefore, these SSFFs are accounted for in the SSFF reported 2nd Quarter of 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	3Q/12	4Q/12	1Q/13	2Q/13	3Q/13	4Q/13	1Q/14	2Q/14
UAI (ΔCDF)	-3.20E-08	-3.22E-08	-2.12E-08	-2.03E-08	2.67E-08	4.45E-08	1.66E-08	1.00E-08
URI (ΔCDF)	8.43E-07	1.96E-06	2.07E-06	1.95E-06	2.01E-06	2.07E-06	2.13E-06	-3.05E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	8.10E-07	1.90E-06	2.00E-06	1.90E-06	2.00E-06	2.10E-06	2.10E-06	-2.00E-08

Licensee Comments:

2Q/14: Risk Cap Invoked. The MSPI Risk Cap is invoked. The contribution from the highest worth single failure (1.88E-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 (1.24E-06) has been replaced by a value of 5.00E-07. The fuel fitting leak on 11/23/2013, previously documented as an MSPI failure, was subsequently evaluated further, based on additional information, and determined not to be a MSPI failure. The 4th Quarter 2013 data has been updated to remove the MSPI failure. This change will not affect the color of the indicator.

4Q/13: Risk Cap Invoked. The MSPI Risk Cap is invoked. The contribution from the highest worth single failure (1.22E-06) has been replaced by a value of 5.00E-07. There was one additional failure during the 4th Quarter 2013. On 11/23/2013, EDG A was removed from service to repair a fuel fitting which failed during a run.

4Q/13: Risk Cap Invoked. The MSPI Risk Cap is invoked. The contribution from the highest worth single failure

(1.22E-06) has been replaced by a value of 5.00E-07. The fuel fitting leak on 11/23/2013, previously documented as a MSPI failure, was subsequently evaluated further, based on additional information, and determined not to be a MSPI failure.

3Q/13: Risk Cap Invoked. The MSPI Risk Cap is invoked. The contribution from one Failure to Run (1.19E-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 (1.17E-06) has been replaced by a value of 5.00E-07.

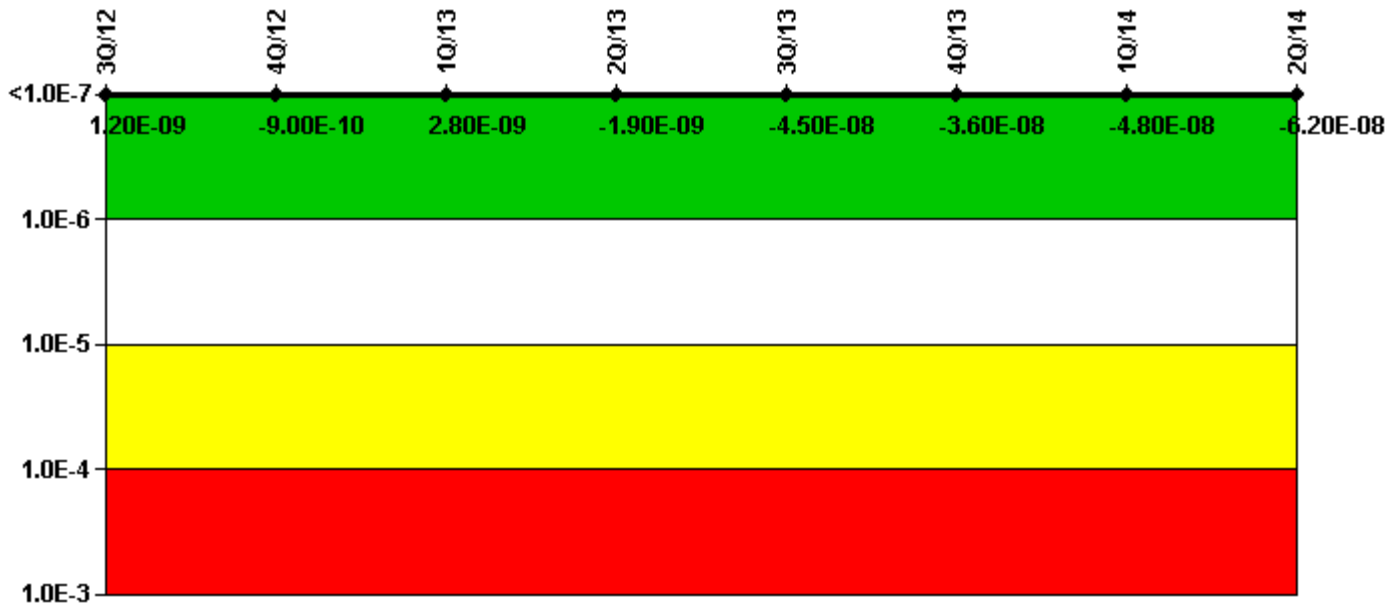
1Q/13: Risk Cap Invoked. Changed PRA Parameter(s). The MSPI Risk Cap is invoked. The contribution from one Failure to Run (1.15E-06) has been replaced by a value of 5.00E-07. MSPI Basis Documents and PRA Parameters were revised based on Calculation NDN-000-999-2010-003 Revision 007 to reflect Browns Ferry CAFTA PRA Model Revision 5 approved on 11/06/12. These changes are effective first quarter 2013. On December 22, 2012, the Emergency AC Power system experienced a failure that was incorrectly categorized as a load/run failure instead of a run failure. The failure mode was corrected resulting in the performance indicator color changing from green to white in the 4th Quarter of 2012. This issue is being tracked by PERs 704392 and 669462.

4Q/12: Risk Cap Invoked. The MSPI Risk Cap is invoked. The contribution from one Failure to Run (1.08E-06) has been replaced by a value of 5.00E-07.

4Q/12: Risk Cap Invoked. The MSPI Risk Cap is invoked. The contribution from one Failure to Run (1.08E-06) has been replaced by a value of 5.00E-07.

3Q/12: Risk Cap Invoked. Changed PRA Parameter(s). The MSPI Risk Cap is invoked. The contribution from one Failure to Run (1.06E-06) has been replaced by a value of 5.00E-07. The A Diesel Generator Baseline Planned Unavailability was adjusted to reflect the 12-Year Diesel Maintenance Outage scheduled to be performed in the third quarter of 2012 (FAQ 468).

Mitigating Systems Performance Index, High Pressure Injection System



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

Notes

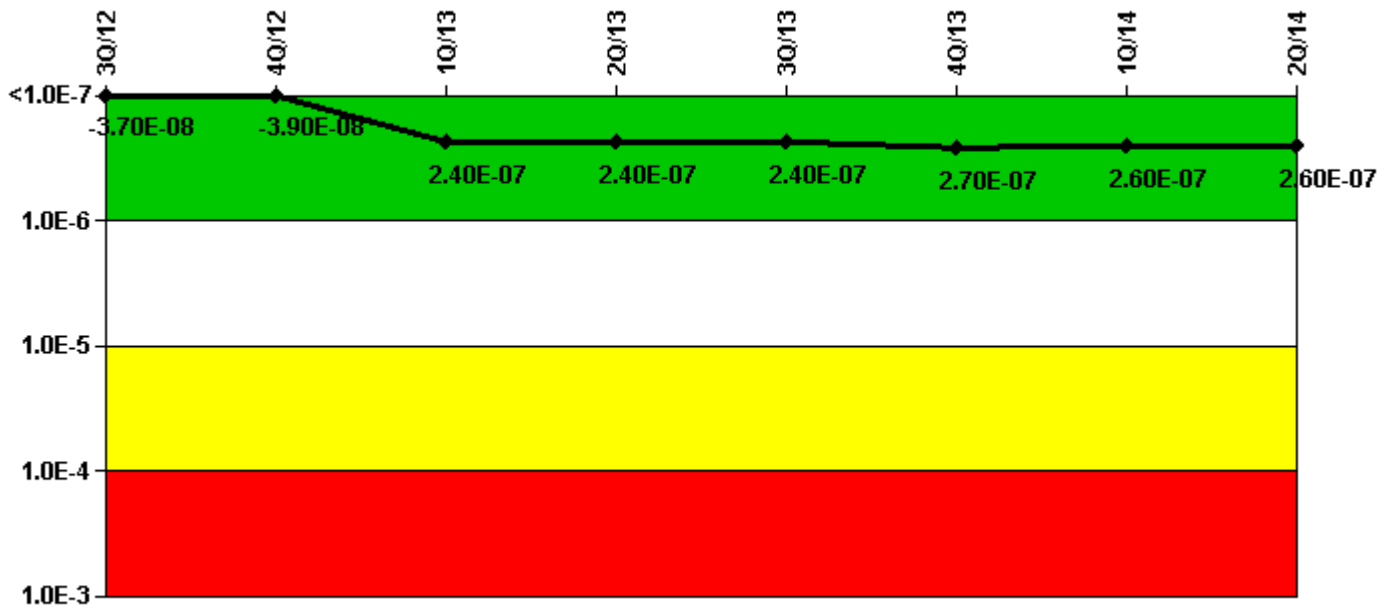
Mitigating Systems Performance Index, High Pressure Injection System	3Q/12	4Q/12	1Q/13	2Q/13	3Q/13	4Q/13	1Q/14	2Q/14
UAI (Δ CDF)	7.15E-08	7.17E-08	1.77E-07	1.67E-07	1.24E-07	1.34E-07	1.21E-07	1.08E-07
URI (Δ CDF)	-7.04E-08	-7.26E-08	-1.74E-07	-1.69E-07	-1.69E-07	-1.69E-07	-1.69E-07	-1.69E-07
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	1.20E-09	9.00E-10	2.80E-09	1.90E-09	4.50E-08	3.60E-08	4.80E-08	6.20E-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.

3Q/12: Previously submitted data has been revised due to a new more conservative interpretation of short term duration surveillances. A recent Engineering review indicates surveillance listed in the MSPI Basis Document occasionally took longer than 15 minutes. The revision for this quarters previously submitted data incorporates all occurrences of the subject surveillance that took longer than the allotted 15 minutes. This impacts the following data: Unit 1- April 2012. Unit 2 - December 2011, March 2012, June 2012. Unit 3 - November 2011, February 2012, August 2012. Changes were also made to account for Unplanned Unavailability hours for High Pressure Injection System for the month of June 2012. No indicator color was impacted.

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	3Q/12	4Q/12	1Q/13	2Q/13	3Q/13	4Q/13	1Q/14	2Q/14
UAI (Δ CDF)	-1.85E-09	-2.92E-10	1.53E-07	1.42E-07	1.42E-07	1.73E-07	1.63E-07	1.60E-07
URI (Δ CDF)	-3.55E-08	-3.91E-08	8.96E-08	9.54E-08	9.54E-08	9.54E-08	9.54E-08	9.89E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-3.70E-08	-3.90E-08	2.40E-07	2.40E-07	2.40E-07	2.70E-07	2.60E-07	2.60E-07

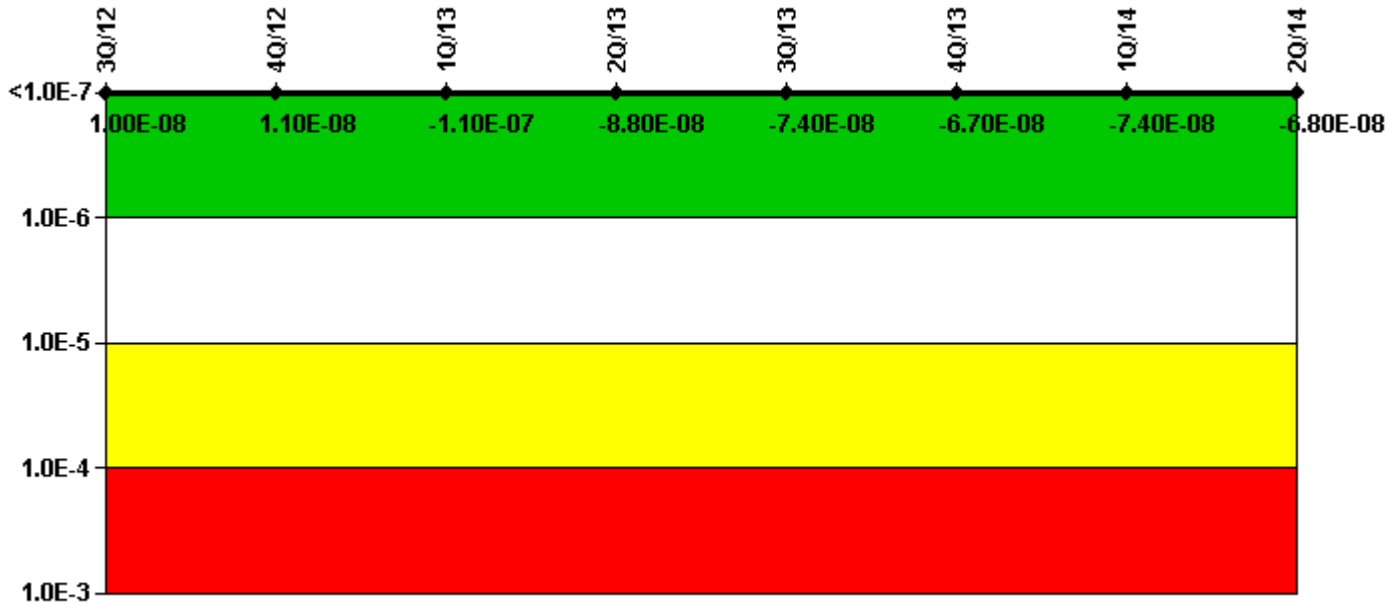
Licensee Comments:

3Q/13: Added previously uncounted RCIC injection demands. Added demand data for Unit 2 in April 2011 and December 2012. 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	3Q/12	4Q/12	1Q/13	2Q/13	3Q/13	4Q/13	1Q/14	2Q/14
UAI (Δ CDF)	$5.64E-09$	$5.79E-09$	$1.85E-08$	$3.78E-08$	$5.24E-08$	$5.98E-08$	$5.28E-08$	$5.85E-08$
URI (Δ CDF)	$4.32E-09$	$5.14E-09$	$-1.29E-07$	$-1.26E-07$	$-1.26E-07$	$-1.26E-07$	$-1.26E-07$	$-1.26E-07$
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	$1.00E-08$	$1.10E-08$	$-1.10E-07$	$-8.80E-08$	$-7.40E-08$	$-6.70E-08$	$-7.40E-08$	$-6.80E-08$

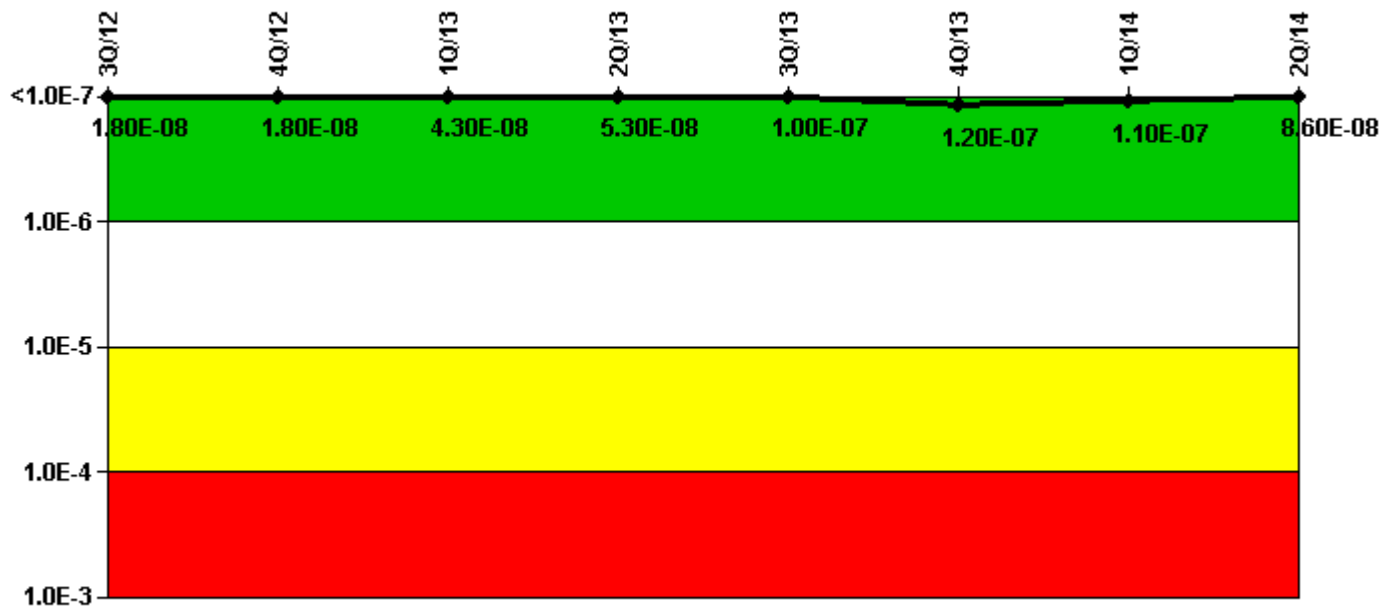
Licensee Comments:

1Q/14: 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.

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	3Q/12	4Q/12	1Q/13	2Q/13	3Q/13	4Q/13	1Q/14	2Q/14
UAI (Δ CDF)	5.20E-08	5.20E-08	6.60E-08	7.63E-08	1.25E-07	1.40E-07	1.34E-07	1.25E-07
URI (Δ CDF)	-3.37E-08	-3.37E-08	-2.28E-08	-2.28E-08	-2.28E-08	-2.28E-08	-2.28E-08	-3.90E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	1.80E-08	1.80E-08	4.30E-08	5.30E-08	1.00E-07	1.20E-07	1.10E-07	8.60E-08

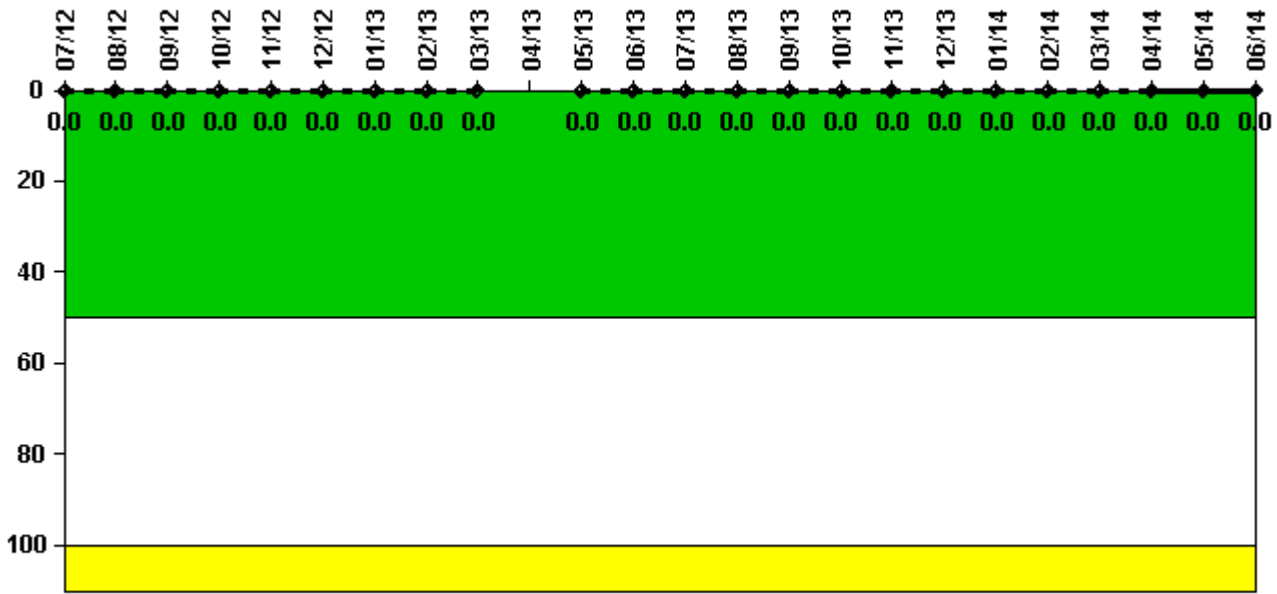
Licensee Comments:

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.

3Q/12: 2nd Quarter 2012 Data were updated. On April 4, 2012, B2 Residual Heat Removal Service Water pump failed to start when given a start signal. No indicator color was impacted by this event.

Reactor Coolant System Activity



Thresholds: White > 50.0 Yellow > 100.0

Notes

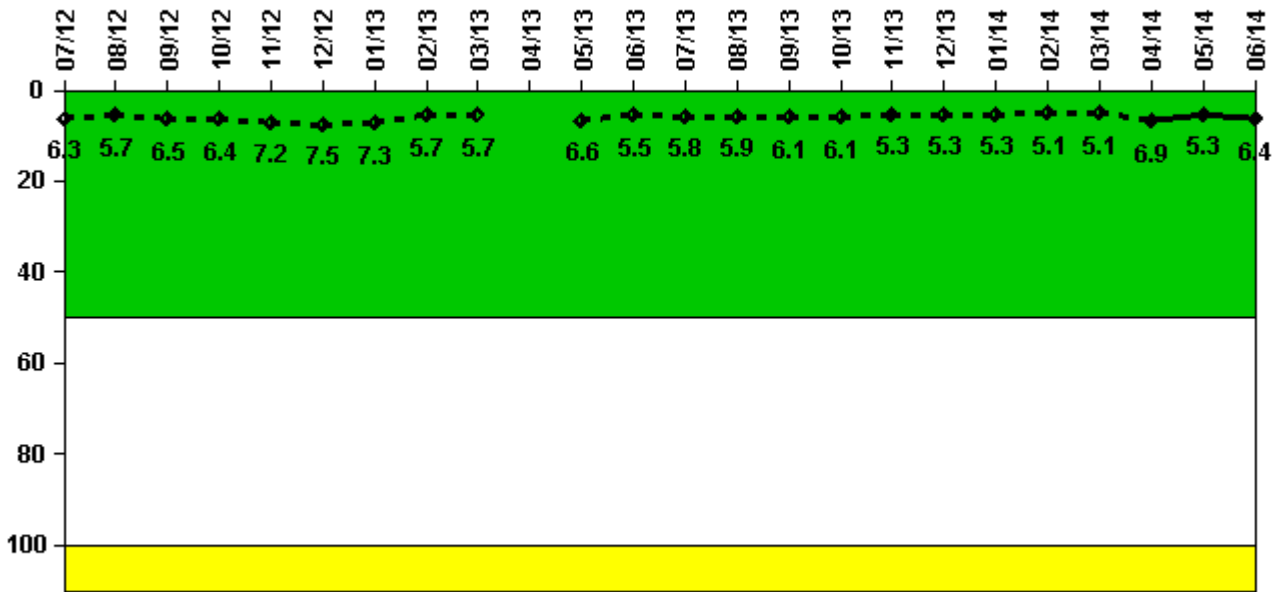
Reactor Coolant System Activity	7/12	8/12	9/12	10/12	11/12	12/12	1/13	2/13	3/13	4/13	5/13	6/13
Maximum activity	0.000060	0.000067	0.000063	0.000063	0.000070	0.000100	0.000070	0.000062	0.000047	N/A	0.000040	0.000022
Technical specification limit	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
Indicator value	0	0	0	0	0	0	0	0	0	N/A	0	0

Reactor Coolant System Activity	7/13	8/13	9/13	10/13	11/13	12/13	1/14	2/14	3/14	4/14	5/14	6/14
Maximum activity	0.000037	0.000040	0.000049	0.000064	0.000072	0.000057	0.000109	0.000108	0.000104	0.000059	0.000075	0.000056
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
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Licensee Comments: none

Reactor Coolant System Leakage



Thresholds: White > 50.0 Yellow > 100.0

Notes

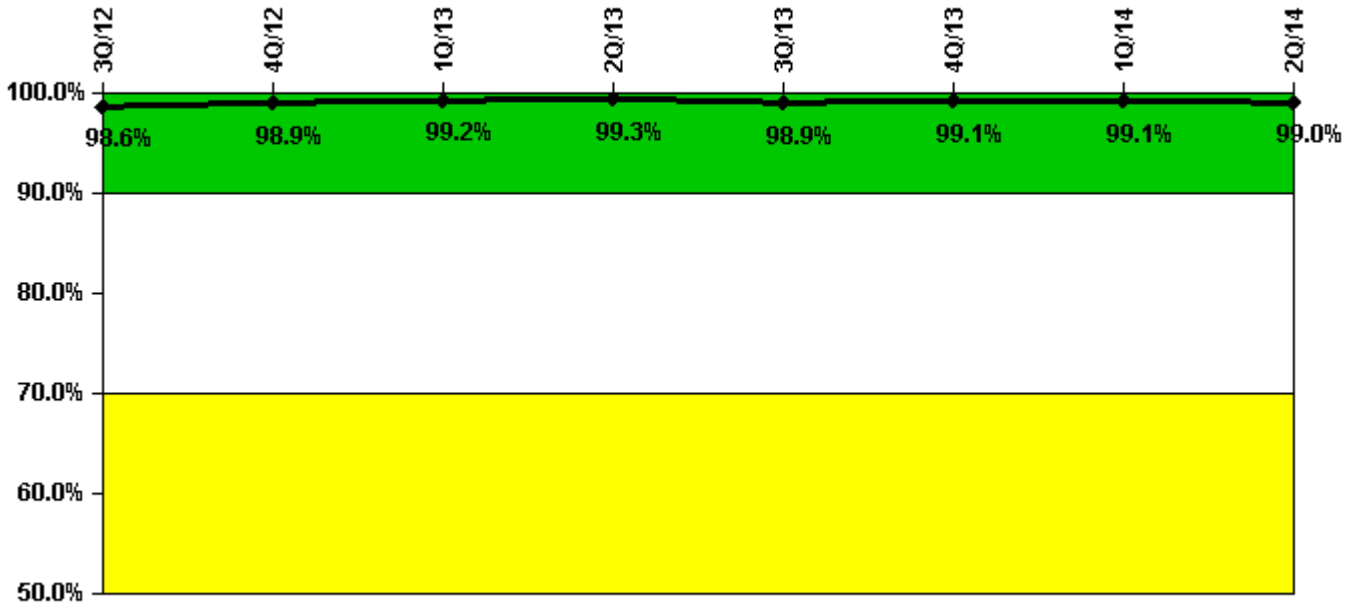
Reactor Coolant System Leakage	7/12	8/12	9/12	10/12	11/12	12/12	1/13	2/13	3/13	4/13	5/13	6/13
Maximum leakage	1.880	1.720	1.950	1.910	2.150	2.260	2.180	1.710	1.720	N/A	1.990	1.660
Technical specification limit	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0
Indicator value	6.3	5.7	6.5	6.4	7.2	7.5	7.3	5.7	5.7	N/A	6.6	5.5
Reactor Coolant System Leakage	7/13	8/13	9/13	10/13	11/13	12/13	1/14	2/14	3/14	4/14	5/14	6/14
Maximum leakage	1.750	1.770	1.840	1.840	1.600	1.590	1.600	1.520	1.540	2.080	1.600	1.930
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	5.9	6.1	6.1	5.3	5.3	5.3	5.1	5.1	6.9	5.3	6.4

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%

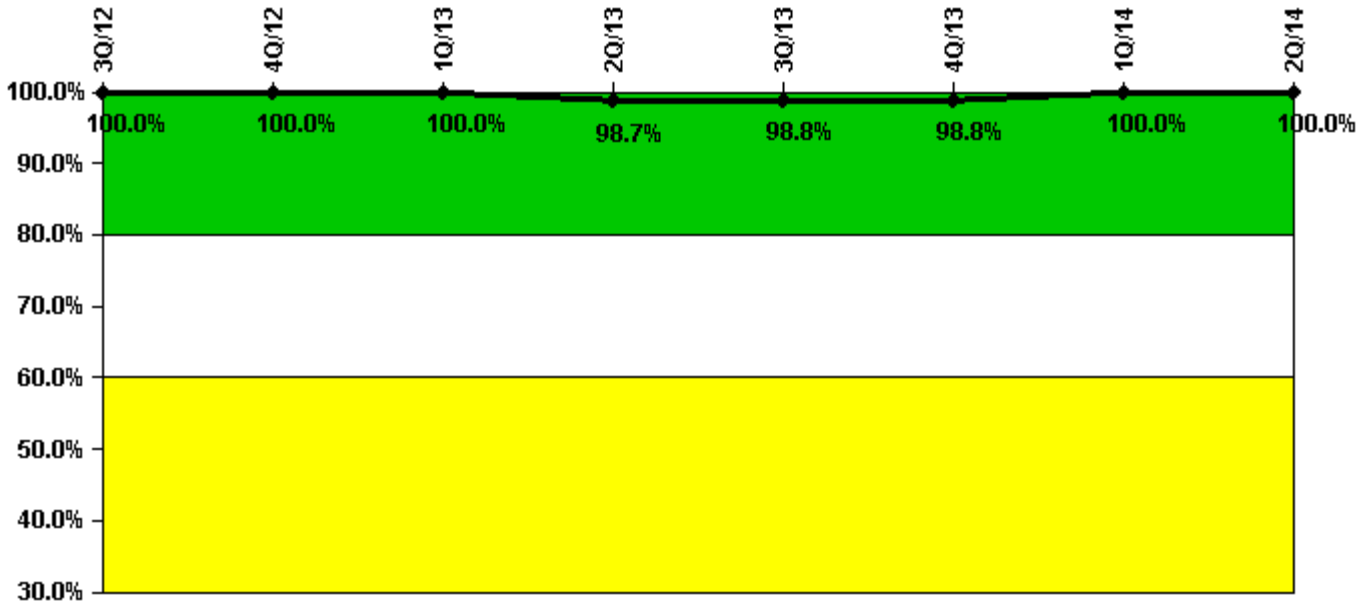
Notes

Drill/Exercise Performance	3Q/12	4Q/12	1Q/13	2Q/13	3Q/13	4Q/13	1Q/14	2Q/14
Successful opportunities	34.0	14.0	24.0	26.0	40.0	70.0	12.0	63.0
Total opportunities	34.0	14.0	24.0	26.0	42.0	70.0	12.0	64.0
Indicator value	98.6%	98.9%	99.2%	99.3%	98.9%	99.1%	99.1%	99.0%

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



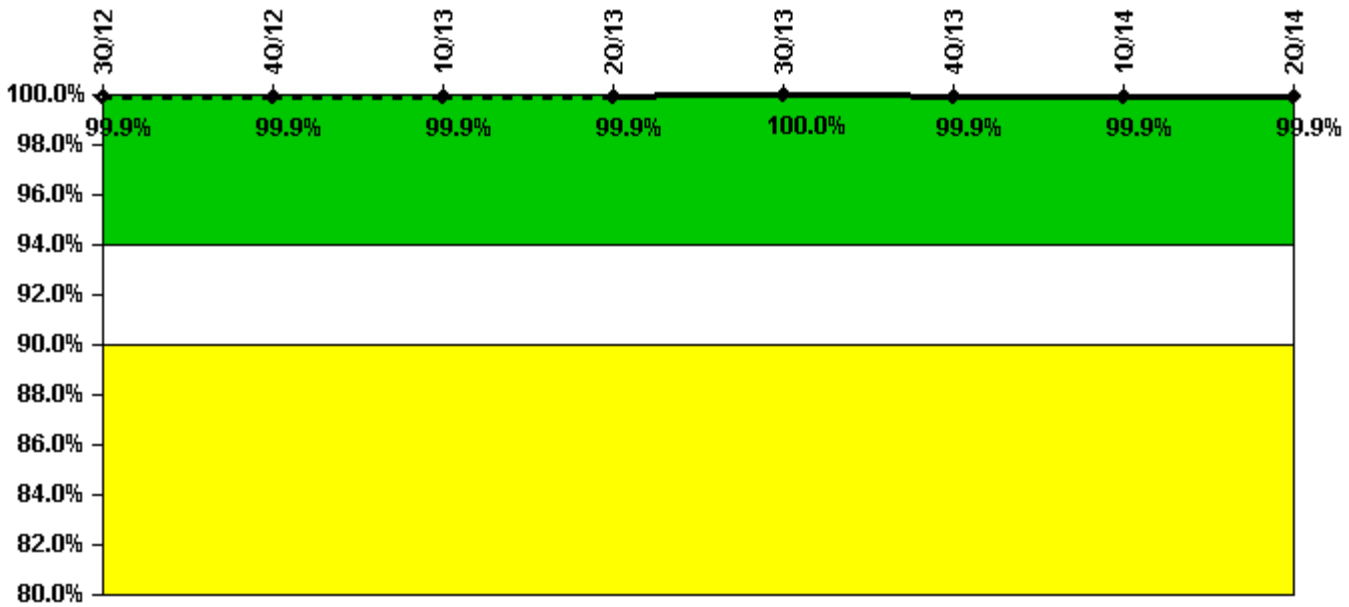
Thresholds: White < 80.0% Yellow < 60.0%

Notes

ERO Drill Participation	3Q/12	4Q/12	1Q/13	2Q/13	3Q/13	4Q/13	1Q/14	2Q/14
Participating Key personnel	77.0	73.0	76.0	76.0	79.0	81.0	76.0	78.0
Total Key personnel	77.0	73.0	76.0	77.0	80.0	82.0	76.0	78.0
Indicator value	100.0%	100.0%	100.0%	98.7%	98.8%	98.8%	100.0%	100.0%

Licensee Comments: none

Alert & Notification System



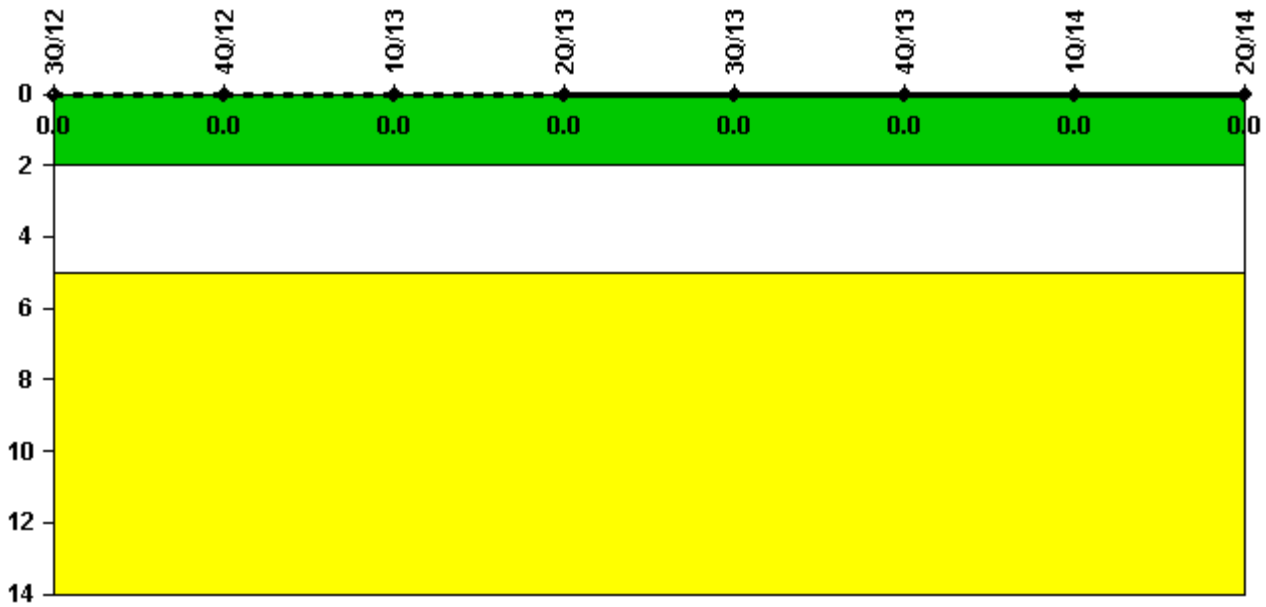
Thresholds: White < 94.0% Yellow < 90.0%

Notes

Alert & Notification System	3Q/12	4Q/12	1Q/13	2Q/13	3Q/13	4Q/13	1Q/14	2Q/14
Successful siren-tests	799	899	900	800	932	622	1040	624
Total sirens-tests	800	900	900	800	932	624	1040	624
Indicator value	99.9%	99.9%	99.9%	99.9%	100.0%	99.9%	99.9%	99.9%

Licensee Comments: none

Occupational Exposure Control Effectiveness



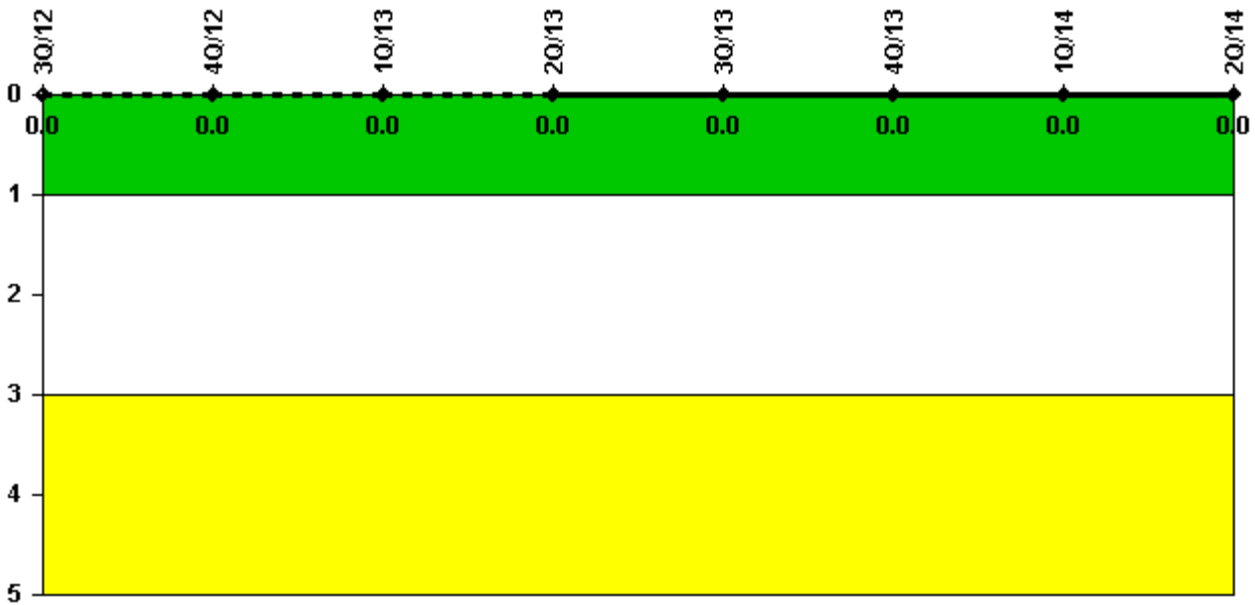
Thresholds: White > 2.0 Yellow > 5.0

Notes

Occupational Exposure Control Effectiveness	3Q/12	4Q/12	1Q/13	2Q/13	3Q/13	4Q/13	1Q/14	2Q/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	3Q/12	4Q/12	1Q/13	2Q/13	3Q/13	4Q/13	1Q/14	2Q/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: July 31, 2014