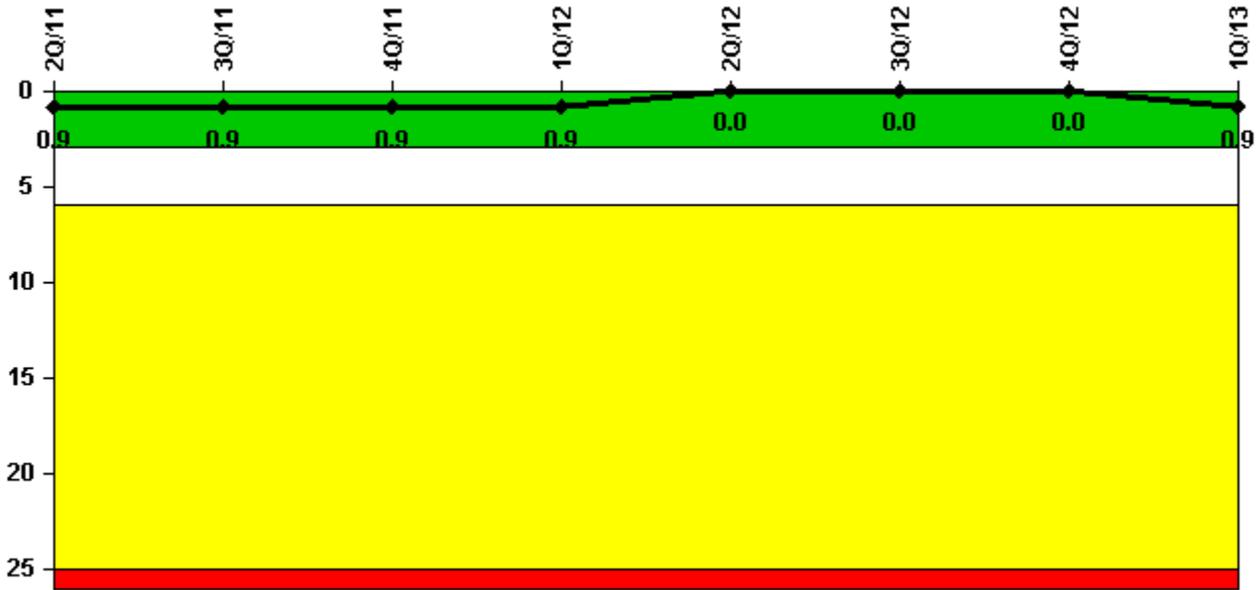


# Browns Ferry 1

## 1Q/2013 Performance Indicators

Licensee's General Comments: none

### Unplanned Scrams per 7000 Critical Hrs



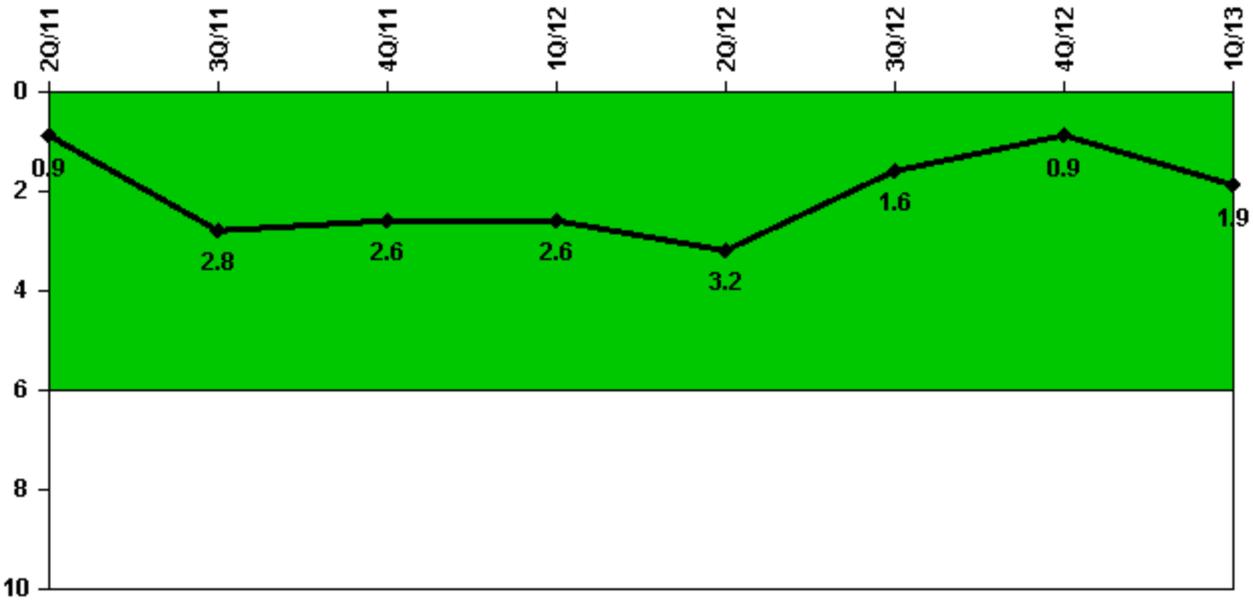
Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

### Notes

Unplanned Scrams per 7000 Critical Hrs	2Q/11	3Q/11	4Q/11	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13
Unplanned scrams	1.0	0	0	0	0	0	0	1.0
Critical hours	1646.9	2208.0	2105.9	2183.0	2184.0	2208.0	1182.3	1954.2
<b>Indicator value</b>	<b>0.9</b>	<b>0.9</b>	<b>0.9</b>	<b>0.9</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.9</b>

Licensee Comments: none

### Unplanned Power Changes per 7000 Critical Hrs



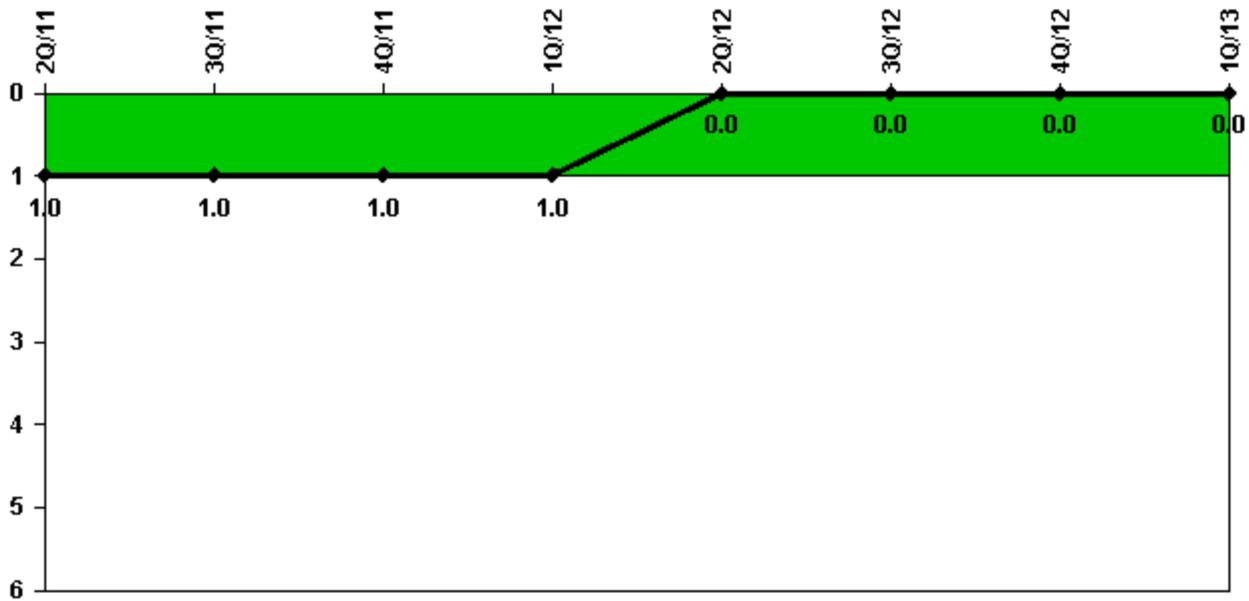
Thresholds: White > 6.0

#### Notes

Unplanned Power Changes per 7000 Critical Hrs	2Q/11	3Q/11	4Q/11	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13
Unplanned power changes	0	2.0	1.0	0	1.0	0	0	1.0
Critical hours	1646.9	2208.0	2105.9	2183.0	2184.0	2208.0	1182.3	1954.2
<b>Indicator value</b>	<b>0.9</b>	<b>2.8</b>	<b>2.6</b>	<b>2.6</b>	<b>3.2</b>	<b>1.6</b>	<b>0.9</b>	<b>1.9</b>

Licensee Comments: none

### Unplanned Scrams with Complications



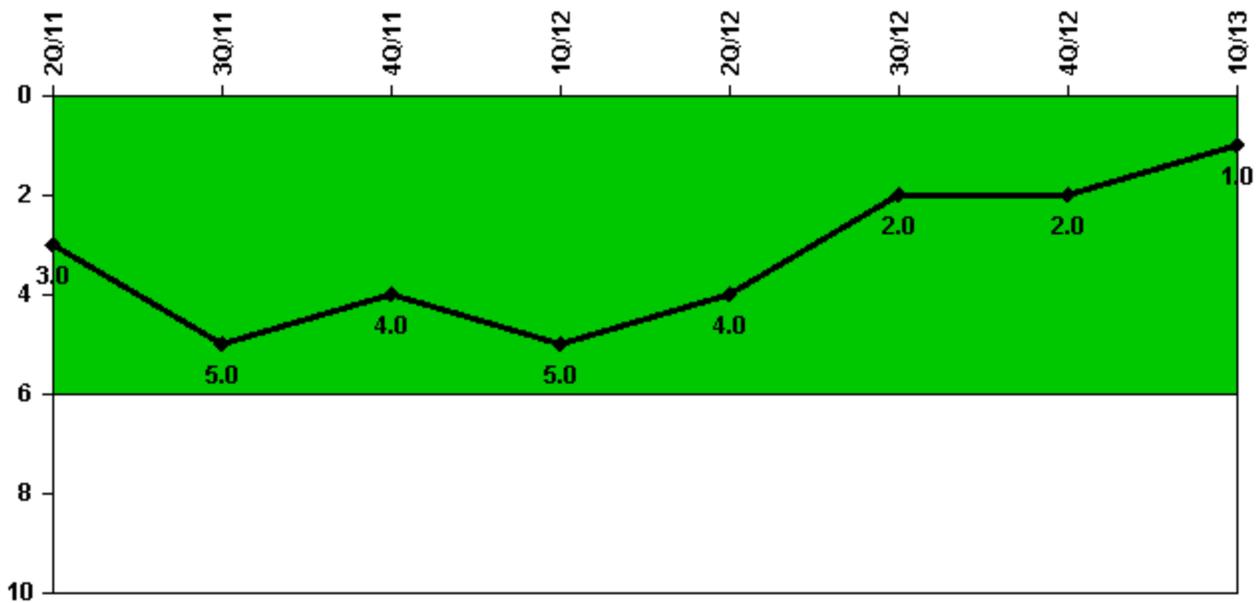
Thresholds: White > 1.0

#### Notes

Unplanned Scrams with Complications	2Q/11	3Q/11	4Q/11	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13
Scrams with complications	1.0	0	0	0	0	0	0	0
<b>Indicator value</b>	<b>1.0</b>	<b>1.0</b>	<b>1.0</b>	<b>1.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>

Licensee Comments: none

### Safety System Functional Failures (BWR)



Thresholds: White > 6.0

#### Notes

Safety System Functional Failures (BWR)	2Q/11	3Q/11	4Q/11	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13
Safety System Functional Failures	2	2	0	1	1	0	0	0
<b>Indicator value</b>	<b>3</b>	<b>5</b>	<b>4</b>	<b>5</b>	<b>4</b>	<b>2</b>	<b>2</b>	<b>1</b>

#### Licensee Comments:

4Q/12: The following LERs were once considered Safety System Functional Failures (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. 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: 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: 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.

3Q/12: 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 Safety System Functional Failures (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.

2Q/12: LER 259/2012-006-00, High Pressure Coolant Injection System Turbine Failed to Trip Using the Manual Trip Pushbutton. The following LERs are Safety System Functional Failures (SSFFs) that were identified as a result of the NFPA 805 Transition: LER 259/2012-001-00, LER 259/2012-002-00, LER 259/2012-003-00, and LER 259/2012-004-00. 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 in the 3rd Quarter of 2012. 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. Therefore, these SSFFs are accounted for in the SSFF reported in the 2nd Quarter 2012.

2Q/12: LER 259/2012-006-00, High Pressure Coolant Injection System Turbine Failed to Trip Using the Manual Trip Pushbutton. The following LERs were once considered Safety System Functional Failures (SSFFs) that were identified as a result of the NFPA 805 Transition: 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.

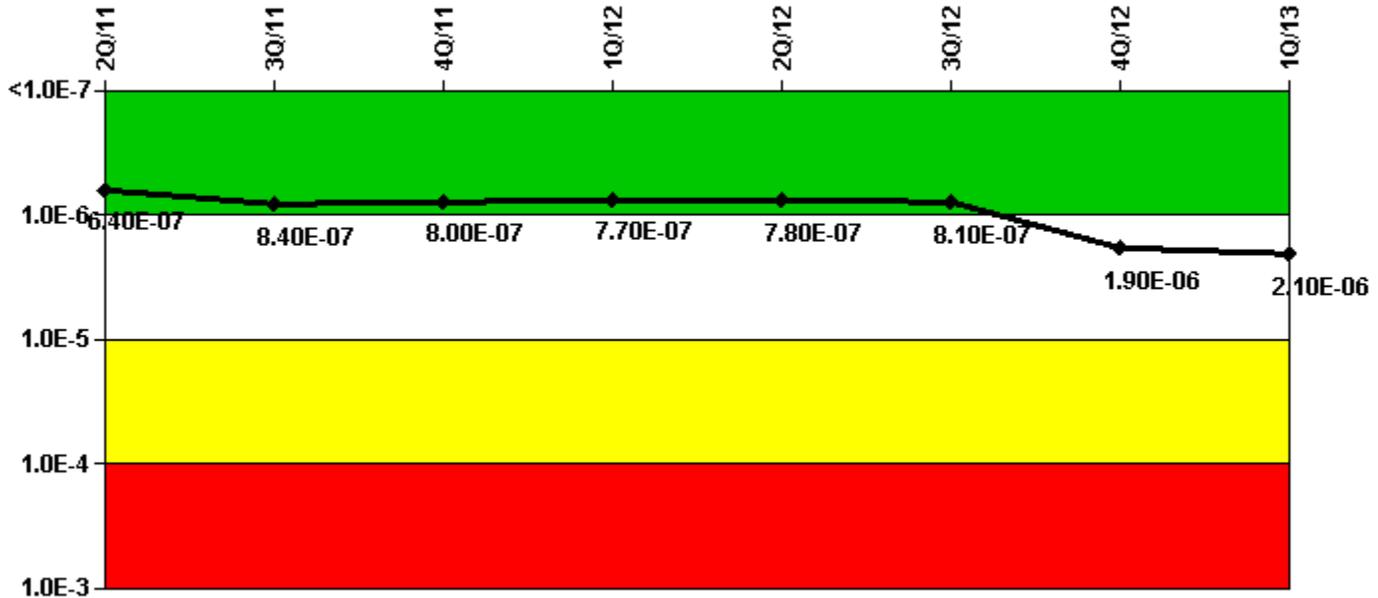
2Q/12: LER 259/2012-006-00, High Pressure Coolant Injection System Turbine Failed to Trip Using the Manual Trip Pushbutton. The following LERs were identified as a result of the NFPA 805 Transition and are due to the same condition. In accordance with NEI 99-02 section 2.2, the following LERs count as single SSFF: LER 259/2012-001-00 - Unanalyzed Conditions Discovered During NFPA 805 Transition Review, LER 259/2012-002-00 - Fault Propagation During A Postulated Appendix R Event Could Result In An Inability To Close Motor Operated Valves, LER 259/2012-003-00 - Reactor Protection System Circuit Could Potentially Remain Energized During An Appendix R Fire, and LER 259/2012-004-00 - Fire Damage to Cables in Fire Areas Could Cause a Residual Heat Removal Service Water Pump to Spuriously Start.

1Q/12: LER 259/2011-008-01, High Vibrations on High Pressure Coolant Injection Booster Pump Thrust Bearings

3Q/11: LER 259/2011-003-00, Loss of Safety Function (SDC) Resulting from Emergency Diesel Generator Output Breaker Trip LER 259/2011-006-00, Loss of Safety Function (HPCI) Due to Primary Containment Isolation

2Q/11: LER 259/2010-003-01, Failure of a Low Pressure Coolant Injection Flow Control Valve LER 259/2011-002-00, Loss of Safety Function (SDC) Resulting from Loss of Power from C EDG Due to Oil Leak

### 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/11	3Q/11	4Q/11	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13
UAI (ΔCDF)	5.65E-08	1.18E-07	7.42E-08	-2.06E-08	-3.16E-08	-3.66E-08	-3.47E-08	-2.17E-08
URI (ΔCDF)	5.84E-07	7.25E-07	7.25E-07	7.87E-07	8.15E-07	8.45E-07	1.96E-06	2.09E-06
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	6.40E-07	8.40E-07	8.00E-07	7.70E-07	7.80E-07	8.10E-07	1.90E-06	2.10E-06

#### Licensee Comments:

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. 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 (1.09E-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 (1.09E-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 ( $1.07E-06$ ) 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).

2Q/12: Risk Cap Invoked. Changed PRA Parameter(s). The MSPI Risk Cap is invoked. The contribution from one Failure to Run ( $1.05E-06$ ) has been replaced by a value of  $5.00E-07$ . The D Diesel Generator Baseline Planned Unavailability was adjusted to reflect the 12-Year Diesel Maintenance Outages scheduled to be performed in the second quarter of 2012 (FAQ 468).

1Q/12: Risk Cap Invoked. Changed PRA Parameter(s). The MSPI Risk Cap is invoked. The contribution from one Failure to Run ( $1.03E-06$ ) has been replaced by a value of  $5.00E-07$ . Revised PRA parameters based on Calculation NDN-000-999-2010-0003 rev 006 to reflect CAFTA PRA Model Revision 4. CAFTA PRA Model Revision 4 was performed in accordance with NEI 99-02 to evaluate the impacts of adjusting the Diesel Generator Baseline Planned Unavailability in conjunction with the 12-Year Diesel Maintenance Outages (FAQ 468). The B and C Diesel Generator Baseline Planned Unavailability was adjusted to reflect the 12-Year Diesel Maintenance Outages scheduled to be performed in the first quarter of 2012 (FAQ 468). Revised Emergency Diesel Generator run hours to exclude the run hours associated with (1) the first hour of run time after breaker closure and (2) unloaded run hours (FAQ 480). Revised Emergency Diesel Generator supercomponent boundary to include fuel oil transfer pumps/valves (FAQ 484).

4Q/11: Risk Cap Invoked. The MSPI Risk Cap is invoked. The contribution from one Failure to Run ( $8.76E-07$ ) has been replaced by a value of  $5.00E-07$ . Problem Evaluation Report 439980 documented that D DG Failure was incorrectly classified as a Start Failure in EPIX Report 624 associated with Heat Exchanger Fouling. Based on the Past Operability performed on D DG, it was determined that the failure of the DG would have been a load-run failure. This failure classification does not result in a significant impact to MSPI calculations.

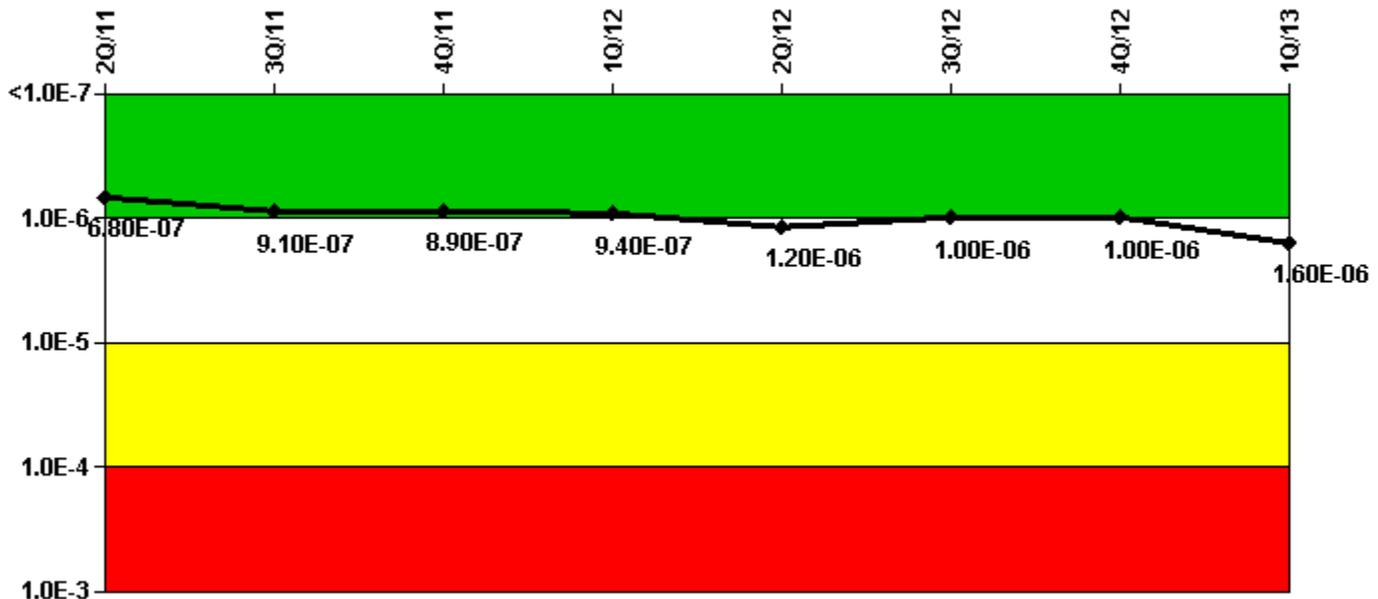
3Q/11: Risk Cap Invoked. Revised MSPI Basis Document and MSPI PRA Parameters based on Calculation NDN-000-999-2010-0003 Rev 005 to reflect BFN CAFTA PRA Model Rev 3 which was approved in June 2011. MSPI PRA Parameters based on this model are effective as of Third Quarter 2011. The MSPI Risk Cap is also invoked. The contribution from one Failure to Run ( $8.76E-07$ ) has been replaced by a value of  $5.00E-07$ . Problem Evaluation Report 439980 documented that D DG Failure was incorrectly classified as a Start Failure in EPIX Report 624 associated with Heat Exchanger Fouling. Based on the Past Operability performed on D DG, it was determined that the failure of the DG would have been a load-run failure. This failure classification does not result in a significant impact to MSPI calculations.

3Q/11: Risk Cap Invoked. Changed PRA Parameter(s). Revised MSPI Basis Document and MSPI PRA Parameters based on Calculation NDN-000-999-2010-0003 Rev 005 to reflect BFN CAFTA PRA Model Rev 3 which was approved in June 2011. MSPI PRA Parameters based on this model are effective as of Third Quarter 2011. The MSPI Risk Cap is also invoked. The contribution from one Failure to Run ( $8.76E-07$ ) has been replaced by a value of  $5.00E-07$ .

2Q/11: Revised MSPI Basis Document and MSPI PRA Parameters based on Calculation NDN-000-999-2010-0003 rev 003 to correct PRA Model errors associated with the modeling of EECW (Cooling Water System 2) North Header Unavailability and not modeling a failure of a normally operating EECW pump to restart following loss of offsite power. These changes are effective as of Second Quarter 2011.

2Q/11: Revised MSPI Basis Document and MSPI PRA Parameters based on Calculation NDN-000-999-2010-0003 rev 003 to correct PRA Model errors associated with the modeling of EECW (Cooling Water System 2) North Header Unavailability and not modeling a failure of a normally operating EECW pump to restart following loss of offsite power. These changes are effective as of Second Quarter 2011. Problem Evaluation Report 439980 documented that D DG Failure was incorrectly classified as a Start Failure in EPIX Report 624 associated with Heat Exchanger Fouling. Based on the Past Operability performed on D DG, it was determined that the failure of the DG would have been a load-run failure. This failure classification does not result in a significant impact to MSPI calculations.

### 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/11	3Q/11	4Q/11	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13
UAI ( $\Delta$ CDF)	2.07E-07	3.20E-07	3.04E-07	3.92E-07	4.76E-07	4.45E-07	4.72E-07	6.75E-07
URI ( $\Delta$ CDF)	4.72E-07	5.91E-07	5.90E-07	5.52E-07	7.26E-07	5.50E-07	5.50E-07	9.35E-07
PLE	NO							
Indicator value	6.80E-07	9.10E-07	8.90E-07	9.40E-07	1.20E-06	1.00E-06	1.00E-06	1.60E-06

#### Licensee Comments:

1Q/13: Risk Cap Invoked. Changed PRA Parameter(s). The MSPI Risk Cap is invoked. The contribution from one Turbine Driven Pump Demand Failure (5.49E-07) 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. High Pressure Injection System indicator color changed from green to white. The High Pressure Injection System indicator was white in the 2nd Quarter of 2012. No new failures have occurred since that time.

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. No indicator color was impacted.

2Q/12: The unit 1 HPCI system changed from green to white this quarter. There are 4 failures currently counted against HPCI (reports #527, #678, #701, #819) and excessive unavailability due to steam admission valve leakage. 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. No indicator color was impacted.

2Q/12: The unit 1 HPCI system changed from green to white this quarter. There are 4 failures currently counted against HPCI (reports #527, #678, #701, #819) and excessive unavailability due to steam admission valve leakage.

1Q/12: Changed PRA Parameter(s). Revised PRA parameters based on Calculation NDN-000-999-2010-0003 rev 006 to reflect CAFTA PRA Model Revision 4. CAFTA PRA Model Revision 4 was performed in accordance with NEI 99-02 to evaluate the impacts of adjusting the Diesel Generator Baseline Planned Unavailability in conjunction with the 12-Year Diesel Maintenance Outages (FAQ 468). 4/12 Revised unplanned unavailability in May 2011 to count from point of discovery. This is a reduction in unplanned unavailability of about 17 hours.

3Q/11: Revised MSPI Basis Document and MSPI PRA Parameters based on Calculation NDN-000-999-2010-0003 Rev 005 to reflect BFN CAFTA PRA Model Rev 3 which was approved in June 2011. MSPI PRA Parameters based on this model are effective as of Third Quarter 2011.

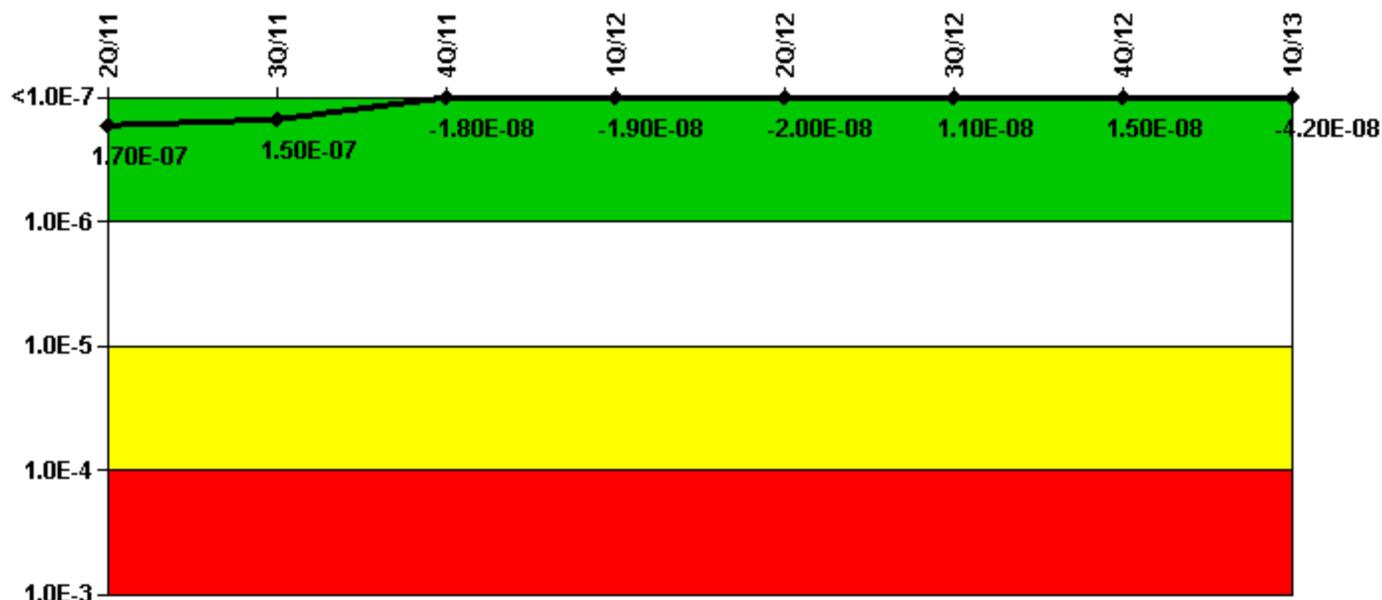
3Q/11: Changed PRA Parameter(s). Revised MSPI Basis Document and MSPI PRA Parameters based on Calculation NDN-000-999-2010-0003 Rev 005 to reflect BFN CAFTA PRA Model Rev 3 which was approved in June 2011. MSPI PRA Parameters based on this model are effective as of Third Quarter 2011.

2Q/11: Unplanned Unavailability resulted from discharge check valve hanging open, causing pump suction overpressure event, causing external leakage, which caused DC motor on aux oil pump to fail. See report #678. Revised MSPI Basis Document and MSPI PRA Parameters based on Calculation NDN-000-999-2010-0003 rev 003 to correct PRA Model errors associated with the modeling of EECW (Cooling Water System 2) North Header Unavailability and not modeling a failure of a normally operating EECW pump to restart following loss of offsite power. These changes are effective as of Second Quarter 2011.

2Q/11: Unplanned Unavailability resulted from discharge check valve hanging open, causing pump suction overpressure event, causing external leakage, which caused DC motor on aux oil pump to fail. See report #678. Revised MSPI Basis Document and MSPI PRA Parameters based on Calculation NDN-000-999-2010-0003 rev 003 to correct PRA Model errors associated with the modeling of EECW (Cooling Water System 2) North Header Unavailability and not modeling a failure of a normally operating EECW pump to restart following loss of offsite power. These changes are effective as of Second Quarter 2011. 4/12 Revised unplanned unavailability to count from point of discovery of the failure. This was a reduction of about 17 hours.

2Q/11: Unpl Unav resulted from discharge check valve hanging open, causing pump suction overpressure event, causing external leakage, which caused DC motor on aux oil pump to fail. See report #678.

### 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/11	3Q/11	4Q/11	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13
UAI (ΔCDF)	5.82E-08	6.66E-08	1.50E-08	1.35E-08	1.36E-08	4.41E-08	4.85E-08	1.12E-07
URI (ΔCDF)	1.15E-07	8.24E-08	-3.34E-08	-3.26E-08	-3.31E-08	-3.35E-08	-3.40E-08	-1.54E-07
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	1.70E-07	1.50E-07	-1.80E-08	-1.90E-08	-2.00E-08	1.10E-08	1.50E-08	-4.20E-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.

1Q/12: Changed PRA Parameter(s). Revised PRA parameters based on Calculation NDN-000-999-2010-0003 rev 006 to reflect CAFTA PRA Model Revision 4. CAFTA PRA Model Revision 4 was performed in accordance with NEI 99-02 to evaluate the impacts of adjusting the Diesel Generator Baseline Planned Unavailability in conjunction with the 12-Year Diesel Maintenance Outages (FAQ 468).

3Q/11: Changed PRA Parameter(s). Revised MSPI Basis Document and MSPI PRA Parameters based on Calculation NDN-000-999-2010-0003 Rev 005 to reflect BFN CAFTA PRA Model Rev 3 which was approved in June 2011. MSPI PRA Parameters based on this model are effective as of Third Quarter 2011.

2Q/11: Revised MSPI Basis Document and MSPI PRA Parameters based on Calculation NDN-000-999-2010-0003 rev 003 to correct PRA Model errors associated with the modeling of EECW (Cooling Water System 2) North

Header Unavailability and not modeling a failure of a normally operating EECW pump to restart following loss of offsite power. These changes are effective as of Second Quarter 2011.

### 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/11	3Q/11	4Q/11	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13
UAI ( $\Delta$ CDF)	1.80E-09	3.08E-09	2.59E-09	1.04E-09	5.91E-09	1.33E-08	1.66E-08	9.47E-08
URI ( $\Delta$ CDF)	-5.65E-08	-3.08E-08	-2.94E-08	-2.80E-08	-2.83E-08	-2.85E-08	-2.86E-08	-1.16E-07
PLE	NO							
Indicator value	-5.50E-08	-2.80E-08	-2.70E-08	-2.70E-08	-2.20E-08	-1.50E-08	-1.20E-08	-2.20E-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.

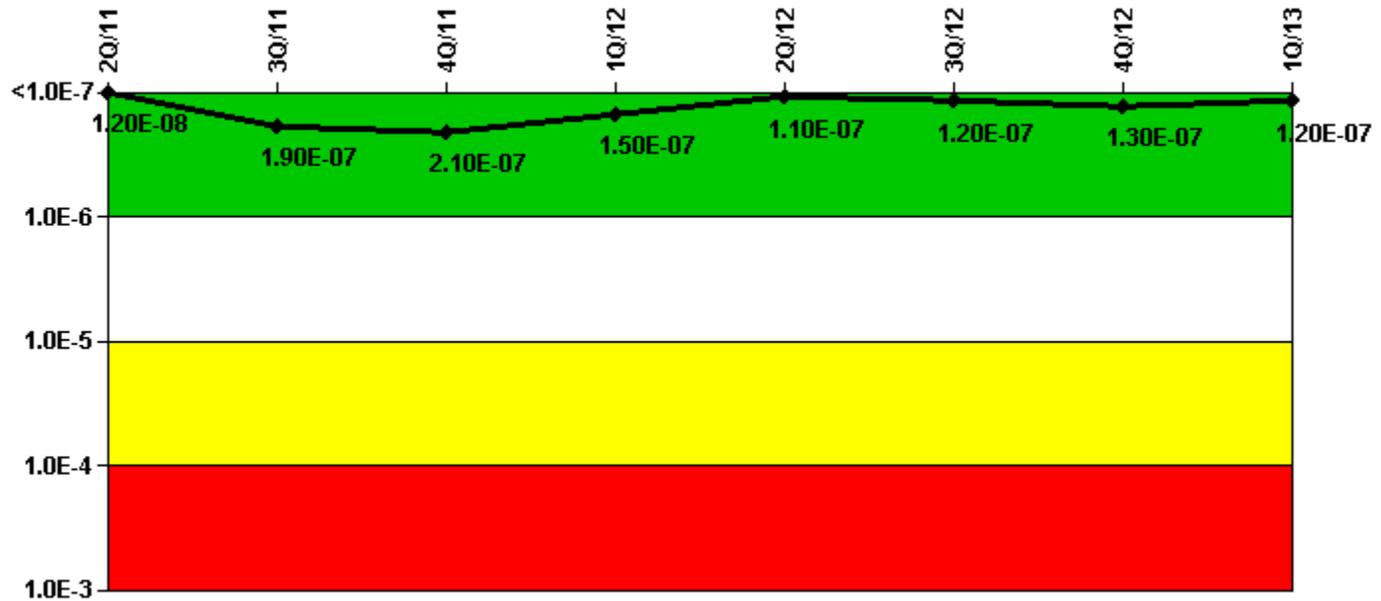
1Q/12: Changed PRA Parameter(s). Revised PRA parameters based on Calculation NDN-000-999-2010-0003 rev 006 to reflect CAFTA PRA Model Revision 4. CAFTA PRA Model Revision 4 was performed in accordance with NEI

99-02 to evaluate the impacts of adjusting the Diesel Generator Baseline Planned Unavailability in conjunction with the 12-Year Diesel Maintenance Outages (FAQ 468).

3Q/11: Changed PRA Parameter(s). Revised MSPI Basis Document and MSPI PRA Parameters based on Calculation NDN-000-999-2010-0003 Rev 005 to reflect BFN CAFTA PRA Model Rev 3 which was approved in June 2011. MSPI PRA Parameters based on this model are effective as of Third Quarter 2011.

2Q/11: Revised MSPI Basis Document and MSPI PRA Parameters based on Calculation NDN-000-999-2010-0003 rev 003 to correct PRA Model errors associated with the modeling of EECW (Cooling Water System 2) North Header Unavailability and not modeling a failure of a normally operating EECW pump to restart following loss of offsite power. These changes are effective as of Second Quarter 2011.

### 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/11	3Q/11	4Q/11	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13
UAI (ΔCDF)	2.84E-09	2.62E-07	2.76E-07	2.18E-07	1.60E-07	1.65E-07	1.75E-07	1.41E-07
URI (ΔCDF)	8.99E-09	-6.93E-08	-6.93E-08	-6.66E-08	-4.51E-08	-4.51E-08	-4.51E-08	-2.46E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	1.20E-08	1.90E-07	2.10E-07	1.50E-07	1.10E-07	1.20E-07	1.30E-07	1.20E-07

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.

2Q/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.

1Q/12: Changed PRA Parameter(s). Revised PRA parameters based on Calculation NDN-000-999-2010-0003 rev 006 to reflect CAFTA PRA Model Revision 4. CAFTA PRA Model Revision 4 was performed in accordance with NEI 99-02 to evaluate the impacts of adjusting the Diesel Generator Baseline Planned Unavailability in conjunction with the 12-Year Diesel Maintenance Outages (FAQ 468).

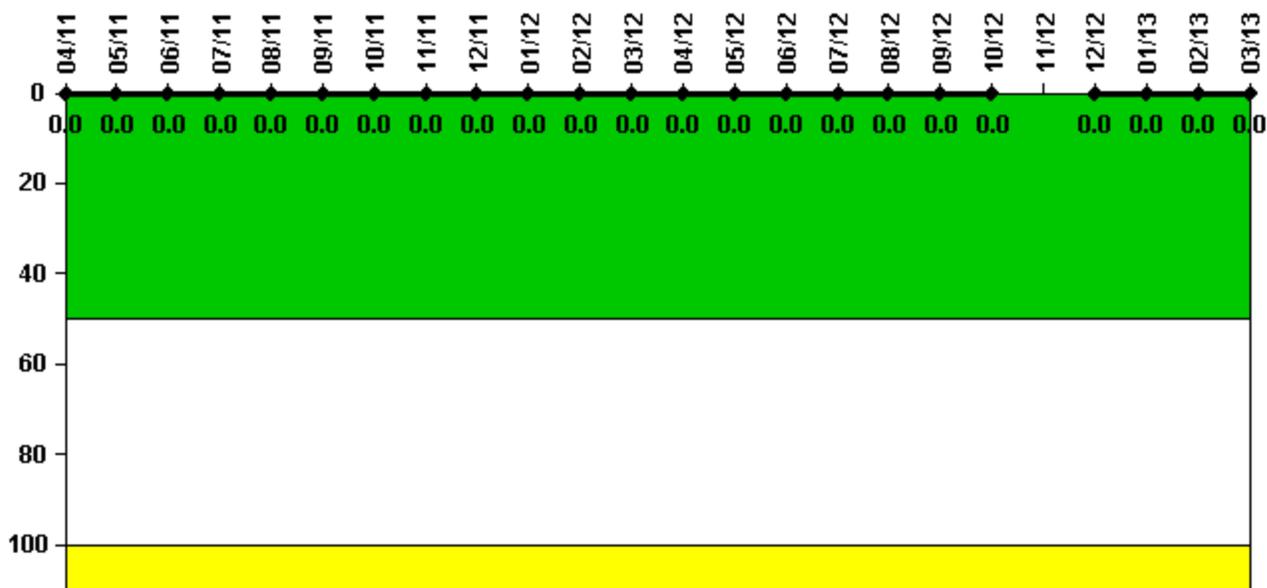
3Q/11: Revised MSPI Basis Document and MSPI PRA Parameters based on Calculation NDN-000-999-2010-0003 Rev 005 to reflect BFN CAFTA PRA Model Rev 3 which was approved in June 2011. MSPI PRA Parameters based on this model are effective as of Third Quarter 2011. Problem Evaluation Report 468993 documents changes to RHRSW pump demand failures to run failures on failure reports 573, 584, and 692.

3Q/11: Changed PRA Parameter(s). Revised MSPI Basis Document and MSPI PRA Parameters based on Calculation NDN-000-999-2010-0003 Rev 005 to reflect BFN CAFTA PRA Model Rev 3 which was approved in June 2011. MSPI PRA Parameters based on this model are effective as of Third Quarter 2011.

2Q/11: Revised MSPI Basis Document and MSPI PRA Parameters based on Calculation NDN-000-999-2010-0003 rev 003 to correct PRA Model errors associated with the modeling of EECW (Cooling Water System 2) North Header Unavailability and not modeling a failure of a normally operating EECW pump to restart following loss of offsite power. These changes are effective as of Second Quarter 2011. Problem Evaluation Report 468993 documents changes to RHRSW pump demand failures to run failures on failure reports 573, 584, and 692.

2Q/11: Revised MSPI Basis Document and MSPI PRA Parameters based on Calculation NDN-000-999-2010-0003 rev 003 to correct PRA Model errors associated with the modeling of EECW (Cooling Water System 2) North Header Unavailability and not modeling a failure of a normally operating EECW pump to restart following loss of offsite power. These changes are effective as of Second Quarter 2011.

### Reactor Coolant System Activity



Thresholds: White > 50.0 Yellow > 100.0

#### Notes

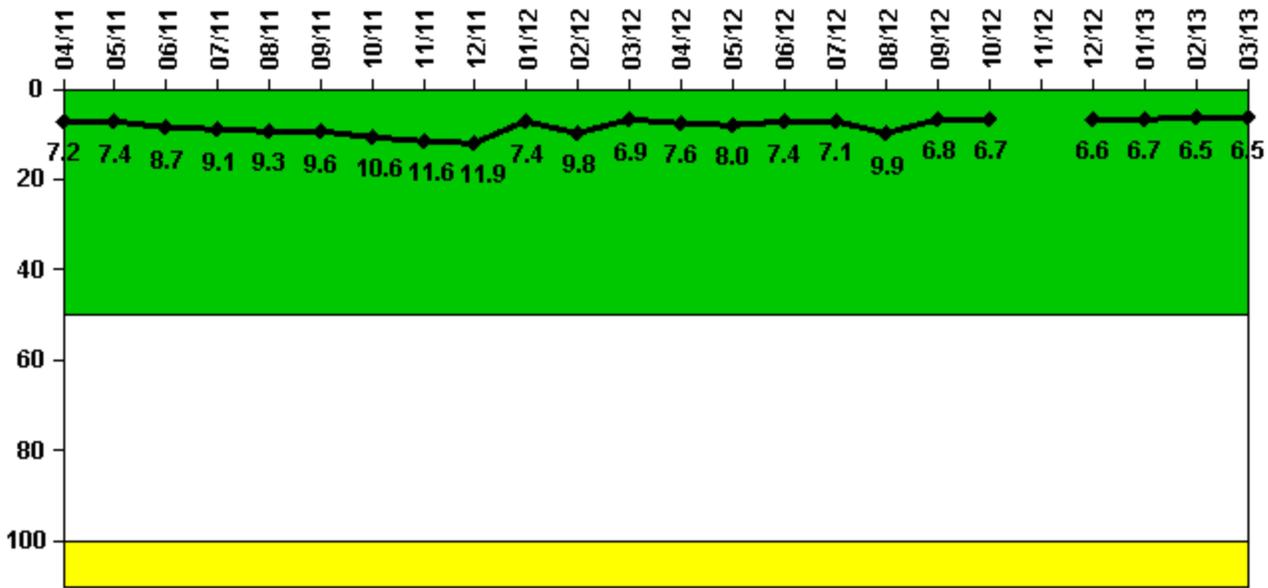
Reactor Coolant System Activity	4/11	5/11	6/11	7/11	8/11	9/11	10/11	11/11	12/11	1/12	2/12	3/12
Maximum activity	0.000068	0.000055	0.000160	0.000077	0.000079	0.000083	0.000085	0.000096	0.000089	0.000161	0.000174	0.000172
Technical specification limit	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
Indicator value	0	0	0	0	0	0	0	0	0	0	0	0

Reactor Coolant System Activity	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	0.000100	0.000177	0.000185	0.000192	0.000143	0.000202	0.000210	N/A	0.000079	0.000110	0.000084	0.000150
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	N/A	0	0	0	0

Licensee Comments: none

### Reactor Coolant System Leakage



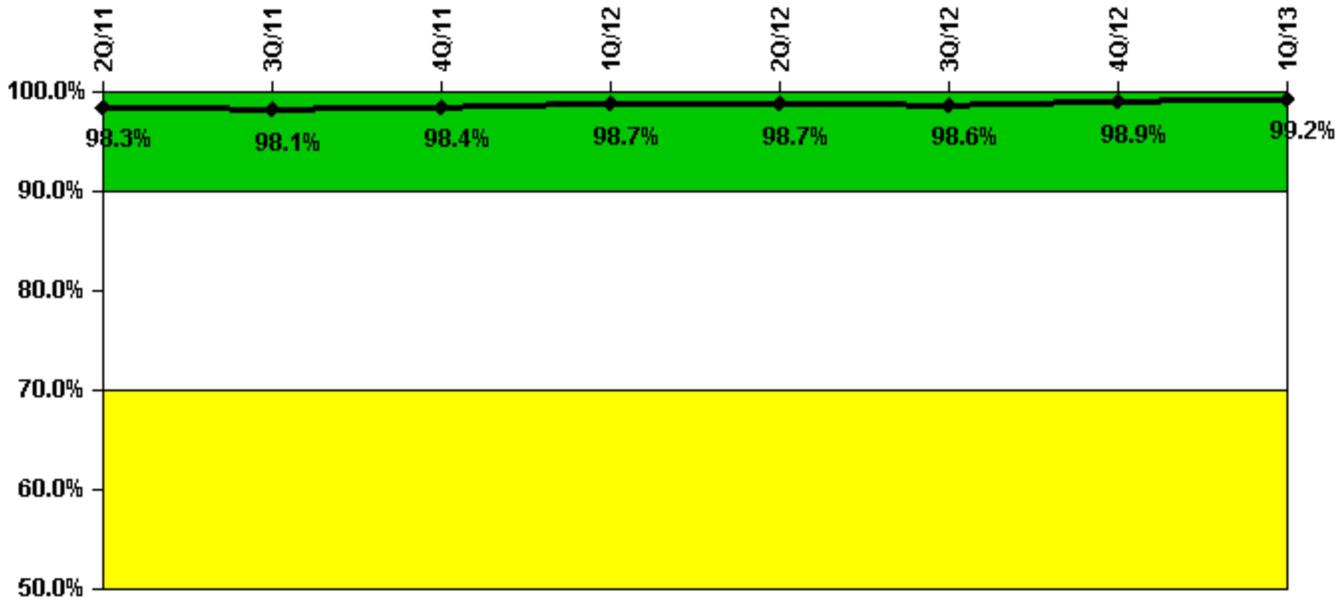
Thresholds: White > 50.0 Yellow > 100.0

#### Notes

Reactor Coolant System Leakage	4/11	5/11	6/11	7/11	8/11	9/11	10/11	11/11	12/11	1/12	2/12	3/12
Maximum leakage	2.170	2.230	2.600	2.730	2.780	2.890	3.170	3.470	3.560	2.230	2.940	2.060
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	7.2	7.4	8.7	9.1	9.3	9.6	10.6	11.6	11.9	7.4	9.8	6.9
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	2.290	2.390	2.210	2.130	2.960	2.050	2.000	N/A	1.970	2.010	1.960	1.950
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	7.6	8.0	7.4	7.1	9.9	6.8	6.7	N/A	6.6	6.7	6.5	6.5

Licensee Comments: none

### Drill/Exercise Performance



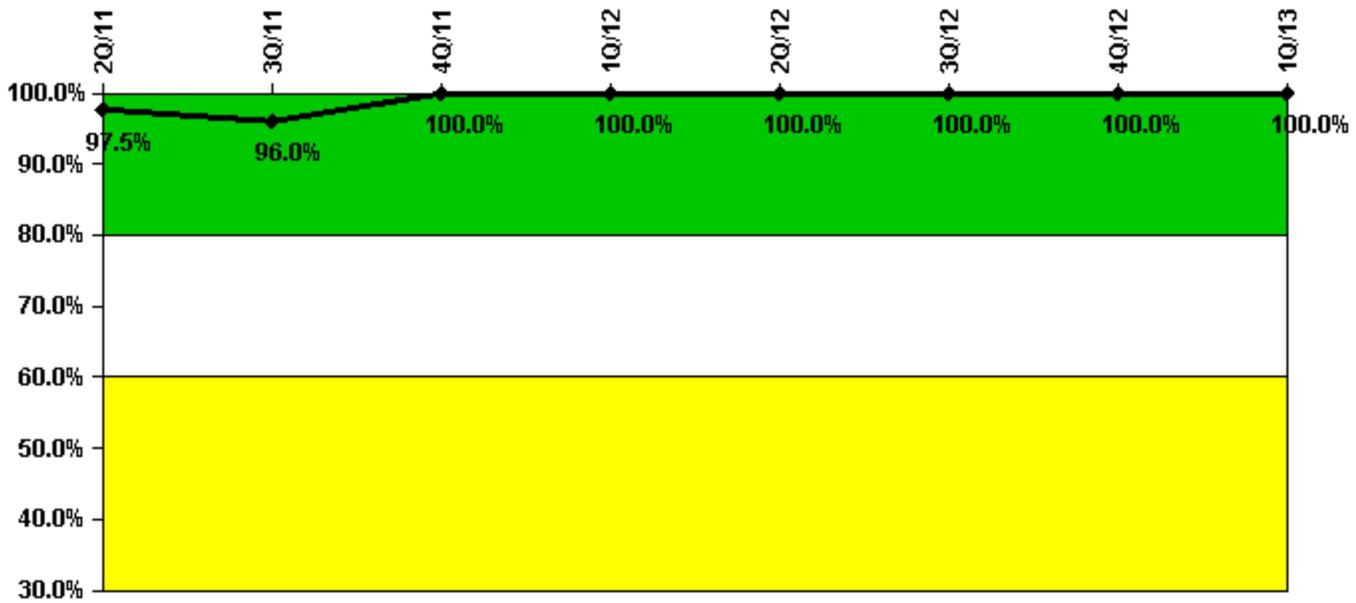
Thresholds: White < 90.0% Yellow < 70.0%

#### Notes

Drill/Exercise Performance	2Q/11	3Q/11	4Q/11	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13
Successful opportunities	24.0	37.0	111.0	13.0	6.0	34.0	14.0	24.0
Total opportunities	24.0	38.0	112.0	13.0	6.0	34.0	14.0	24.0
<b>Indicator value</b>	<b>98.3%</b>	<b>98.1%</b>	<b>98.4%</b>	<b>98.7%</b>	<b>98.7%</b>	<b>98.6%</b>	<b>98.9%</b>	<b>99.2%</b>

Licensee Comments: none

### ERO Drill Participation



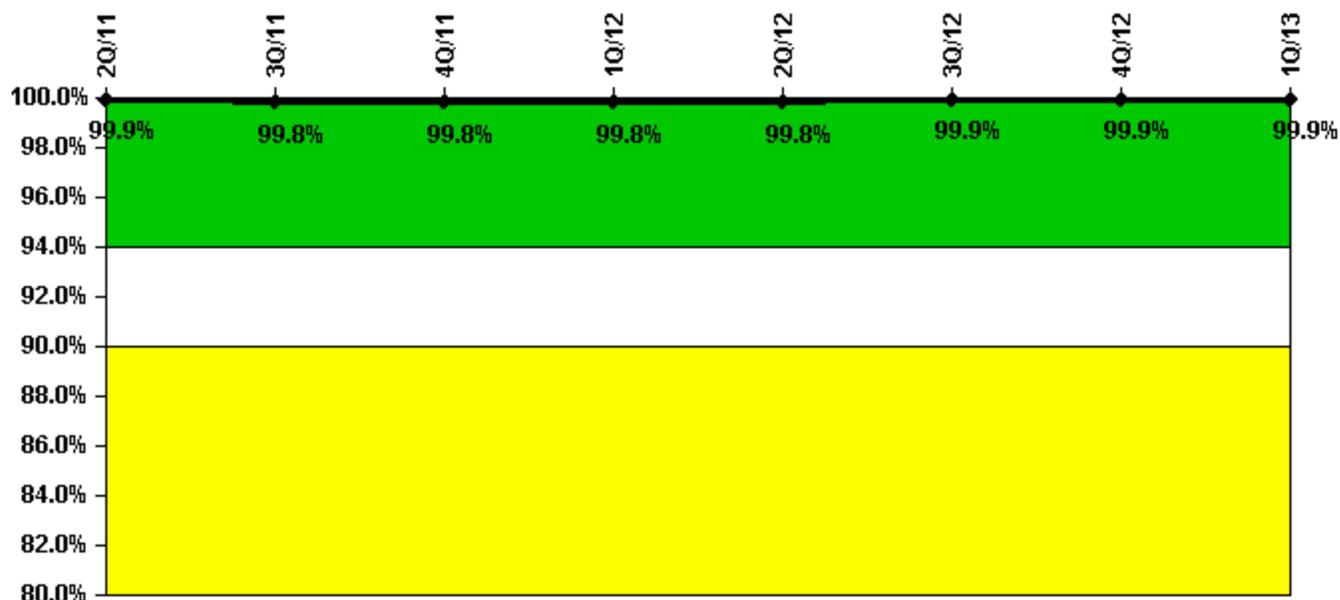
Thresholds: White < 80.0% Yellow < 60.0%

#### Notes

ERO Drill Participation	2Q/11	3Q/11	4Q/11	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13
Participating Key personnel	77.0	72.0	80.0	74.0	73.0	77.0	73.0	76.0
Total Key personnel	79.0	75.0	80.0	74.0	73.0	77.0	73.0	76.0
Indicator value	97.5%	96.0%	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%

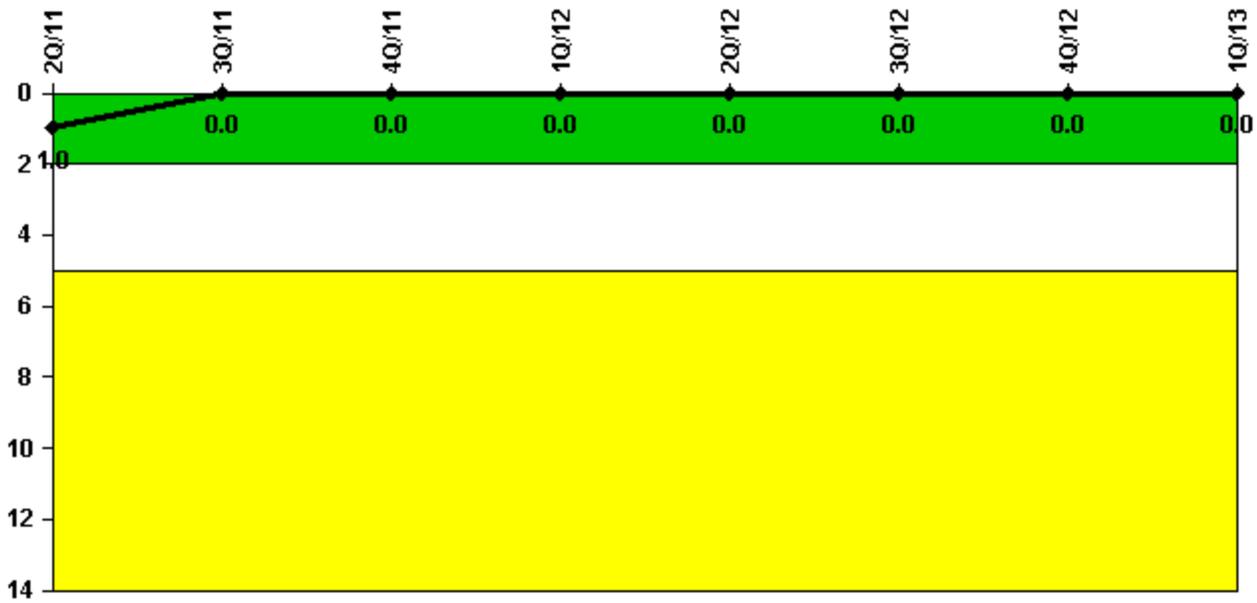
#### Notes

Alert & Notification System	2Q/11	3Q/11	4Q/11	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13
Successful siren-tests	599	896	799	800	799	799	899	900
Total sirens-tests	600	900	800	800	800	800	900	900
Indicator value	99.9%	99.8%	99.8%	99.8%	99.8%	99.9%	99.9%	99.9%

Licensee Comments:

2Q/11: Siren Test canceled for May 9, 2011 due to severe weather in the area.

### Occupational Exposure Control Effectiveness



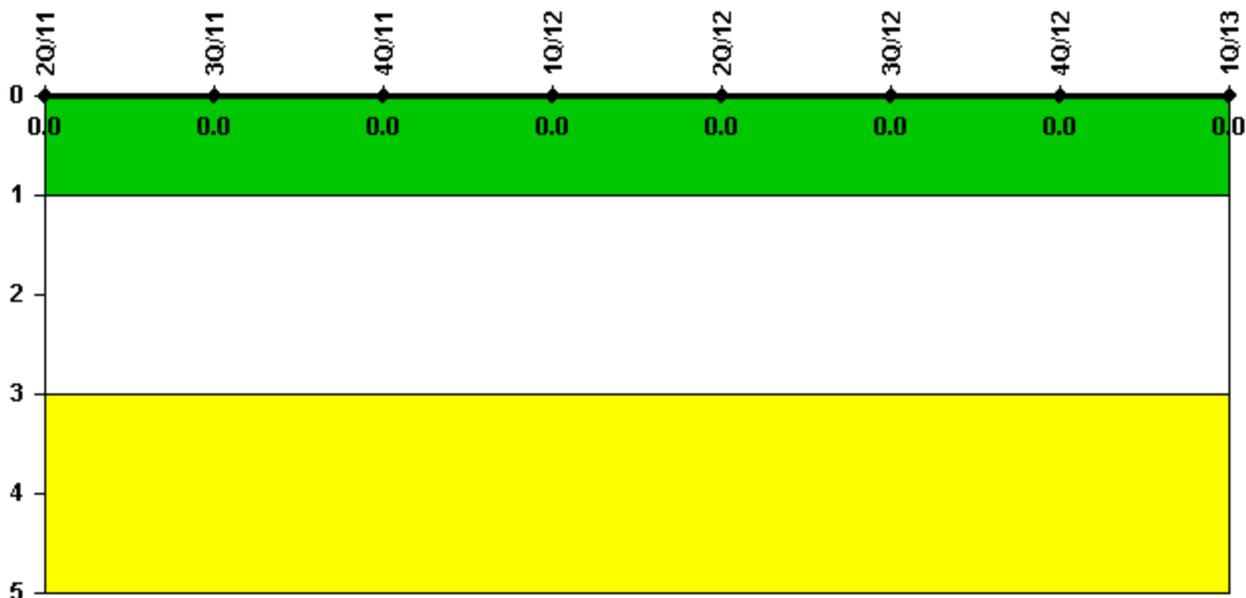
Thresholds: White > 2.0 Yellow > 5.0

#### Notes

Occupational Exposure Control Effectiveness	2Q/11	3Q/11	4Q/11	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13
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
<b>Indicator value</b>	<b>1</b>	<b>0</b>						

Licensee Comments: none

### RETS/ODCM Radiological Effluent



Thresholds: White > 1.0 Yellow > 3.0

#### Notes

RETS/ODCM Radiological Effluent	2Q/11	3Q/11	4Q/11	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13
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, 2013*