U.S.NRC
United States Nuclear Regulatory Commission
*Protecting People and the Environment*



# Browns Ferry 1 – Quarterly Performance Indicators

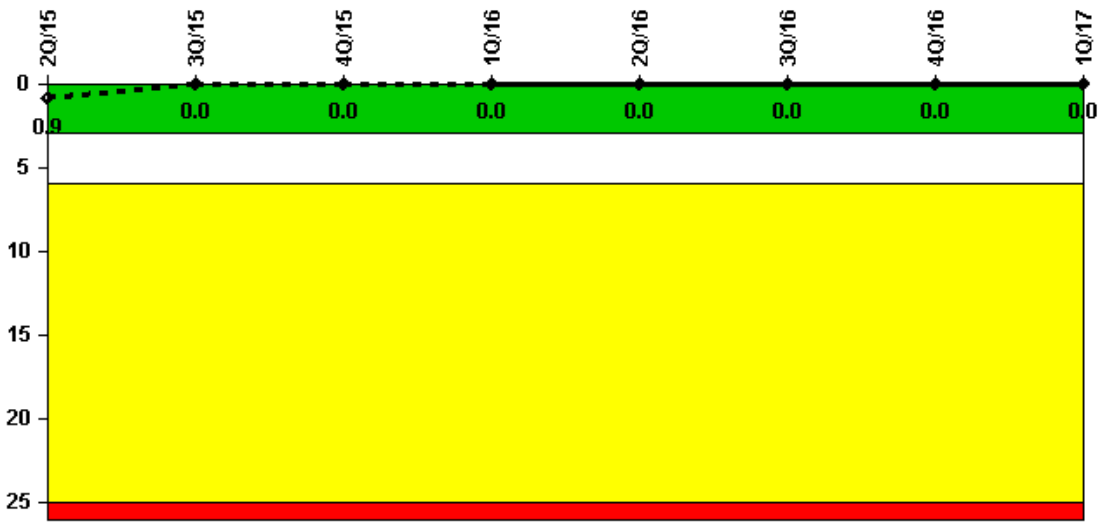
## 1Q/2017 Performance Indicators

The solid trend line represents the current reporting period.

Licensee's General Comments: none

On this page:

## Unplanned Scrams per 7000 Critical Hrs




Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

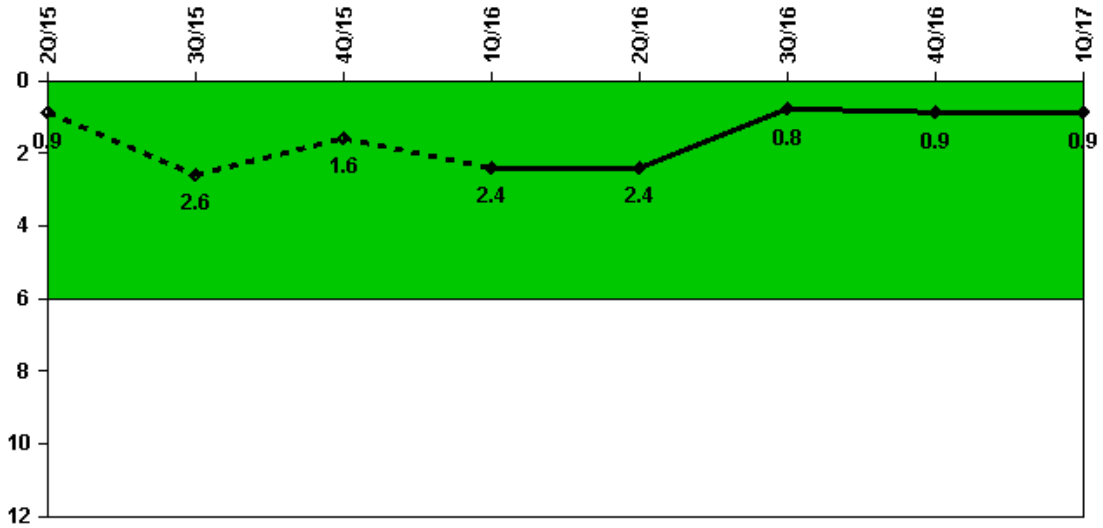
### Notes

| Unplanned Scrams per 7000 Critical Hrs | 2Q/15 | 3Q/15 | 4Q/15 | 1Q/16 | 2Q/16 | 3Q/16 | 4Q/16 | 1Q/17 |
|---|---|---|---|---|---|---|---|---|
| Unplanned scrams | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Critical hours | 2121.7 | 2208.0 | 2111.7 | 2183.0 | 2184.0 | 2073.5 | 1422.4 | 2159.0 |
| **Indicator value** | **0.9** | **0** | **0** | **0** | **0** | **0** | **0** | **0** |

TOP

Licensee Comments: none

## Unplanned Power Changes per 7000 Critical Hrs



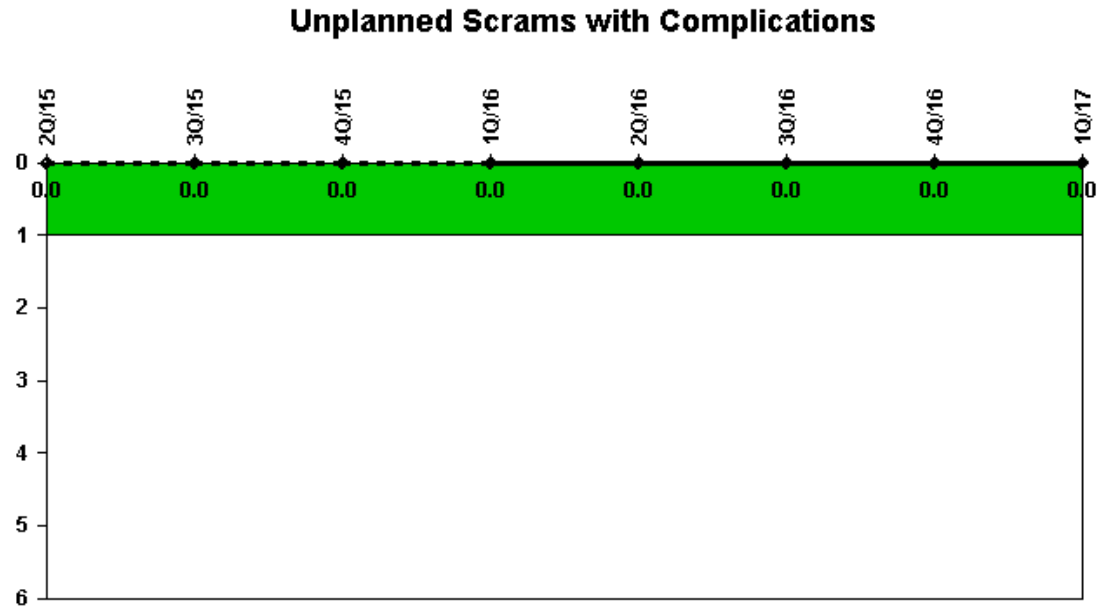

Thresholds: White > 6.0

## Notes

| Unplanned Power Changes per 7000 Critical Hrs | 2Q/15 | 3Q/15 | 4Q/15 | 1Q/16 | 2Q/16 | 3Q/16 | 4Q/16 | 1Q/17 |
|---|---|---|---|---|---|---|---|---|
| Unplanned power changes | 0 | 2.0 | 0 | 1.0 | 0 | 0 | 0 | 1.0 |
| Critical hours | 2121.7 | 2208.0 | 2111.7 | 2183.0 | 2184.0 | 2073.5 | 1422.4 | 2159.0 |
| **Indicator value** | **0.9** | **2.6** | **1.6** | **2.4** | **2.4** | **0.8** | **0.9** | **0.9** |

TOP

Licensee Comments: none



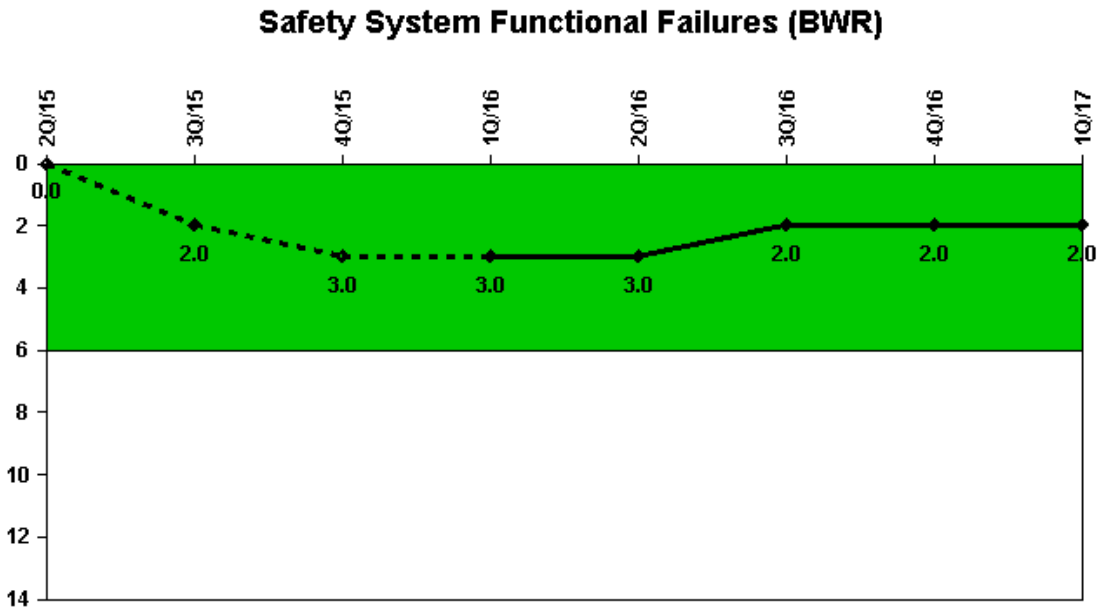

**Thresholds: White > 1.0**

## Notes

| Unplanned Scrams with Complications | 2Q/15 | 3Q/15 | 4Q/15 | 1Q/16 | 2Q/16 | 3Q/16 | 4Q/16 | 1Q/17 |
|---|---|---|---|---|---|---|---|---|
| Scrams with complications | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Indicator value** | **0.0** | **0.0** | **0.0** | **0.0** | **0.0** | **0.0** | **0.0** | **0.0** |

TOP

Licensee Comments: none




Thresholds: White > 6.0

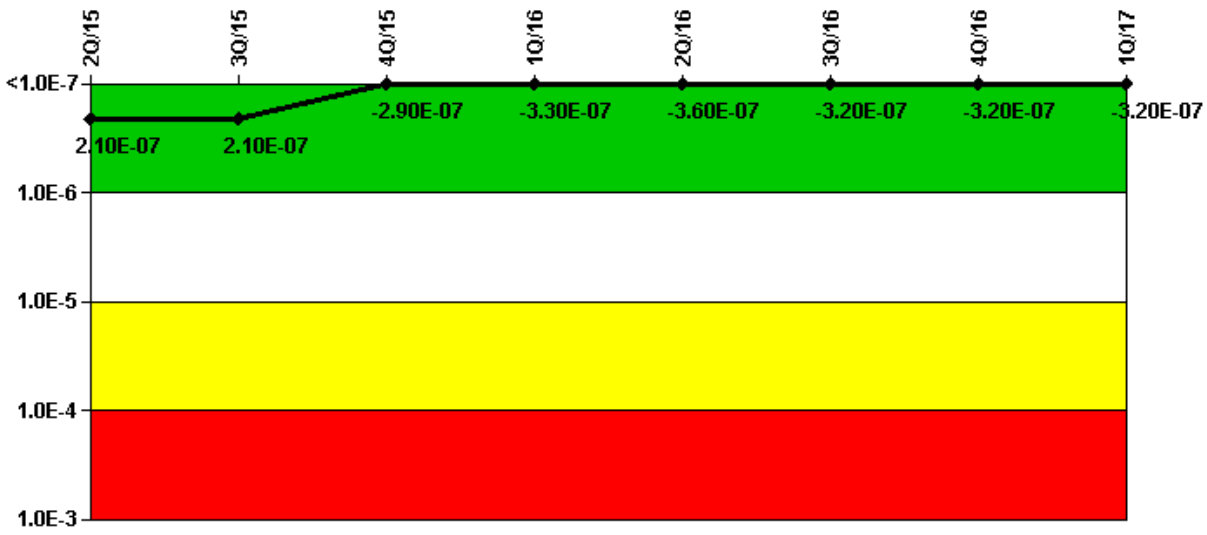
## Notes

| Safety System Functional Failures (BWR) | 2Q/15 | 3Q/15 | 4Q/15 | 1Q/16 | 2Q/16 | 3Q/16 | 4Q/16 | 1Q/17 |
|---|---|---|---|---|---|---|---|---|
| Safety System Functional Failures | 0 | 2 | 1 | 0 | 0 | 1 | 1 | 0 |
| **Indicator value** | **0** | **2** | **3** | **3** | **3** | **2** | **2** | **2** |

TOP

Licensee Comments:
4Q/16: LER 259/2016-004-00 - Incorrect Tap Settings for 480V Shutdown Board Transformers Results in Inoperability of Associated 480V Shutdown Boards
3Q/16: LER 50-259/2016-002-00: High Pressure Coolant Injection System Inoperable Due to Slow Containment Isolation Valve Closing Time
4Q/15: LER 50-259/2015-004-00 - Containment Atmospheric Dilution B Train Supply System Inoperable Longer Than Allowed by Technical Specifications
3Q/15: LER 50-259/2015-002-00, High Pressure Coolant Injection System Inoperable Due to Slow Containment Isolation Valve Closing Time, and LER 50-259/2015-003-00, Loss of Cooling to the Unit 1 and Unit 2 Shutdown Board Rooms Due To Fouled Chiller Coils

## Mitigating Systems Performance Index, Emergency AC Power System




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

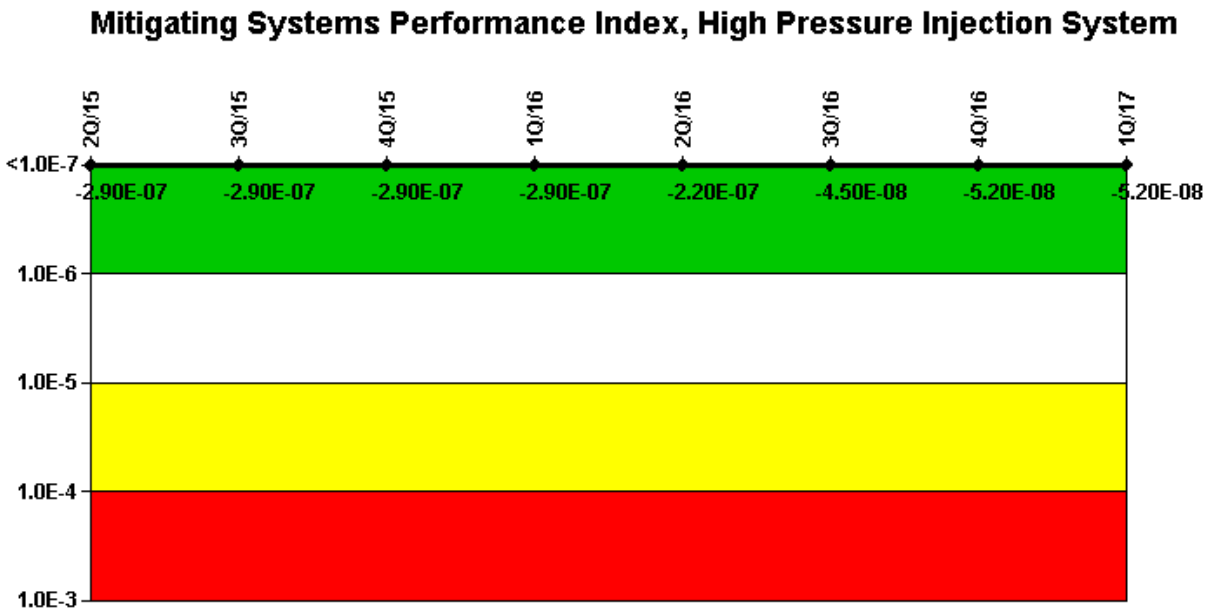
### Notes

| Mitigating Systems Performance Index, Emergency AC Power System | 2Q/15 | 3Q/15 | 4Q/15 | 1Q/16 | 2Q/16 | 3Q/16 | 4Q/16 | 1Q/17 |
|---|---|---|---|---|---|---|---|---|
| UAI (ΔCDF) | 1.62E-08 | 1.62E-08 | 1.88E-08 | -2.25E-08 | -2.47E-08 | -2.47E-08 | -2.47E-08 | -2.47E-08 |
| URI (ΔCDF) | 1.89E-07 | 1.89E-07 | -3.12E-07 | -3.12E-07 | -3.39E-07 | -2.98E-07 | -2.98E-07 | -2.98E-07 |
| PLE | NO | NO | NO | NO | NO | NO | NO | NO |
| **Indicator value** | **2.10E-07** | **2.10E-07** | **-2.90E-07** | **-3.30E-07** | **-3.60E-07** | **-3.20E-07** | **-3.20E-07** | **-3.20E-07** |

TOP

Licensee Comments:
4Q/16: Changed PRA Parameter(s). NDN-000-999-2010-0003 Revision 12 was updated to show the Failure to Run and Failure to Start basic event importances in each of the tables per CR 1110732-001. The Unit 1 MSPI Basis Document Revision 18 was approved on 9/30/2016 to reflect that change. This change allows the use of Option 2 to determine the FV/UR ratio as described in NEI 99-02, Appendix F 2.3.3. Previously, Option 1 was used with other ratio options shown with a strikethrough. The PRA UnR tables for EDG, HPCI, RCIC, RHR, and RHRSW were revised to reflect the change. Additionally, this revision incorporates the changes to the EECW System Description as required by CR 1202022.
3Q/16: Changed PRA Parameter(s). The MSPI Basis documents for all three units were revised to incorporate PRA changes. The PRA was updated to show the Failure to Run and Failure to Start basic event importance in each of the tables. This change allows the use of Option 2 to determine the FV/UR ratio as described in NEI 99-02, Section F 2.3.3. Previously, Option 1 as described in NEI 99-02 F2.3.3, was used with other ratio options shown with a strikethrough. The PRA UnR tables for EDG, HPCI, RCIC, and RHRSW were revised.
2Q/16: Changed PRA Parameter(s). Unit 1: The CAFTA PRA Model Revision 7 was approved on 03/29/2016 with a corresponding MSPI Basis Document Revision 17 approved on 3/31/2016. The PRA model revision was a periodic update to the model which included a data update, HRA update and incorporating recent plant modifications. As a result of the PRA model change, the CDF, Fussel-Vesely and Basic Event Probabilities for all monitored trains and components were revised. Unit 2: The CAFTA PRA Model Revision 7 was approved on 03/29/2016 with a corresponding MSPI Basis Document Revision 16 approved on 3/31/2016. The PRA model revision was a periodic update to the model which included a data update, HRA update and incorporating recent plant modifications. As a result of the PRA model change, the CDF, Fussel-Vesely and Basic Event Probabilities for all monitored trains and components were revised.

3Q/15: Risk Cap Invoked. The MSPI Risk Cap is invoked. The contribution from the highest worth single failure (2.26E-06) has been replaced by a value of 5.00E-07.
2Q/15: Risk Cap Invoked. The MSPI Risk Cap is invoked. The contribution from the highest worth single failure (2.26E-06) has been replaced by a value of 5.00E-07. Changing PRA parameters did not result in an indicator color changes. The BFN PRA Model Revision 6 was approved on 1/23/15 with a corresponding MSPI Basis Document Revisions approved on 7/17/15. The PRA model revision incorporated the Fire PRA (FPRA) and the Internal Events PRA (IE) into one model to assure the basic structure of both models remains consistent.. Additionally, identified errors, deficiencies, or over conservatisms in the Rev.5 model were corrected. As a result of the PRA model change, there is a slight decrease in CDF and a slight increase in LERF. Emergency AC Specific Change: In order for LOSP to result in core damage, multiple additional systems have to fail. Most important of those are the EDGs. In Rev. 5, failure of multiple EDGs was assumed to occur at the same time at T=0 (beginning of the event). If AC power is not restored in 4 hours core damage is likely to occur. This is an unlikely occurrence. A more likely scenario is that the EDGs will fail at random times over an extended period of time, resulting in a higher probability that offsite power can be restore before all the EDGs fail or before core damage occurs. Convolution adjusts the offsite power recovery probabilities to account for this fact. This reduces the LOSP CDF and LERF contribution and EDG importance. This change was the sole reason for the net CDF decrease between Rev. 5 and Rev. 6. This comment was updated after the quarterly files were created.
2Q/15: Risk Cap Invoked. Changed PRA Parameter(s). The MSPI Risk Cap is invoked. The contribution from the highest worth single failure (2.26E-06) has been replaced by a value of 5.00E-07. Changing PRA parameters did not result in any indicator color changes.



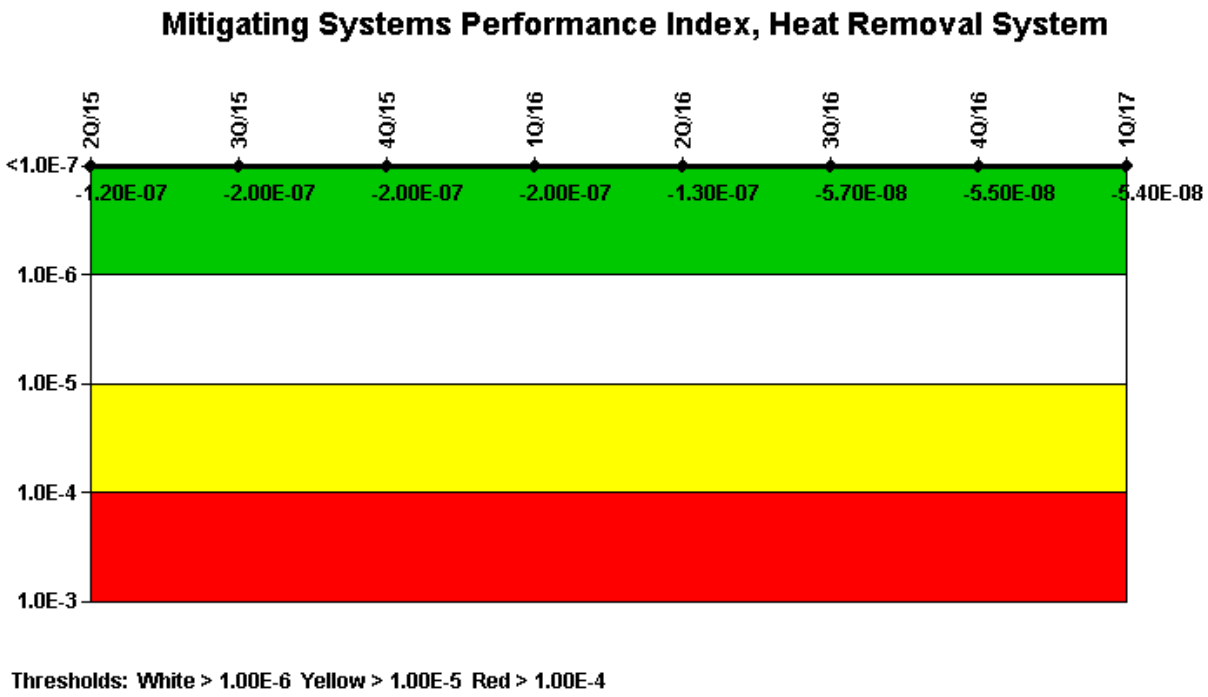

Thresholds: White > 1.00E-6 Yellow > 1.00E-5 Red > 1.00E-4

## Notes

| Mitigating Systems Performance Index, High Pressure Injection System | 2Q/15 | 3Q/15 | 4Q/15 | 1Q/16 | 2Q/16 | 3Q/16 | 4Q/16 | 1Q/17 |
|---|---|---|---|---|---|---|---|---|
| UAI (ΔCDF) | -6.30E-08 | -6.30E-08 | -6.30E-08 | -6.30E-08 | -5.24E-08 | 5.99E-08 | 5.22E-08 | 5.23E-08 |
| URI (ΔCDF) | -2.30E-07 | -2.30E-07 | -2.30E-07 | -2.30E-07 | -1.69E-07 | -1.04E-07 | -1.04E-07 | -1.04E-07 |
| PLE | NO | NO | NO | NO | NO | NO | NO | NO |
| **Indicator value** | **-2.90E-07** | **-2.90E-07** | **-2.90E-07** | **-2.90E-07** | **-2.20E-07** | **-4.50E-08** | **-5.20E-08** | **-5.20E-08** |

TOP

Licensee Comments:
4Q/16: Changed PRA Parameter(s). NDN-000-999-2010-0003 Revision 12 was updated to show the Failure to Run and Failure to Start basic event importances in each of the tables per CR 1110732-001. The Unit 1 MSPI Basis Document Revision 18 was approved on 9/30/2016 to reflect that change. This change allows the use of Option 2 to determine the FV/UR ratio as described in NEI 99-02, Appendix F 2.3.3. Previously, Option 1 was used with other ratio options shown with a strikethrough. The PRA UnR tables for EDG, HPCI, RCIC, RHR, and RHRSW were revised to reflect the change. Additionally, this revision incorporates the changes to the EECW System Description as required by CR 1202022.
3Q/16: Changed PRA Parameter(s). The MSPI Basis documents for all three units were revised to incorporate PRA changes. The PRA was updated to show the Failure to Run and Failure to Start basic event importance in each of the tables. This change allows the use of Option 2 to determine the FV/UR ratio as described in NEI 99-02, Appendix F 2.3.3. Previously, Option 1 as described in NEI 99-02 F2.3.3, was used with other ratio options shown with a strikethrough. The PRA UnR tables for EDG, HPCI, RCIC, RHR, and RHRSW were revised.
2Q/16: Changed PRA Parameter(s). Unit 1: The CAFTA PRA Model Revision 7 was approved on 03/29/2016 with a corresponding MSPI Basis Document Revision 17 approved on 3/31/2016. The PRA model revision was a periodic update to the model which included a data update, HRA update and incorporating recent plant modifications. As a result of the PRA model change, the CDF, Fussel-Vesely and Basic Event Probabilities for all monitored trains and components were revised.
2Q/15: Changing PRA parameters did not result in any indicator color changes. The BFN PRA Model Revision 6 was approved on 1/23/15 with a corresponding MSPI Basis Document Revisions approved on 7/17/15. The PRA model revision incorporated the Fire PRA (FPRA) and the Internal Events PRA (IE) into one model to assure the basic structure of both models remains consistent.. Additionally, identified errors, deficiencies, or over conservatisms in the Rev.5 model were corrected. As a result of the PRA model change, there is a slight decrease in CDF and a slight increase in LERF. This comment was updated after the quarterly files were created.
2Q/15: Changed PRA Parameter(s). Changing PRA parameters did not result in any indicator color changes.




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

## Notes

| Mitigating Systems Performance Index, Heat Removal System | 2Q/15 | 3Q/15 | 4Q/15 | 1Q/16 | 2Q/16 | 3Q/16 | 4Q/16 | 1Q/17 |
|---|---|---|---|---|---|---|---|---|
| UAI (ΔCDF) | 8.03E-08 | 6.79E-09 | -2.03E-10 | -9.55E-10 | -1.69E-08 | 1.49E-08 | 1.74E-08 | 1.74E-08 |
| URI (ΔCDF) | -2.04E-07 | -2.04E-07 | -2.04E-07 | -2.04E-07 | -1.18E-07 | -7.19E-08 | -7.19E-08 | -7.19E-08 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| PLE | NO | NO | NO | NO | NO | NO | NO | NO |
| **Indicator value** | **-1.20E-07** | **-2.00E-07** | **-2.00E-07** | **-2.00E-07** | **-1.30E-07** | **-5.70E-08** | **-5.50E-08** | **-5.40E-08** |

TOP

Licensee Comments:
4Q/16: Changed PRA Parameter(s). NDN-000-999-2010-0003 Revision 12 was updated to show the Failure to Run and Failure to Start basic event importances in each of the tables per CR 1110732-001. The Unit 1 MSPI Basis Document Revision 18 was approved on 9/30/2016 to reflect that change. This change allows the use of Option 2 to determine the FV/UR ratio as described in NEI 99-02, Appendix F 2.3.3. Previously, Option 1 was used with other ratio options shown with a strikethrough. The PRA UnR tables for EDG, HPCI, RCIC, RHR, and RHRSW were revised to reflect the change. Additionally, this revision incorporates the changes to the EECW System Description as required by CR 1202022.
3Q/16: Changed PRA Parameter(s). The MSPI Basis documents for all three units were revised to incorporate PRA changes. The PRA was updated to show the Failure to Run and Failure to Start basic event importance in each of the tables. This change allows the use of Option 2 to determine the FV/UR ratio as described in NEI 99-02, Appendix F 2.3.3. Previously, Option 1 as described in NEI 99-02 F2.3.3, was used with other ratio options shown with a strikethrough. The PRA UnR tables for EDG, HPCI, RCIC, RHR, and RHRSW were revised.
2Q/16: Changed PRA Parameter(s). Unit 1: The CAFTA PRA Model Revision 7 was approved on 03/29/2016 with a corresponding MSPI Basis Document Revision 17 approved on 3/31/2016. The PRA model revision was a periodic update to the model which included a data update, HRA update and incorporating recent plant modifications. As a result of the PRA model change, the CDF, Fussel-Vesely and Basic Event Probabilities for all monitored trains and components were revised.
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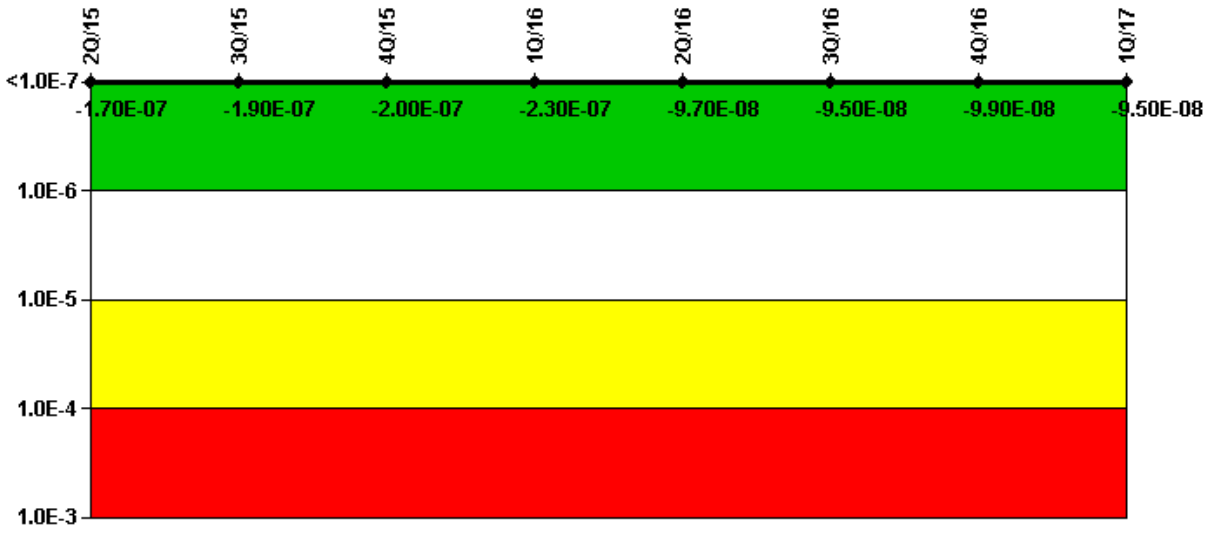
2Q/15: Changed PRA Parameter(s). Changing PRA parameters did not result in any indicator color changes.

**Mitigating Systems Performance Index, Residual Heat Removal System**




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

Notes

| | 2Q/15 | 3Q/15 | 4Q/15 | 1Q/16 | 2Q/16 | 3Q/16 | 4Q/16 | 1Q/17 |
|---|---|---|---|---|---|---|---|---|

| **Mitigating Systems Performance Index, Residual Heat Removal System** | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| UAI (ΔCDF) | 7.13E-08 | 5.03E-08 | 3.37E-08 | 9.32E-09 | 1.62E-08 | 1.76E-08 | 1.40E-08 | 1.79E-08 |
| URI (ΔCDF) | -2.38E-07 | -2.38E-07 | -2.38E-07 | -2.38E-07 | -1.14E-07 | -1.13E-07 | -1.13E-07 | -1.13E-07 |
| PLE | NO | NO | NO | NO | NO | NO | NO | NO |
| **Indicator value** | **-1.70E-07** | **-1.90E-07** | **-2.00E-07** | **-2.30E-07** | **-9.70E-08** | **-9.50E-08** | **-9.90E-08** | **-9.50E-08** |

TOP

Licensee Comments:
4Q/16: Changed PRA Parameter(s). NDN-000-999-2010-0003 Revision 12 was updated to show the Failure to Run and Failure to Start basic event importances in each of the tables per CR 1110732-001. The Unit 1 MSPI Basis Document Revision 18 was approved on 9/30/2016 to reflect that change. This change allows the use of Option 2 to determine the FV/UR ratio as described in NEI 99-02, Appendix F 2.3.3. Previously, Option 1 was used with other ratio options shown with a strikethrough. The PRA UnR tables for EDG, HPCI, RCIC, RHR, and RHRSW were revised to reflect the change. Additionally, this revision incorporates the changes to the EECW System Description as required by CR 1202022.
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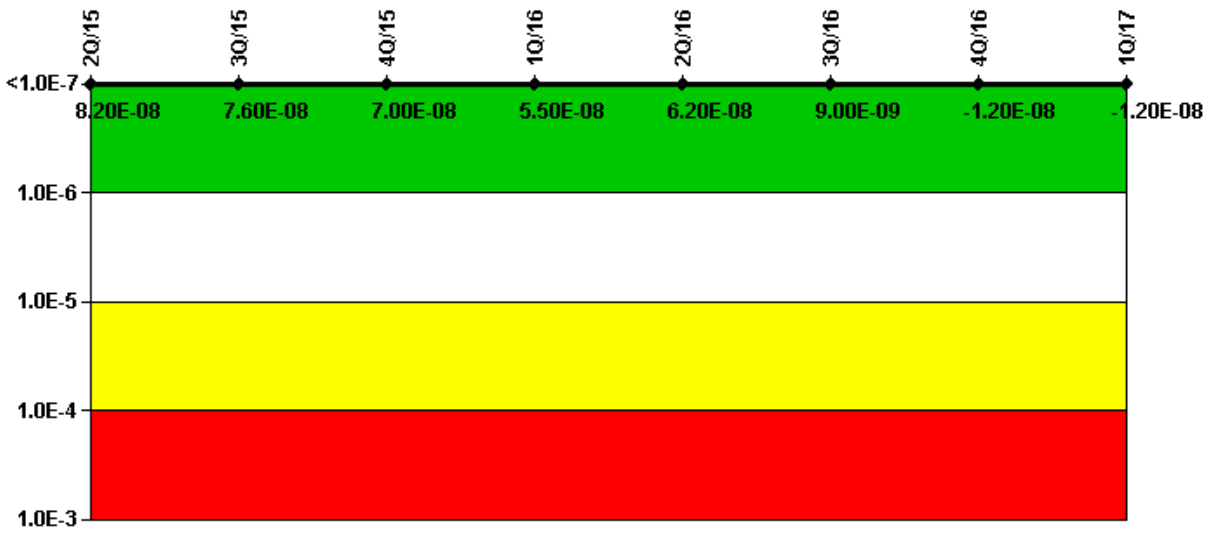
2Q/15: Changed PRA Parameter(s). Changing PRA parameters did not result in any indicator color changes.

## 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/15 | 3Q/15 | 4Q/15 | 1Q/16 | 2Q/16 | 3Q/16 | 4Q/16 | 1Q/17 |
|---|---|---|---|---|---|---|---|---|
| UAI (ΔCDF) | 1.25E-07 | 1.19E-07 | 1.13E-07 | 9.82E-08 | 8.49E-08 | 3.17E-08 | 1.08E-08 | 1.08E-08 |
| URI (ΔCDF) | -4.30E-08 | -4.30E-08 | -4.30E-08 | -4.30E-08 | -2.29E-08 | -2.26E-08 | -2.26E-08 | -2.26E-08 |
| PLE | NO | NO | NO | NO | NO | NO | NO | NO |
| **Indicator value** | **8.20E-08** | **7.60E-08** | **7.00E-08** | **5.50E-08** | **6.20E-08** | **9.00E-09** | **-1.20E-08** | **-1.20E-08** |

TOP

Licensee Comments:
4Q/16: Changed PRA Parameter(s). NDN-000-999-2010-0003 Revision 12 was updated to show the Failure to Run and Failure to Start basic event importances in each of the tables per CR 1110732-001. The Unit 1 MSPI Basis Document Revision 18 was approved on 9/30/2016 to reflect that change. This change allows the use of Option 2 to determine the FV/UR ratio as described in NEI 99-02, Appendix F 2.3.3. Previously, Option 1 was used with other ratio options shown with a strikethrough. The PRA UnR tables for EDG, HPCI, RCIC, RHR, and RHRSW were revised to reflect the change. Additionally, this revision incorporates the changes to the EECW System Description as required by CR 1202022.
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2Q/15: Changing PRA parameters did not result in any indicator color changes. The BFN PRA Model Revision 6 was approved on 1/23/15 with a corresponding MSPI Basis Document Revisions approved on 7/17/15. The PRA model revision incorporated the Fire PRA (FPRA) and the Internal Events PRA (IE) into one model to assure the basic structure of both models remains consistent.. Additionally, identified errors, deficiencies, or over conservatisms in the Rev.5 model were corrected. As a result of the PRA model

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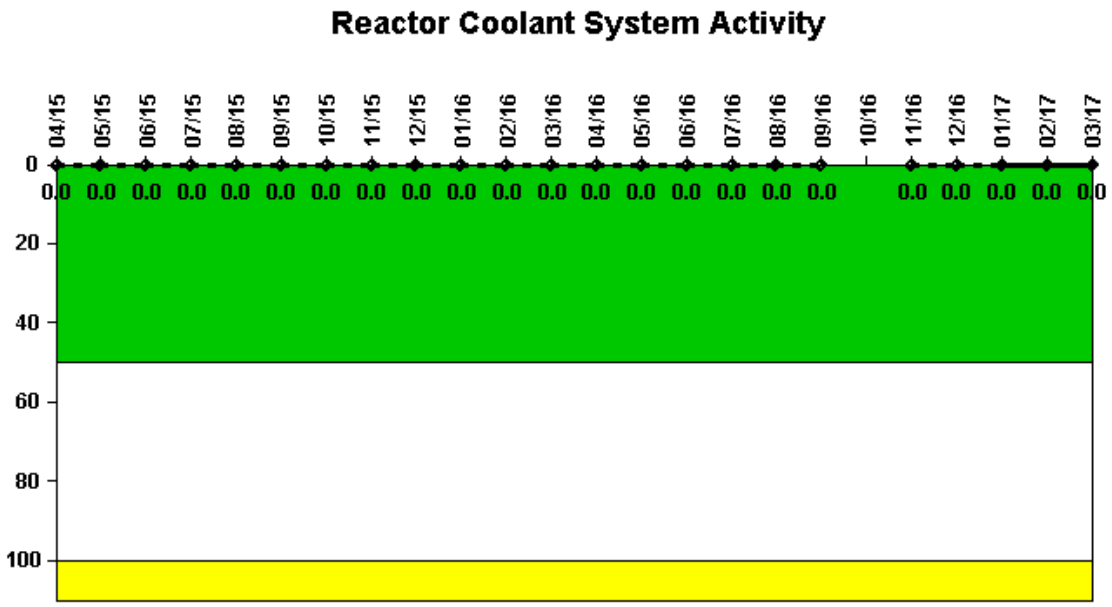



**Thresholds: White > 50.0 Yellow > 100.0**

## Notes

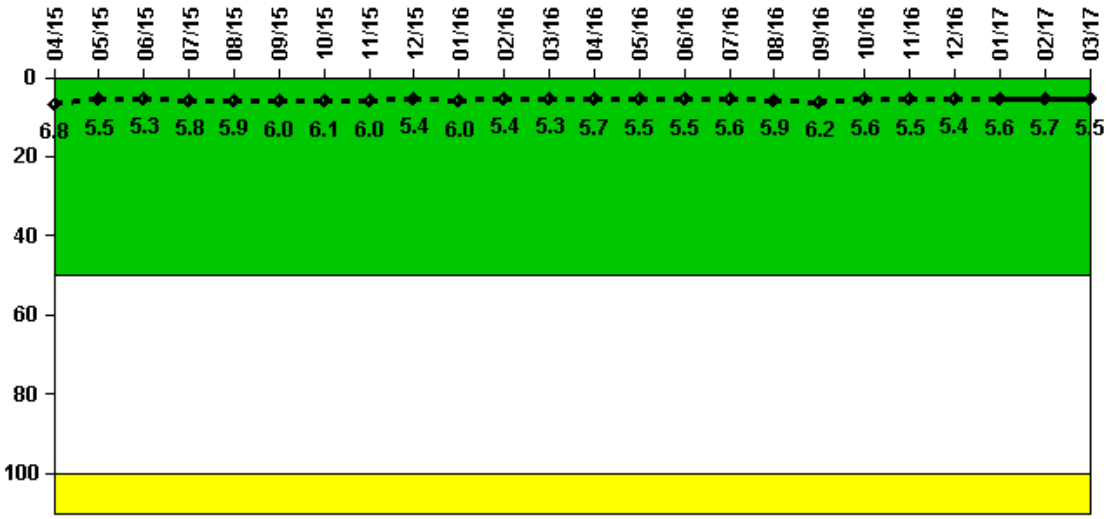
| **Reactor Coolant System Activity** | **4/15** | **5/15** | **6/15** | **7/15** | **8/15** | **9/15** | **10/15** | **11/15** | **12/15** | **1/16** | **2/16** | **3/16** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Maximum activity | 0.000042 | 0.000036 | 0.000035 | 0.000036 | 0.000066 | 0.000073 | 0.000035 | 0.000035 | 0.000075 | 0.000071 | 0.000074 | 0.000076 |
| 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** | **4/16** | **5/16** | **6/16** | **7/16** | **8/16** | **9/16** | **10/16** | **11/16** | **12/16** | **1/17** | **2/17** | **3/17** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Maximum activity | 0.000082 | 0.000120 | 0.000087 | 0.000072 | 0.000078 | 0.000082 | N/A | 0.000067 | 0.000070 | 0.000080 | 0.000084 | 0.000085 |
| 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** | **N/A** | **0** | **0** | **0** | **0** | **0** |

TOP

Licensee Comments: none

## Reactor Coolant System Leakage




Thresholds: White > 50.0 Yellow > 100.0

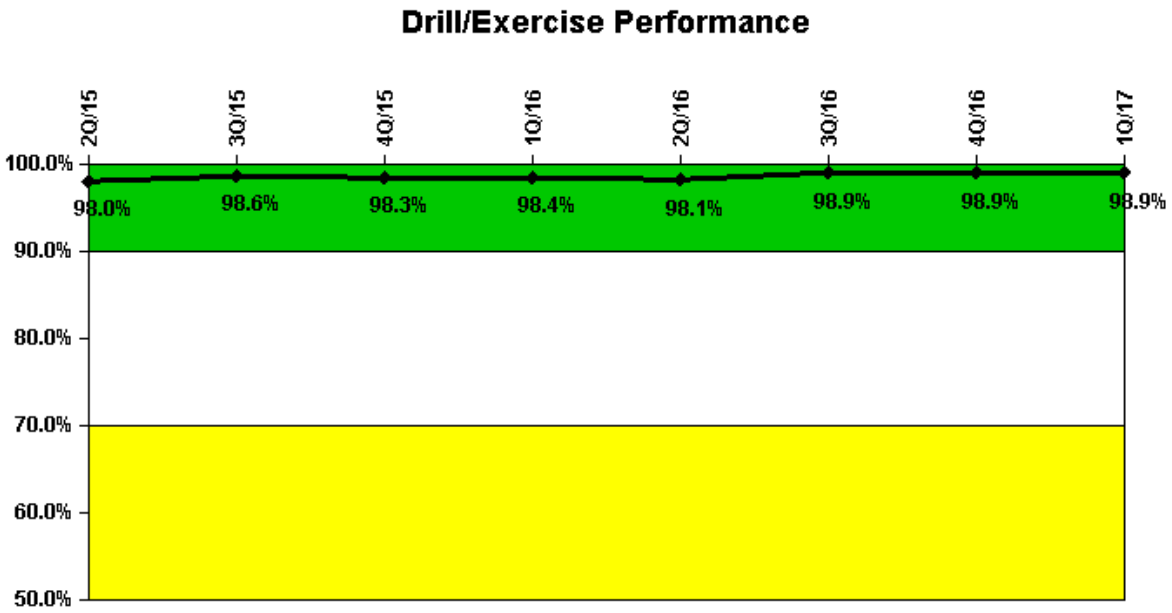
### Notes

| Reactor Coolant System Leakage | 4/15 | 5/15 | 6/15 | 7/15 | 8/15 | 9/15 | 10/15 | 11/15 | 12/15 | 1/16 | 2/16 | 3/16 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Maximum leakage | 2.050 | 1.650 | 1.600 | 1.750 | 1.760 | 1.800 | 1.820 | 1.810 | 1.630 | 1.790 | 1.620 | 1.590 |
| 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** | **6.8** | **5.5** | **5.3** | **5.8** | **5.9** | **6.0** | **6.1** | **6.0** | **5.4** | **6.0** | **5.4** | **5.3** |

| Reactor Coolant System Leakage | 4/16 | 5/16 | 6/16 | 7/16 | 8/16 | 9/16 | 10/16 | 11/16 | 12/16 | 1/17 | 2/17 | 3/17 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Maximum leakage | 1.700 | 1.660 | 1.640 | 1.680 | 1.780 | 1.860 | 1.670 | 1.640 | 1.630 | 1.670 | 1.720 | 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** | **5.7** | **5.5** | **5.5** | **5.6** | **5.9** | **6.2** | **5.6** | **5.5** | **5.4** | **5.6** | **5.7** | **5.5** |

TOP

Licensee Comments: none



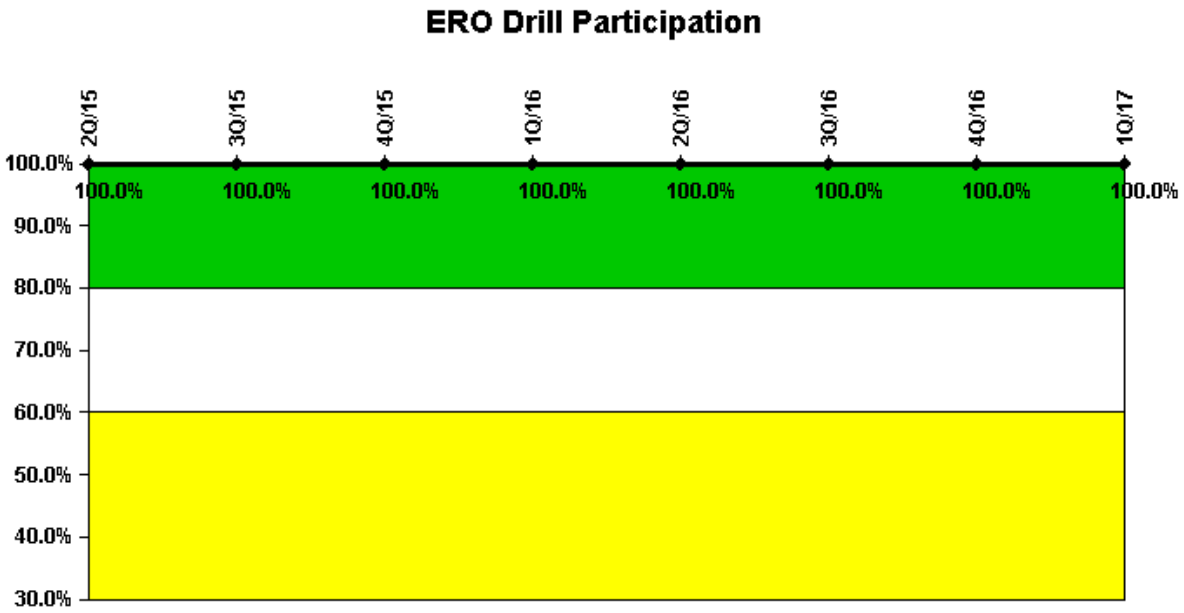

Thresholds: White < 90.0% Yellow < 70.0%

## Notes

| Drill/Exercise Performance | 2Q/15 | 3Q/15 | 4Q/15 | 1Q/16 | 2Q/16 | 3Q/16 | 4Q/16 | 1Q/17 |
|---|---|---|---|---|---|---|---|---|
| Successful opportunities | 16.0 | 50.0 | 74.0 | 34.0 | 43.0 | 94.0 | 6.0 | 36.0 |
| Total opportunities | 16.0 | 50.0 | 75.0 | 34.0 | 45.0 | 95.0 | 6.0 | 36.0 |
| **Indicator value** | **98.0%** | **98.6%** | **98.3%** | **98.4%** | **98.1%** | **98.9%** | **98.9%** | **98.9%** |

TOP

Licensee Comments:
4Q/15: During the November 2015 Emergency Preparedness Graded Exercise NRC Inspection, the NRC identified an error in the PI Data. Emergency Preparedness(EP) failed to count a classification and notification. EP reported 12/12 Drill and Exercise Performance (DEP) opportunities and the actual count is 14/14. Additionally, when Operations Training submitted their October LOR paper work, it included documentation of two "as founds" from September 2015 that were not previously reported. This brought the total DEP opportunities for September 2015 to 18/18. There is no color change associated with this update.



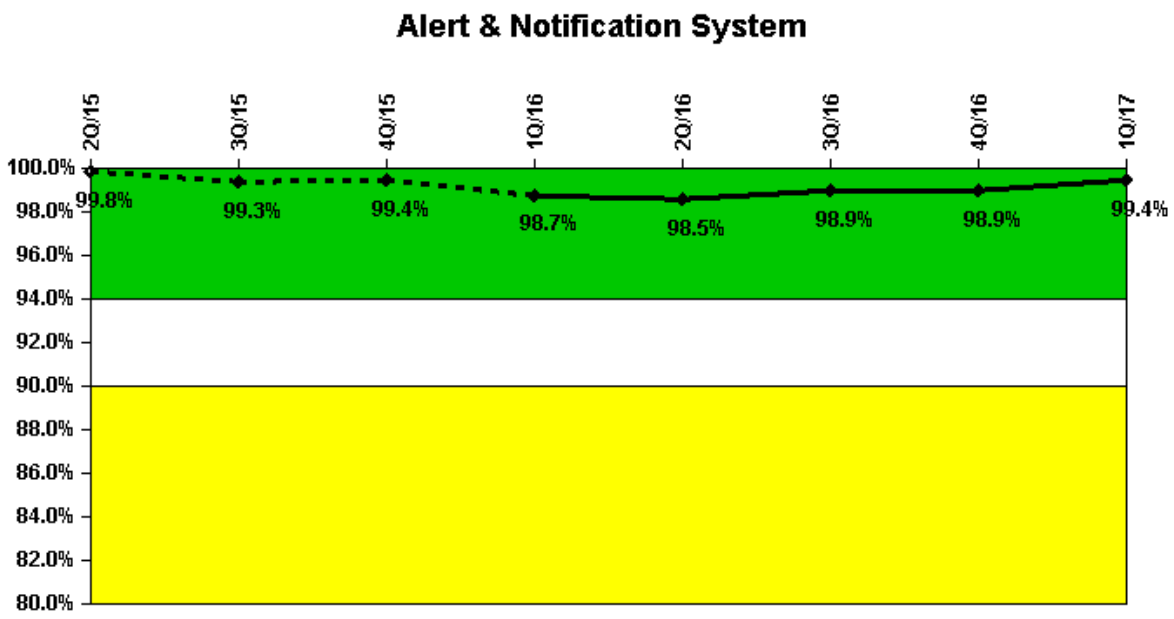

Thresholds: White < 80.0% Yellow < 60.0%

## Notes

| ERO Drill Participation | 2Q/15 | 3Q/15 | 4Q/15 | 1Q/16 | 2Q/16 | 3Q/16 | 4Q/16 | 1Q/17 |
|---|---|---|---|---|---|---|---|---|
| Participating Key personnel | 88.0 | 85.0 | 91.0 | 93.0 | 91.0 | 98.0 | 97.0 | 101.0 |
| Total Key personnel | 88.0 | 85.0 | 91.0 | 93.0 | 91.0 | 98.0 | 97.0 | 101.0 |
| **Indicator value** | **100.0%** | **100.0%** | **100.0%** | **100.0%** | **100.0%** | **100.0%** | **100.0%** | **100.0%** |

TOP

Licensee Comments: none



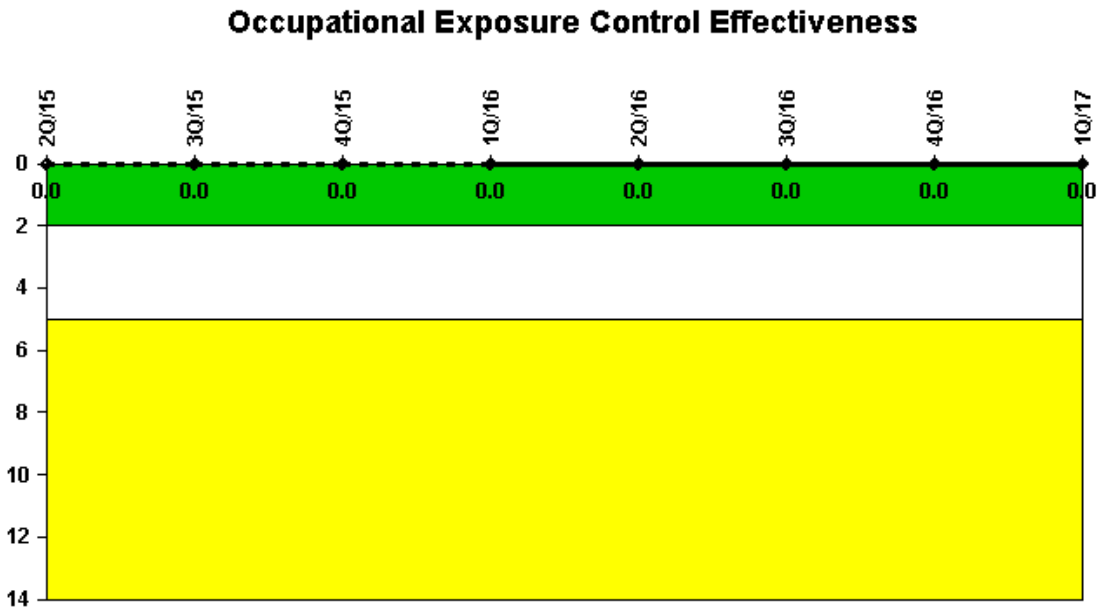

Thresholds: White < 94.0% Yellow < 90.0%

## Notes

| Alert & Notification System | 2Q/15 | 3Q/15 | 4Q/15 | 1Q/16 | 2Q/16 | 3Q/16 | 4Q/16 | 1Q/17 |
|---|---|---|---|---|---|---|---|---|
| Successful siren-tests | 624 | 918 | 726 | 881 | 718 | 932 | 828 | 831 |
| Total sirens-tests | 624 | 936 | 728 | 902 | 728 | 936 | 832 | 832 |
| **Indicator value** | **99.8%** | **99.3%** | **99.4%** | **98.7%** | **98.5%** | **98.9%** | **98.9%** | **99.4%** |

TOP

Licensee Comments: none



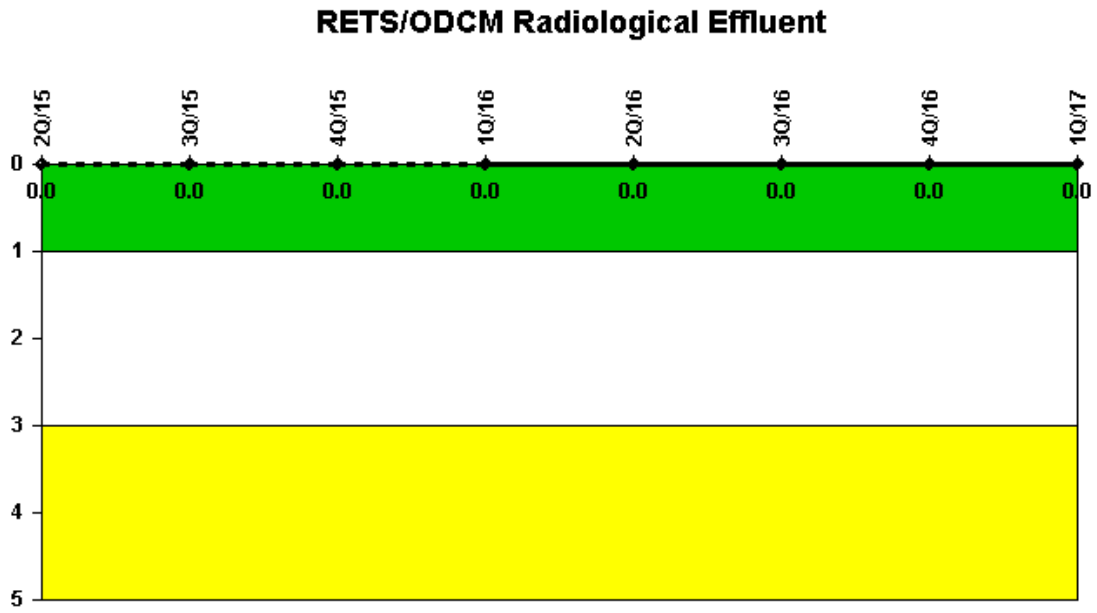

Thresholds: White > 2.0 Yellow > 5.0

## Notes

| Occupational Exposure Control Effectiveness | 2Q/15 | 3Q/15 | 4Q/15 | 1Q/16 | 2Q/16 | 3Q/16 | 4Q/16 | 1Q/17 |
|---|---|---|---|---|---|---|---|---|
| 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** |

TOP

Licensee Comments: none




Thresholds: White > 1.0 Yellow > 3.0

## Notes

| RETS/ODCM Radiological Effluent | 2Q/15 | 3Q/15 | 4Q/15 | 1Q/16 | 2Q/16 | 3Q/16 | 4Q/16 | 1Q/17 |
|---|---|---|---|---|---|---|---|---|
| RETS/ODCM occurrences | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Indicator value** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** |

TOP

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.

*Current data as of: May 5, 2017*

*Page Last Reviewed/Updated Wednesday, June 07, 2017*