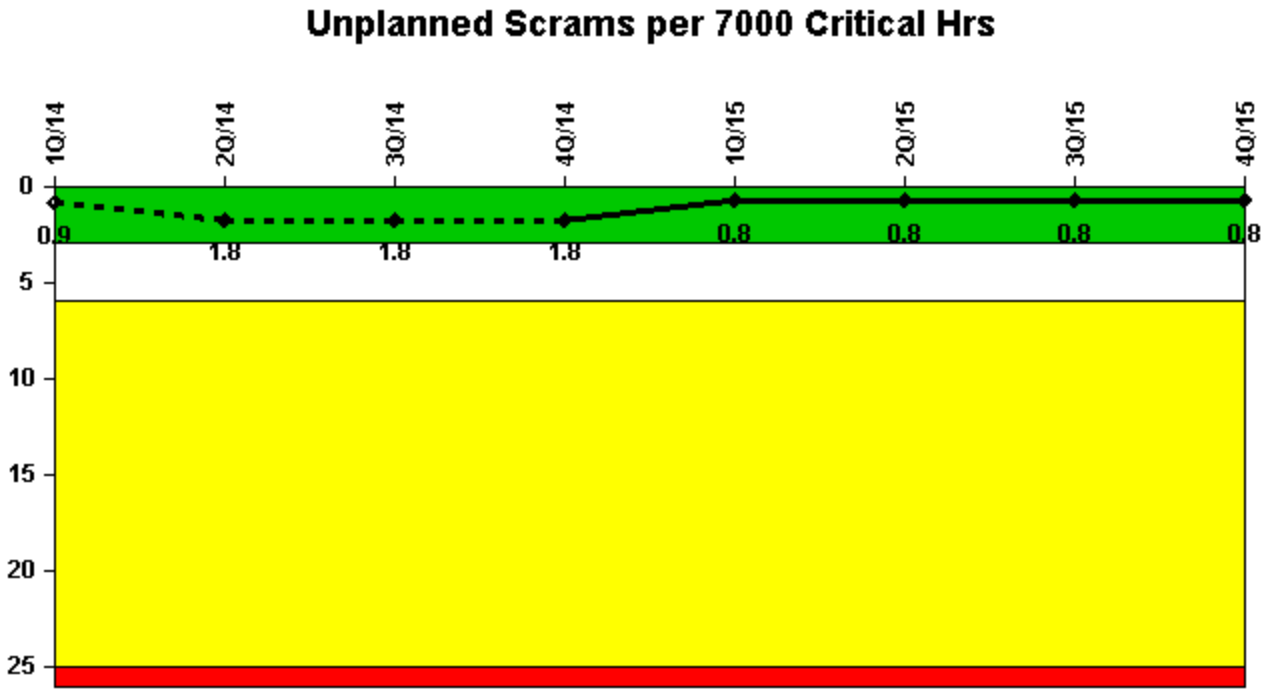
# Calvert Cliffs 1

## 4Q/2015 Performance Indicators

The solid trend line represents the current reporting period.

Licensee's General Comments: none

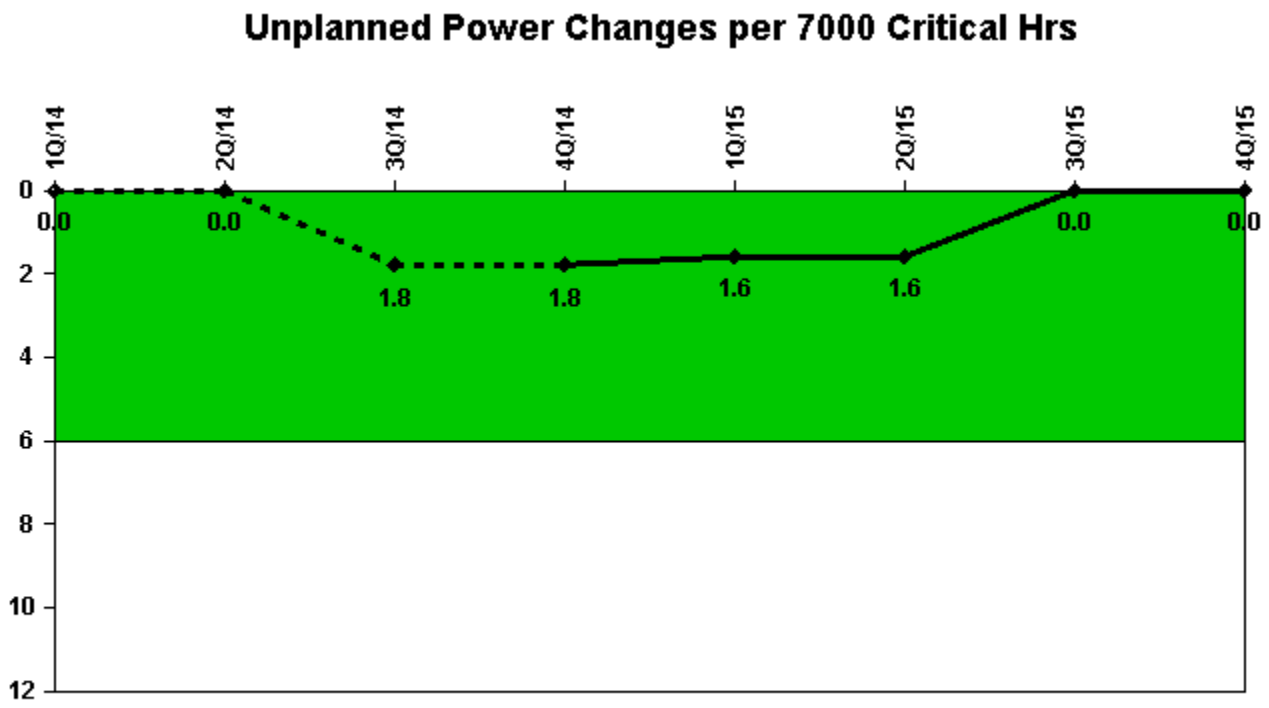



Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

### Notes

| Unplanned Scrams per 7000 Critical Hrs | 1Q/14 | 2Q/14 | 3Q/14 | 4Q/14 | 1Q/15 | 2Q/15 | 3Q/15 | 4Q/15 |
|---|---|---|---|---|---|---|---|---|
| Unplanned scrams | 1.0 | 1.0 | 0 | 0 | 0 | 1.0 | 0 | 0 |
| Critical hours | 1382.8 | 2143.6 | 2208.0 | 2209.0 | 2159.0 | 2146.5 | 2208.0 | 2209.0 |
| | | | | | | | | |
| **Indicator value** | **0.9** | **1.8** | **1.8** | **1.8** | **0.8** | **0.8** | **0.8** | **0.8** |

Licensee Comments: none

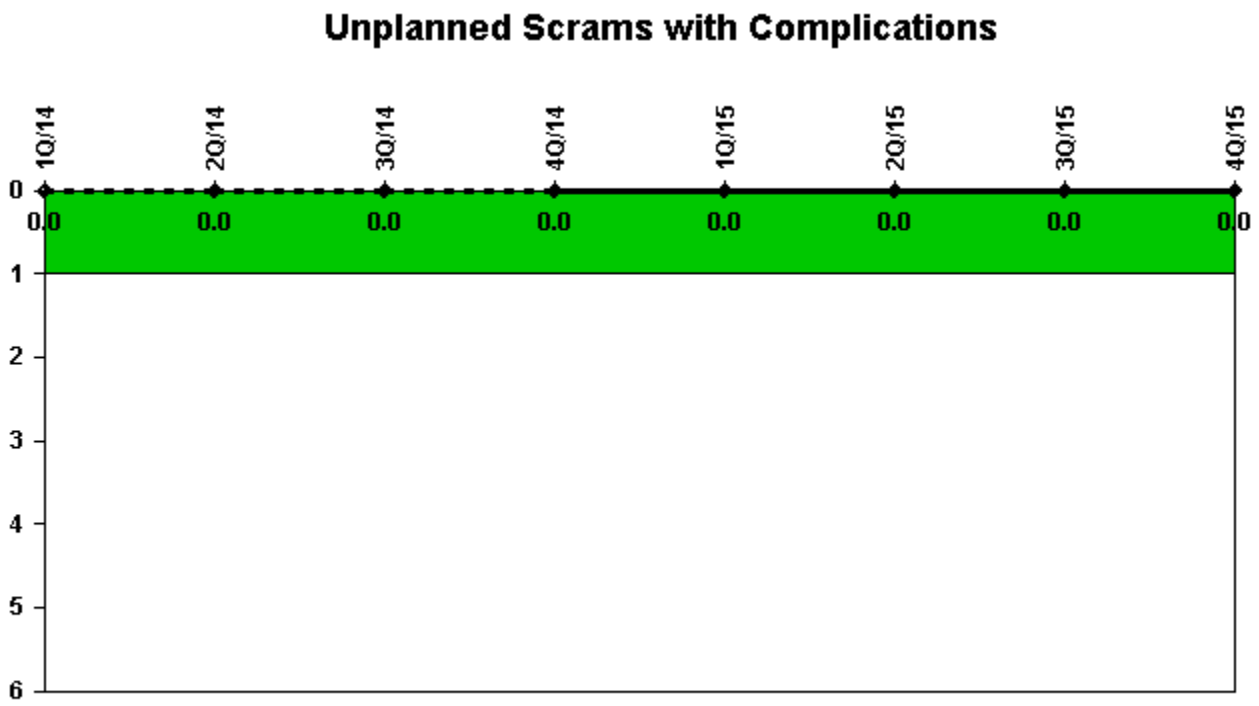



**Thresholds: White > 6.0**

## Notes

| Unplanned Power Changes per 7000 Critical Hrs | 1Q/14 | 2Q/14 | 3Q/14 | 4Q/14 | 1Q/15 | 2Q/15 | 3Q/15 | 4Q/15 |
|---|---|---|---|---|---|---|---|---|
| Unplanned power changes | 0 | 0 | 2.0 | 0 | 0 | 0 | 0 | 0 |
| Critical hours | 1382.8 | 2143.6 | 2208.0 | 2209.0 | 2159.0 | 2146.5 | 2208.0 | 2209.0 |
| | | | | | | | | |
| **Indicator value** | **0** | **0** | **1.8** | **1.8** | **1.6** | **1.6** | **0** | **0** |

Licensee Comments: none

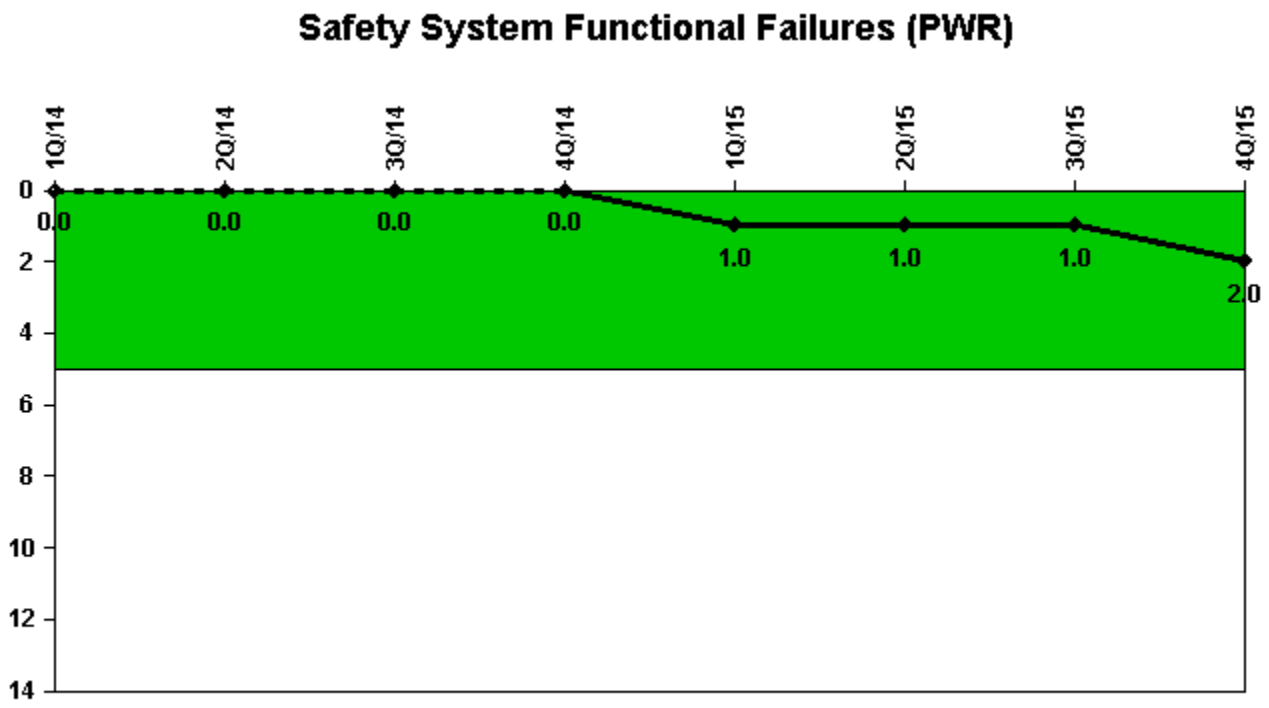



**Thresholds: White > 1.0**

## Notes

| Unplanned Scrams with Complications | 1Q/14 | 2Q/14 | 3Q/14 | 4Q/14 | 1Q/15 | 2Q/15 | 3Q/15 | 4Q/15 |
|---|---|---|---|---|---|---|---|---|
| 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** |

Licensee Comments: none




**Thresholds: White > 5.0**

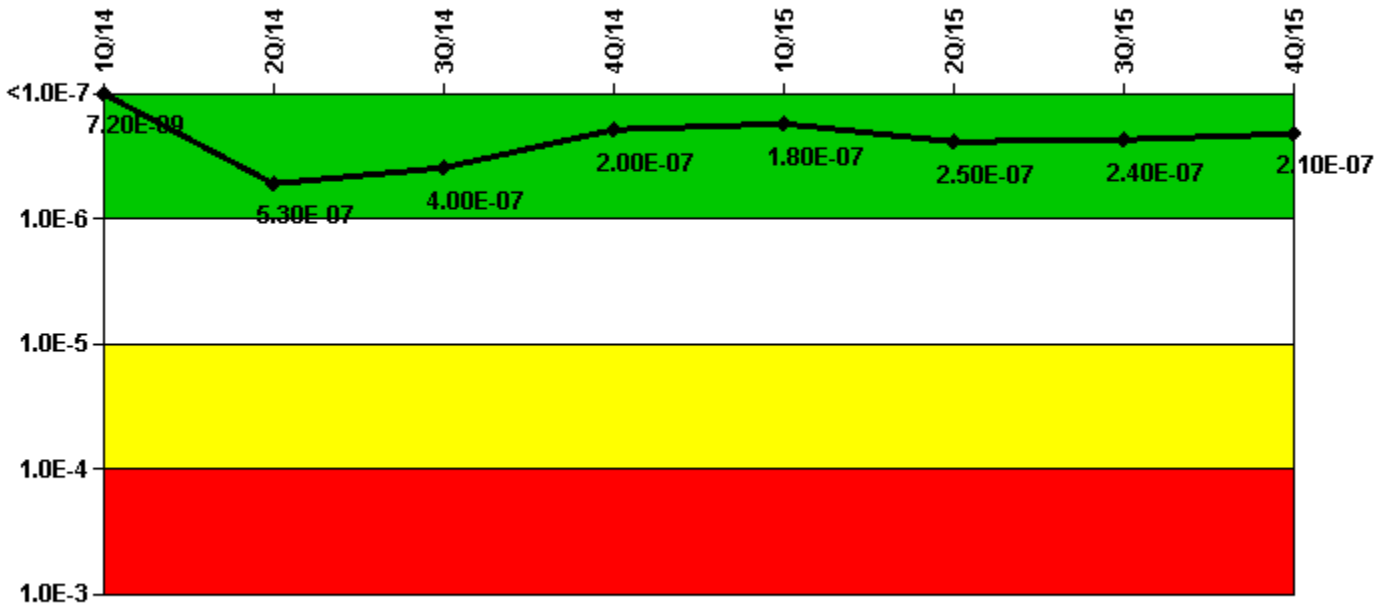
## Notes

| Safety System Functional Failures (PWR) | 1Q/14 | 2Q/14 | 3Q/14 | 4Q/14 | 1Q/15 | 2Q/15 | 3Q/15 | 4Q/15 |
|---|---|---|---|---|---|---|---|---|
| Safety System Functional Failures | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| | | | | | | | | |
| **Indicator value** | **0** | **0** | **0** | **0** | **1** | **1** | **1** | **2** |

Licensee Comments:

1Q/15: 3/22/2015: LER 2015-001-00 05000317/05000318

## Mitigating Systems Performance Index, Emergency AC Power System




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

## Notes

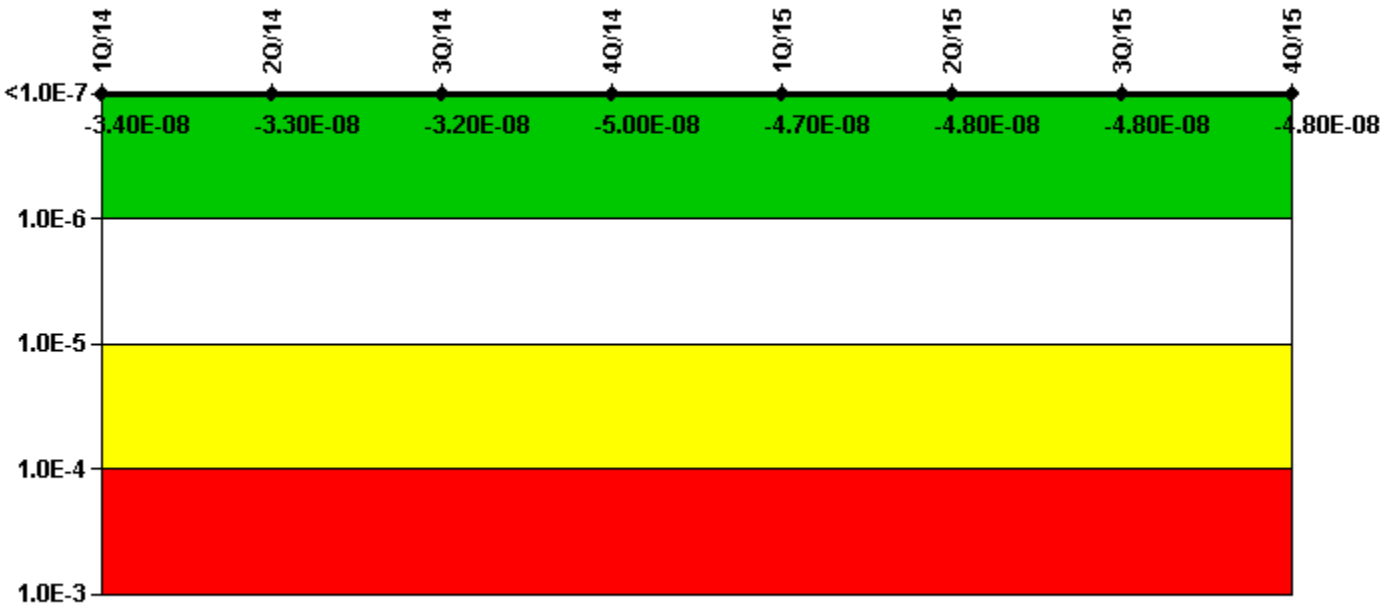
| **Mitigating Systems Performance Index, Emergency AC Power System** | **1Q/14** | **2Q/14** | **3Q/14** | **4Q/14** | **1Q/15** | **2Q/15** | **3Q/15** | **4Q/15** |
|---|---|---|---|---|---|---|---|---|
| UAI (ΔCDF) | 1.78E-08 | 4.27E-08 | 4.17E-08 | 3.74E-08 | 2.11E-08 | 3.16E-08 | 3.04E-08 | -1.88E-09 |
| URI (ΔCDF) | -1.05E-08 | 4.91E-07 | 3.58E-07 | 1.63E-07 | 1.62E-07 | 2.15E-07 | 2.11E-07 | 2.10E-07 |
| PLE | NO | NO | NO | NO | NO | NO | NO | NO |
| | | | | | | | | |
| **Indicator value** | **7.20E-09** | **5.30E-07** | **4.00E-07** | **2.00E-07** | **1.80E-07** | **2.50E-07** | **2.40E-07** | **2.10E-07** |

Licensee Comments:

3Q/14: Risk Cap Invoked.

2Q/14: Risk Cap Invoked.

## Mitigating Systems Performance Index, High Pressure Injection System



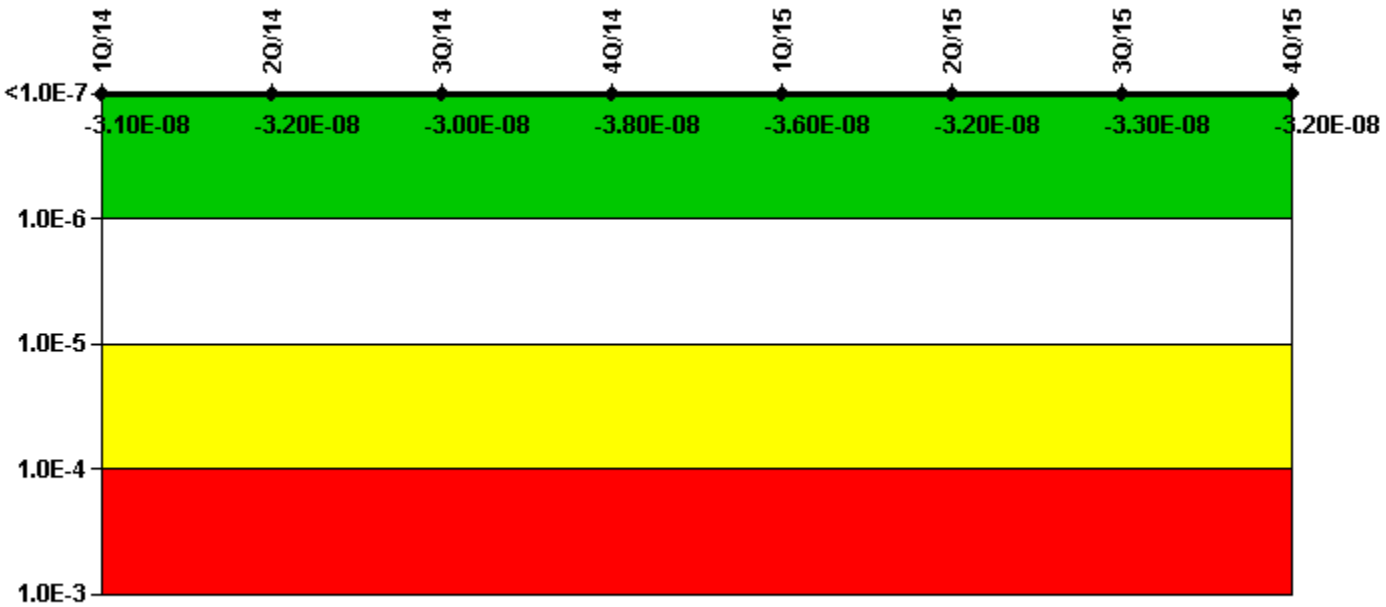

**Thresholds: White > 1.00E-6 Yellow > 1.00E-5 Red > 1.00E-4**

## Notes

| **Mitigating Systems Performance Index, High Pressure Injection System** | **1Q/14** | **2Q/14** | **3Q/14** | **4Q/14** | **1Q/15** | **2Q/15** | **3Q/15** | **4Q/15** |
|---|---|---|---|---|---|---|---|---|
| UAI (ΔCDF) | -1.07E-09 | -7.26E-10 | -1.17E-10 | -1.78E-08 | -2.06E-08 | -2.11E-08 | -2.24E-08 | -2.27E-08 |
| URI (ΔCDF) | -3.25E-08 | -3.25E-08 | -3.22E-08 | -3.22E-08 | -2.69E-08 | -2.73E-08 | -2.59E-08 | -2.54E-08 |
| PLE | NO | NO | NO | NO | NO | NO | NO | NO |
| | | | | | | | | |
| **Indicator value** | **-3.40E-08** | **-3.30E-08** | **-3.20E-08** | **-5.00E-08** | **-4.70E-08** | **-4.80E-08** | **-4.80E-08** | **-4.80E-08** |

Licensee Comments: none

## Mitigating Systems Performance Index, Heat Removal System



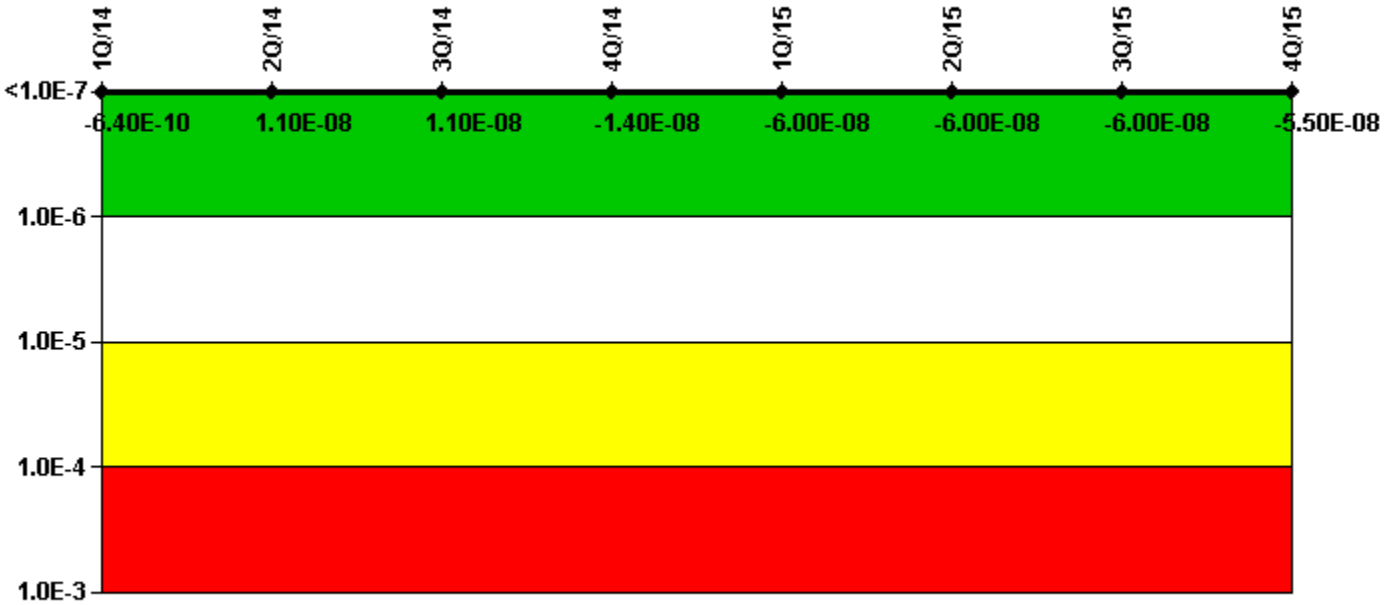

**Thresholds: White > 1.00E-6 Yellow > 1.00E-5 Red > 1.00E-4**

## Notes

| **Mitigating Systems Performance Index, Heat Removal System** | **1Q/14** | **2Q/14** | **3Q/14** | **4Q/14** | **1Q/15** | **2Q/15** | **3Q/15** | **4Q/15** |
|---|---|---|---|---|---|---|---|---|
| UAI (ΔCDF) | -4.17E-09 | -4.15E-09 | -2.79E-09 | -2.78E-09 | -3.31E-09 | -1.30E-09 | -1.36E-09 | 2.10E-10 |
| URI (ΔCDF) | -2.70E-08 | -2.82E-08 | -2.77E-08 | -3.49E-08 | -3.28E-08 | -3.12E-08 | -3.12E-08 | -3.23E-08 |
| PLE | NO | NO | NO | NO | NO | NO | NO | NO |
| | | | | | | | | |
| **Indicator value** | **-3.10E-08** | **-3.20E-08** | **-3.00E-08** | **-3.80E-08** | **-3.60E-08** | **-3.20E-08** | **-3.30E-08** | **-3.20E-08** |

Licensee Comments: none

## Mitigating Systems Performance Index, Residual Heat Removal System



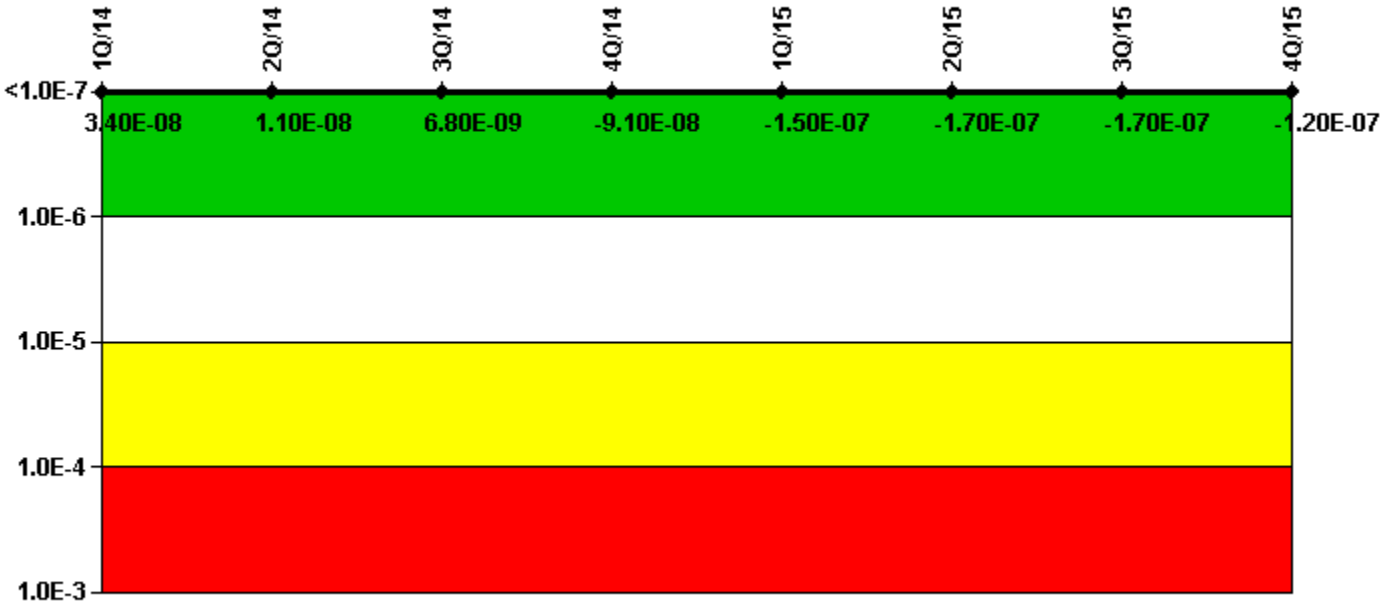

**Thresholds: White > 1.00E-6 Yellow > 1.00E-5 Red > 1.00E-4**

## Notes

| **Mitigating Systems Performance Index, Residual Heat Removal System** | **1Q/14** | **2Q/14** | **3Q/14** | **4Q/14** | **1Q/15** | **2Q/15** | **3Q/15** | **4Q/15** |
|---|---|---|---|---|---|---|---|---|
| UAI (ΔCDF) | 5.11E-09 | 1.68E-08 | 1.71E-08 | -9.26E-09 | -5.56E-08 | -5.56E-08 | -5.56E-08 | -5.09E-08 |
| URI (ΔCDF) | -5.75E-09 | -5.75E-09 | -5.75E-09 | -5.18E-09 | -4.26E-09 | -4.15E-09 | -4.15E-09 | -4.15E-09 |
| PLE | NO | NO | NO | NO | NO | NO | NO | NO |
| | | | | | | | | |
| **Indicator value** | **-6.40E-10** | **1.10E-08** | **1.10E-08** | **-1.40E-08** | **-6.00E-08** | **-6.00E-08** | **-6.00E-08** | **-5.50E-08** |

Licensee Comments: none

## Mitigating Systems Performance Index, Cooling Water Systems

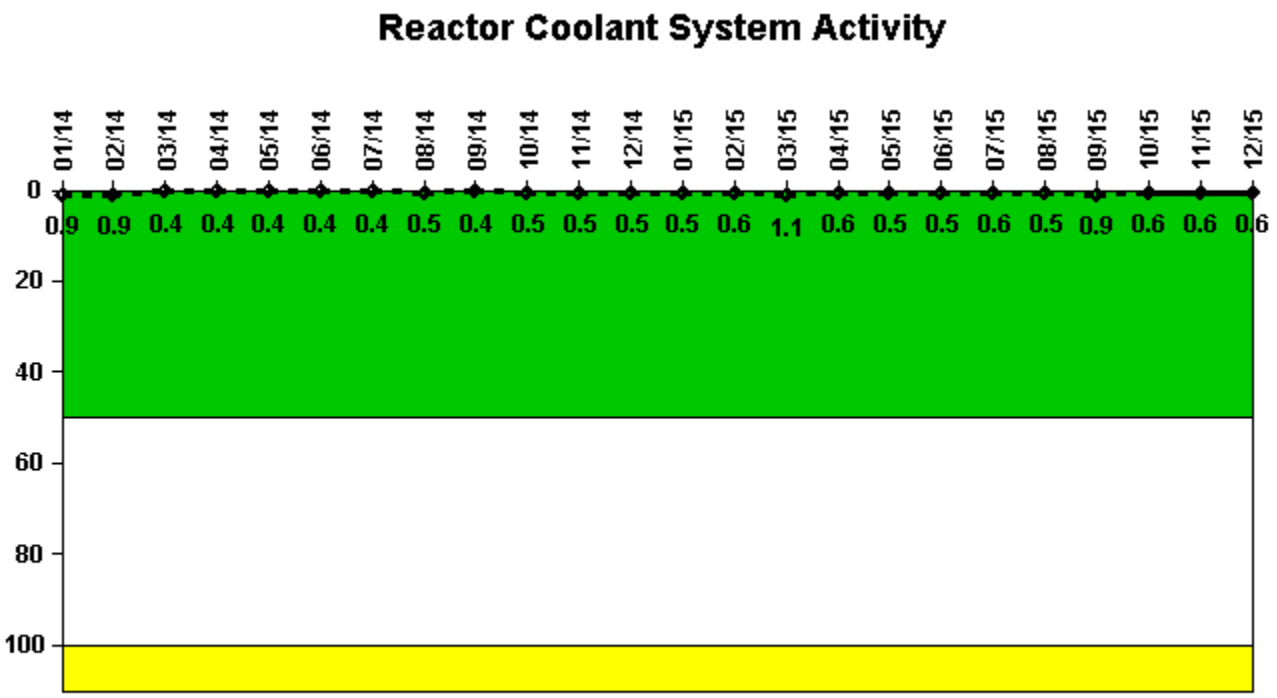



**Thresholds: White > 1.00E-6 Yellow > 1.00E-5 Red > 1.00E-4**

## Notes

| **Mitigating Systems Performance Index, Cooling Water Systems** | **1Q/14** | **2Q/14** | **3Q/14** | **4Q/14** | **1Q/15** | **2Q/15** | **3Q/15** | **4Q/15** |
|---|---|---|---|---|---|---|---|---|
| UAI (ΔCDF) | 2.61E-07 | 2.38E-07 | 2.34E-07 | 1.15E-07 | 6.01E-08 | 3.66E-08 | 3.90E-08 | 8.12E-08 |
| URI (ΔCDF) | -2.27E-07 | -2.27E-07 | -2.27E-07 | -2.06E-07 | -2.06E-07 | -2.06E-07 | -2.06E-07 | -2.06E-07 |
| PLE | NO | NO | NO | NO | NO | NO | NO | NO |
| | | | | | | | | |
| **Indicator value** | **3.40E-08** | **1.10E-08** | **6.80E-09** | **-9.10E-08** | **-1.50E-07** | **-1.70E-07** | **-1.70E-07** | **-1.20E-07** |

Licensee Comments: none

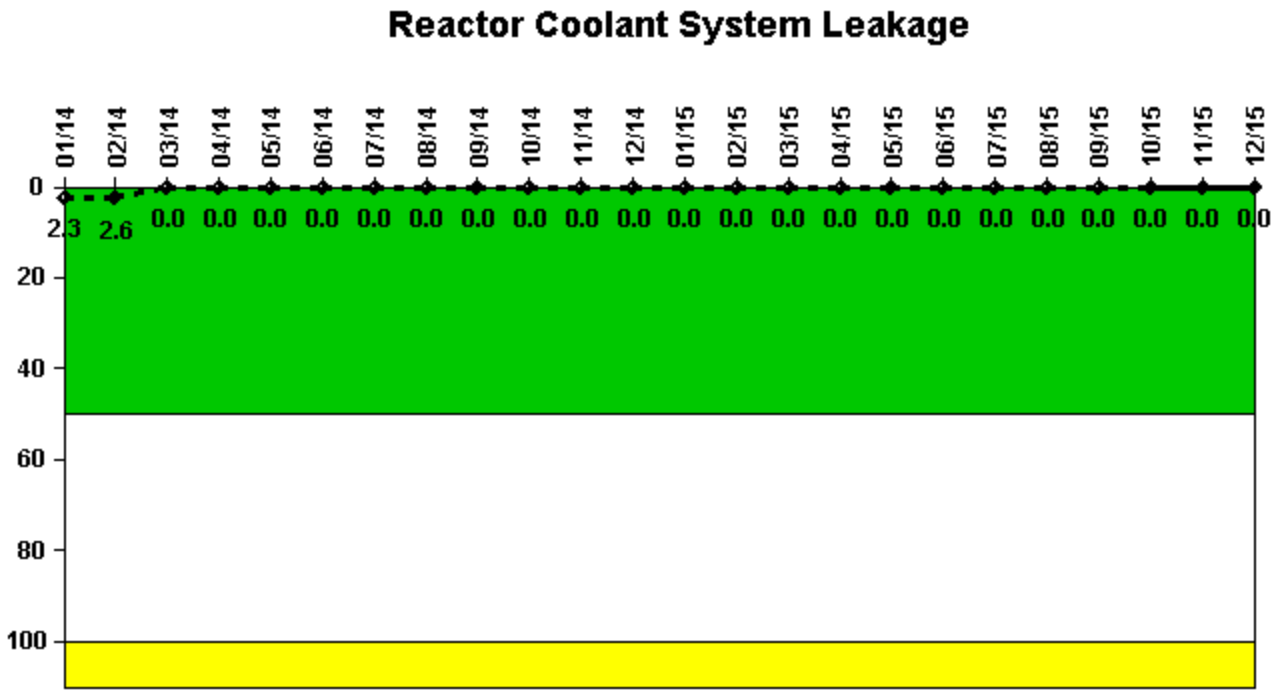



**Thresholds: White > 50.0 Yellow > 100.0**

## Notes

| **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 | 0.004470 | 0.004280 | 0.001760 | 0.002080 | 0.002130 | 0.002160 | 0.002150 | 0.002630 | 0.002200 | 0.002520 | 0.002560 | 0.002250 |
| Technical specification limit | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| | | | | | | | | | | | | |
| **Indicator value** | **0.9** | **0.9** | **0.4** | **0.4** | **0.4** | **0.4** | **0.4** | **0.5** | **0.4** | **0.5** | **0.5** | **0.5** |
| **Reactor Coolant System Activity** | **1/15** | **2/15** | **3/15** | **4/15** | **5/15** | **6/15** | **7/15** | **8/15** | **9/15** | **10/15** | **11/15** | **12/15** |
| Maximum activity | 0.002480 | 0.002830 | 0.005720 | 0.002880 | 0.002460 | 0.002590 | 0.002850 | 0.002650 | 0.004480 | 0.003010 | 0.002870 | 0.003150 |
| Technical specification limit | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| | | | | | | | | | | | | |
| **Indicator value** | **0.5** | **0.6** | **1.1** | **0.6** | **0.5** | **0.5** | **0.6** | **0.5** | **0.9** | **0.6** | **0.6** | **0.6** |

Licensee Comments: none



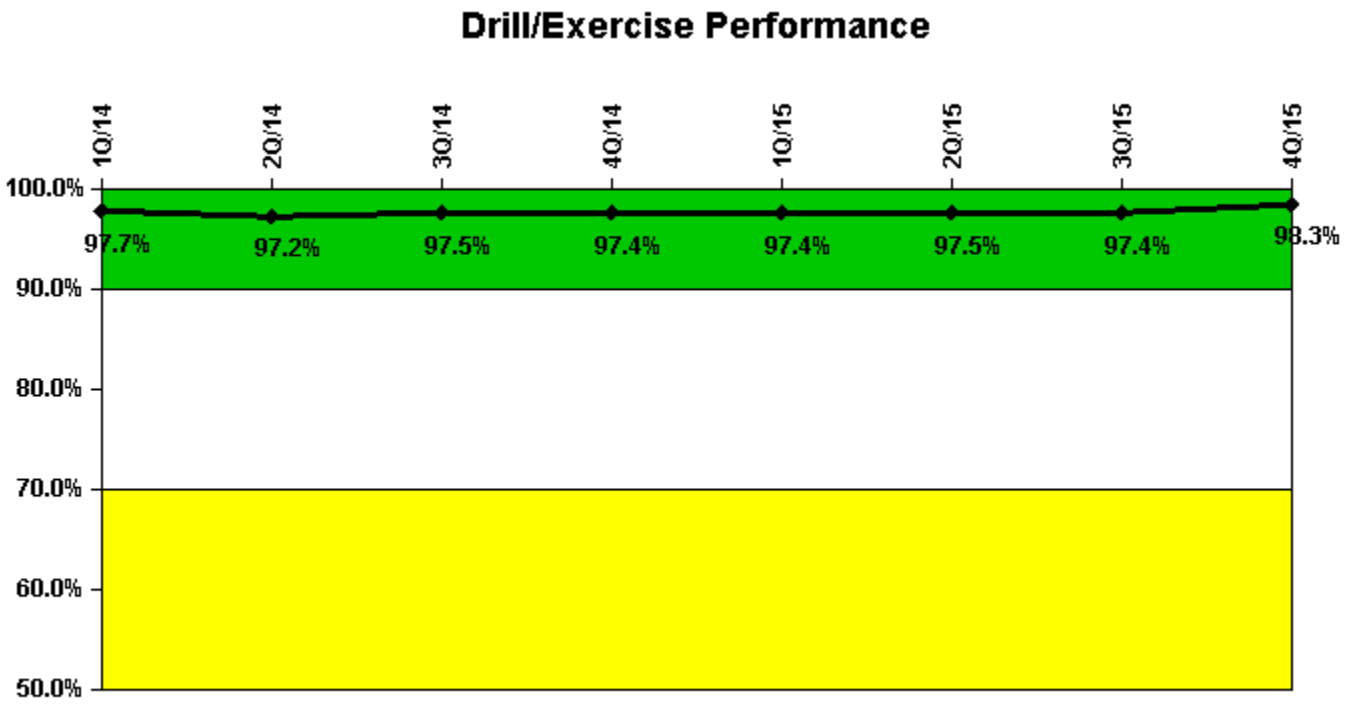

**Thresholds: White > 50.0 Yellow > 100.0**

## Notes

| 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 | 0.230 | 0.260 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Technical specification limit | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 |
| | | | | | | | | | | | | |
| **Indicator value** | **2.3** | **2.6** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** |

| Reactor Coolant System Leakage | 1/15 | 2/15 | 3/15 | 4/15 | 5/15 | 6/15 | 7/15 | 8/15 | 9/15 | 10/15 | 11/15 | 12/15 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Maximum leakage | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Technical specification limit | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 |
| | | | | | | | | | | | | |
| **Indicator value** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** |

Licensee Comments: none

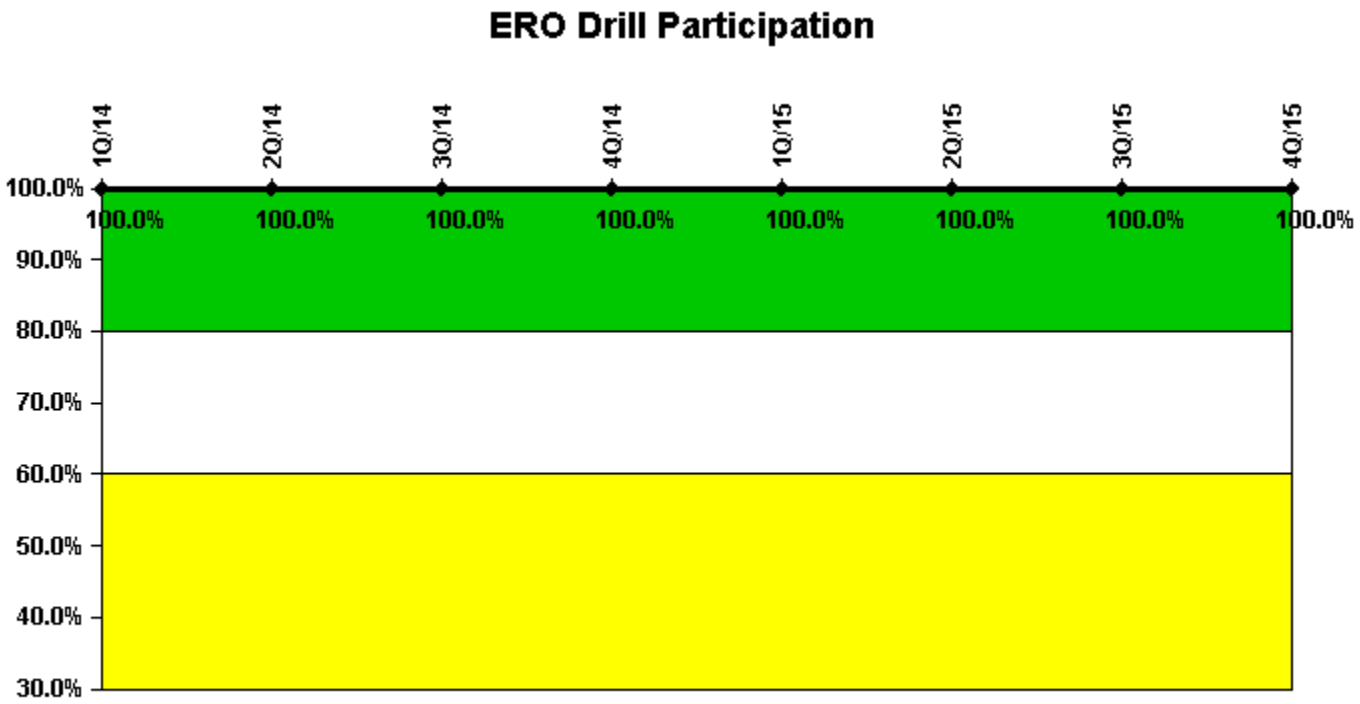



**Thresholds: White < 90.0% Yellow < 70.0%**

## Notes

| Drill/Exercise Performance | 1Q/14 | 2Q/14 | 3Q/14 | 4Q/14 | 1Q/15 | 2Q/15 | 3Q/15 | 4Q/15 |
|---|---|---|---|---|---|---|---|---|
| Successful opportunities | 4.0 | 48.0 | 51.0 | 47.0 | 9.0 | 75.0 | 44.0 | 60.0 |
| Total opportunities | 4.0 | 50.0 | 52.0 | 48.0 | 9.0 | 76.0 | 45.0 | 60.0 |
| | | | | | | | | |
| **Indicator value** | **97.7%** | **97.2%** | **97.5%** | **97.4%** | **97.4%** | **97.5%** | **97.4%** | **98.3%** |

Licensee Comments: none

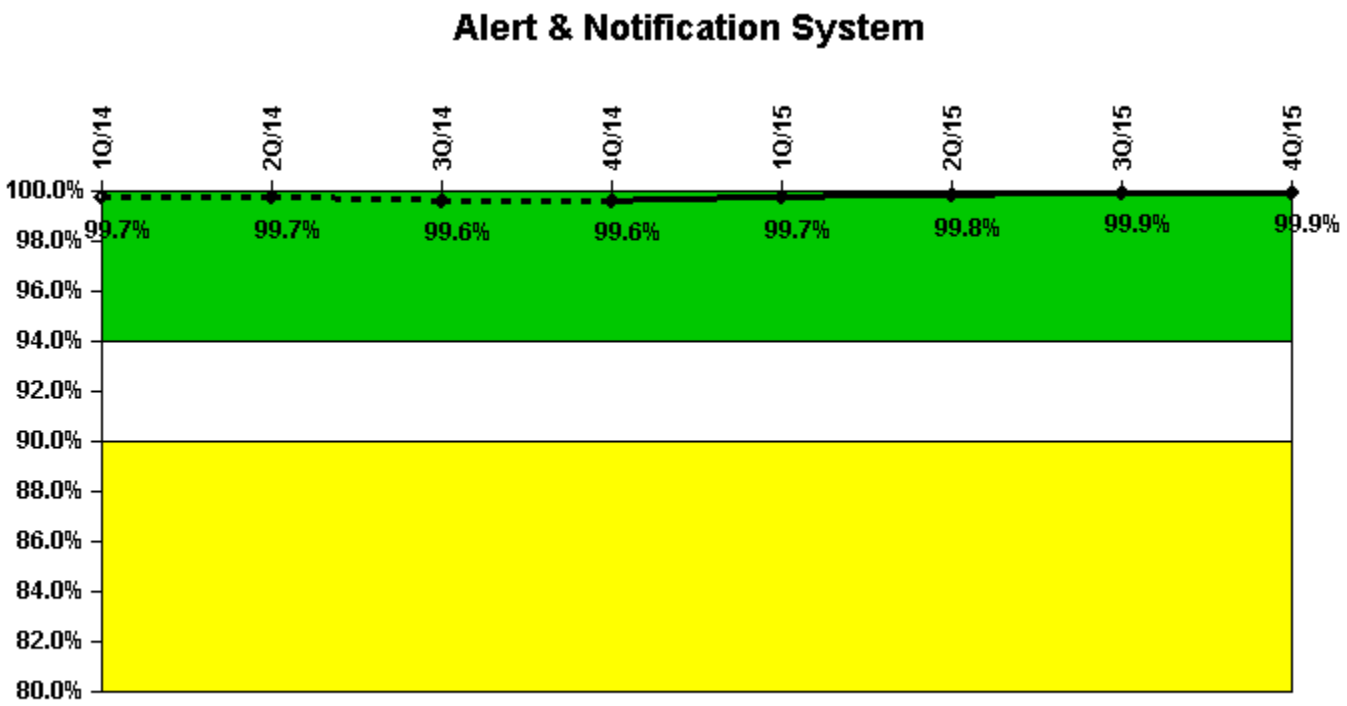



**Thresholds: White < 80.0% Yellow < 60.0%**

## Notes

| ERO Drill Participation | 1Q/14 | 2Q/14 | 3Q/14 | 4Q/14 | 1Q/15 | 2Q/15 | 3Q/15 | 4Q/15 |
|---|---|---|---|---|---|---|---|---|
| Participating Key personnel | 50.0 | 49.0 | 53.0 | 55.0 | 49.0 | 46.0 | 46.0 | 46.0 |
| Total Key personnel | 50.0 | 49.0 | 53.0 | 55.0 | 49.0 | 46.0 | 46.0 | 46.0 |
| | | | | | | | | |
| **Indicator value** | **100.0%** | **100.0%** | **100.0%** | **100.0%** | **100.0%** | **100.0%** | **100.0%** | **100.0%** |

Licensee Comments: none

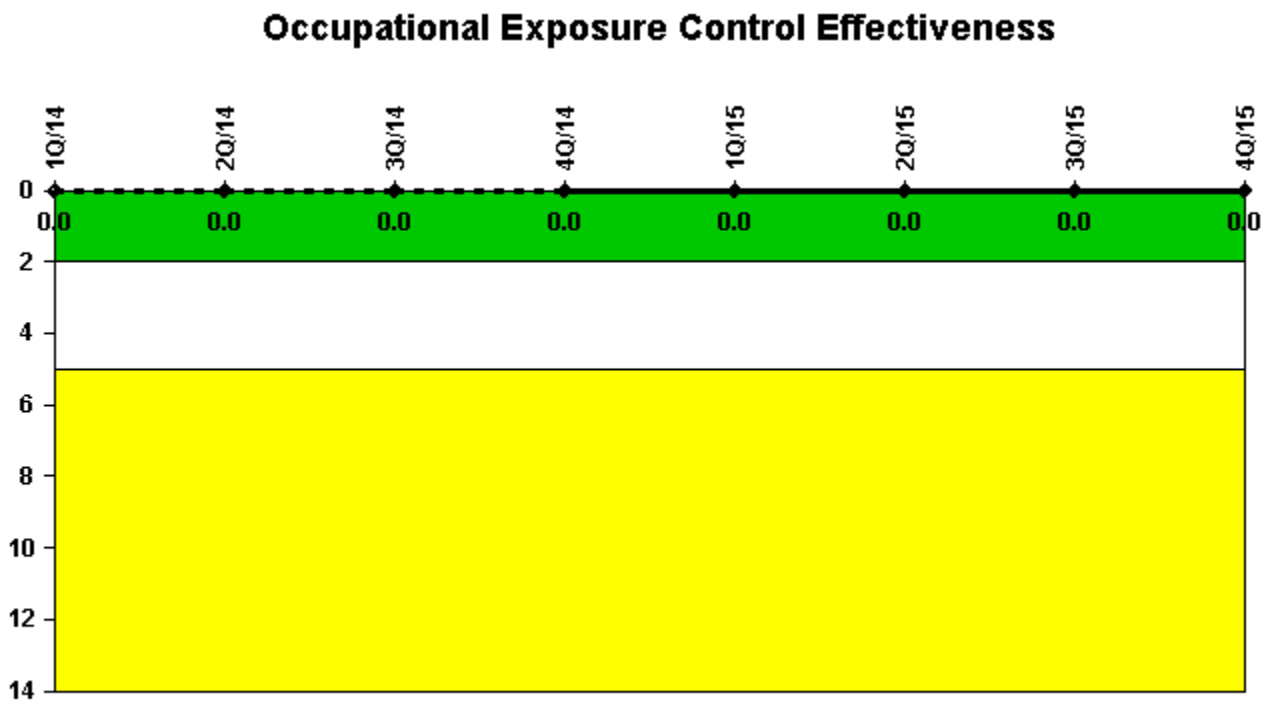



**Thresholds: White < 94.0% Yellow < 90.0%**

## Notes

| Alert & Notification System | 1Q/14 | 2Q/14 | 3Q/14 | 4Q/14 | 1Q/15 | 2Q/15 | 3Q/15 | 4Q/15 |
|---|---|---|---|---|---|---|---|---|
| Successful siren-tests | 943 | 946 | 945 | 947 | 947 | 948 | 949 | 948 |
| Total sirens-tests | 949 | 949 | 949 | 949 | 949 | 949 | 949 | 949 |
| | | | | | | | | |
| **Indicator value** | **99.7%** | **99.7%** | **99.6%** | **99.6%** | **99.7%** | **99.8%** | **99.9%** | **99.9%** |

Licensee Comments: none

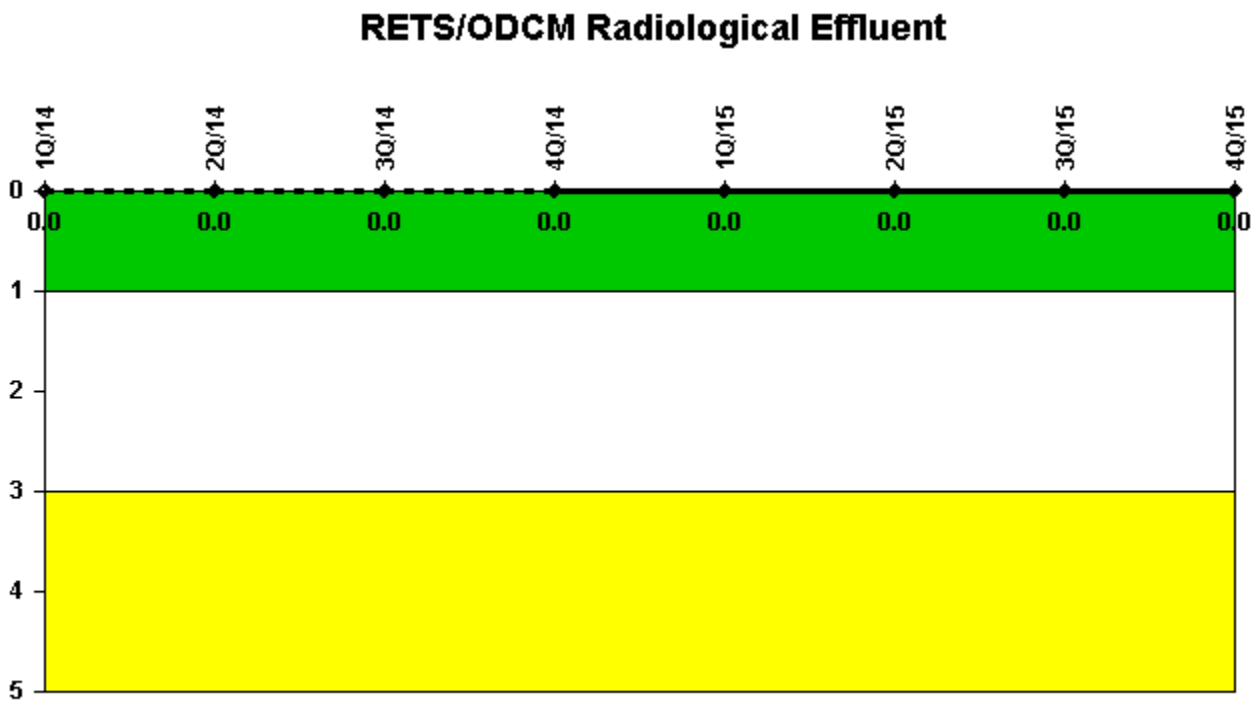



**Thresholds: White > 2.0 Yellow > 5.0**

## Notes

| Occupational Exposure Control Effectiveness | 1Q/14 | 2Q/14 | 3Q/14 | 4Q/14 | 1Q/15 | 2Q/15 | 3Q/15 | 4Q/15 |
|---|---|---|---|---|---|---|---|---|
| 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




Thresholds: White > 1.0 Yellow > 3.0

## Notes

| RETS/ODCM Radiological Effluent | 1Q/14 | 2Q/14 | 3Q/14 | 4Q/14 | 1Q/15 | 2Q/15 | 3Q/15 | 4Q/15 |
|---|---|---|---|---|---|---|---|---|
| RETS/ODCM occurrences | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | |
| **Indicator value** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** |

Licensee Comments: none

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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.

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Action Matrix Summary | Inspection Findings Summary | PI Summary | Reactor Oversight Process

*Last Modified: March 1, 2016*