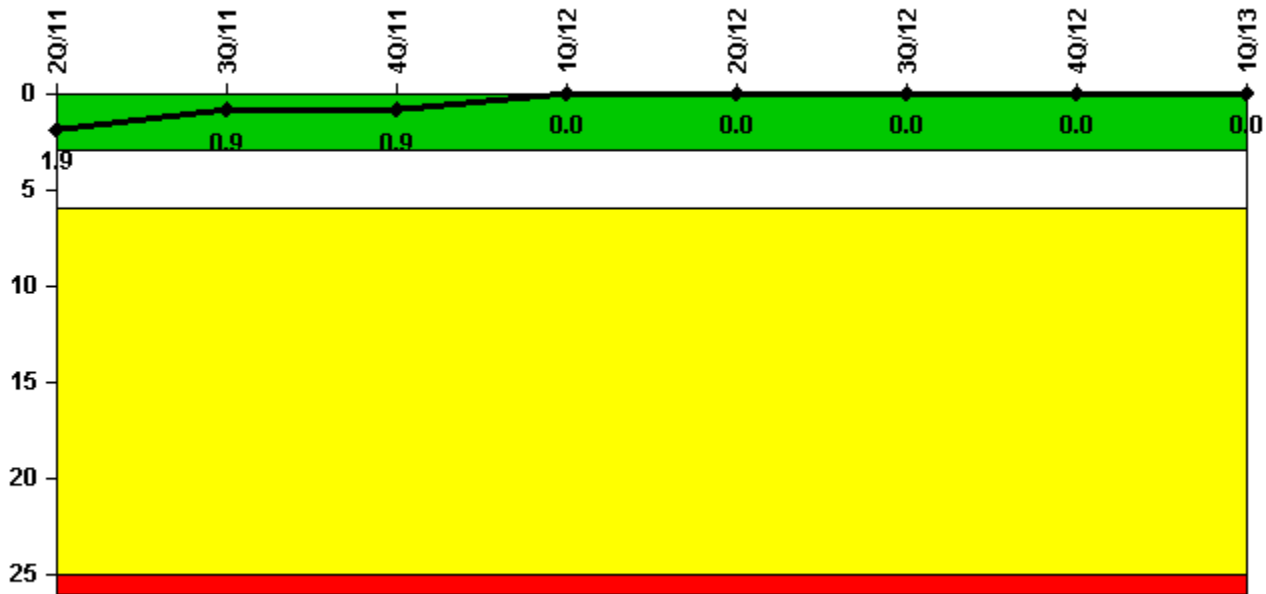


# Susquehanna 1

## 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

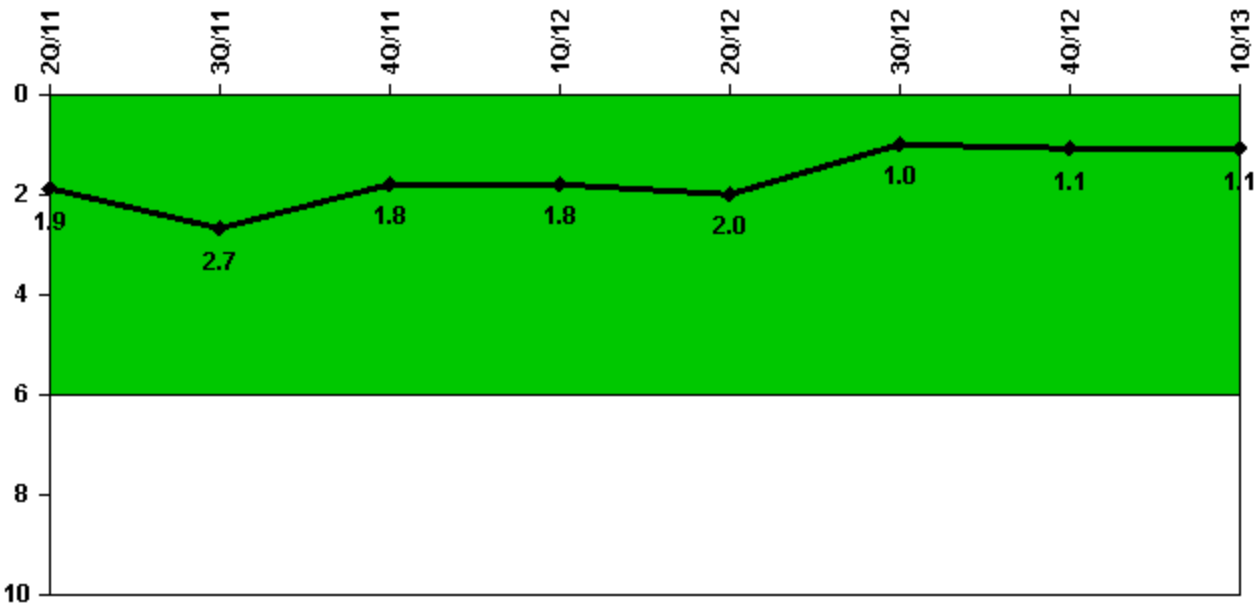
### Notes

| Unplanned Scrams per 7000 Critical Hrs | 2Q/11      | 3Q/11      | 4Q/11      | 1Q/12    | 2Q/12    | 3Q/12    | 4Q/12    | 1Q/13    |
|--|------------|------------|------------|----------|----------|----------|----------|----------|
| Unplanned scrams                       | 0          | 0          | 0          | 0        | 0        | 0        | 0        | 0        |
| Critical hours                         | 1291.5     | 2208.0     | 2209.0     | 2165.2   | 353.0    | 2208.0   | 1792.2   | 2159.0   |
| <b>Indicator value</b>                 | <b>1.9</b> | <b>0.9</b> | <b>0.9</b> | <b>0</b> | <b>0</b> | <b>0</b> | <b>0</b> | <b>0</b> |

Licensee Comments:

1Q/12: Supplemental LER's 50-387/2011-002-01, 50-387/2010-002-02, and 50-387/2010-003-03 were submitted in February 2012 to provide updated information related to the previously reported unplanned scrams at Susquehanna Unit 1 in April, May, July 2010, and January 2011.

### Unplanned Power Changes per 7000 Critical Hrs



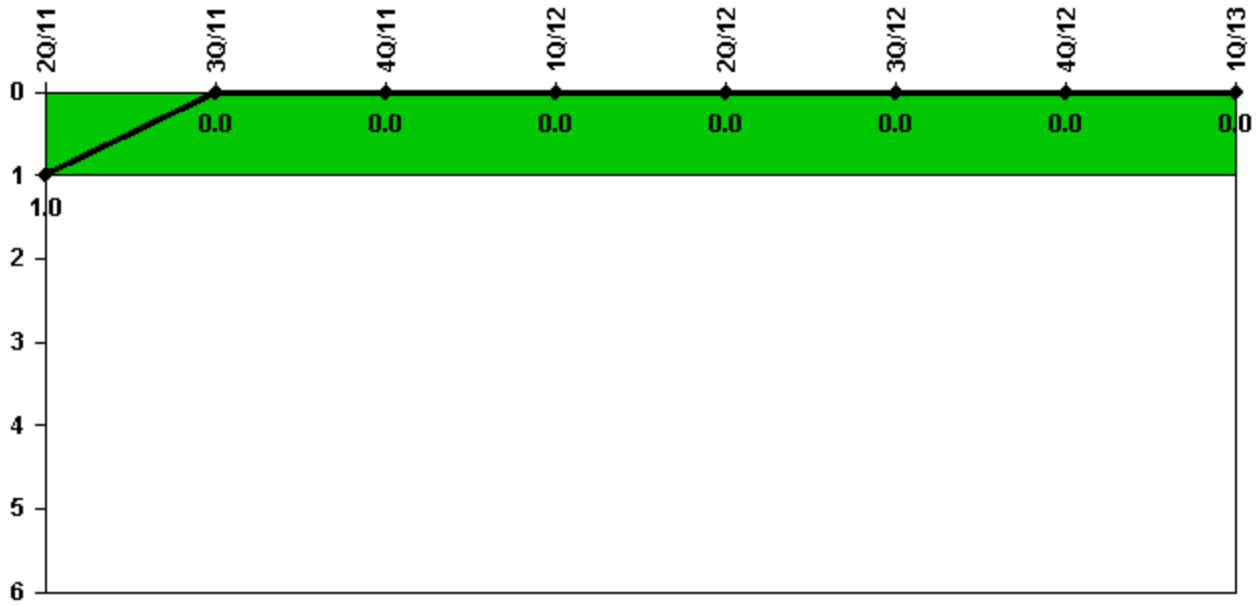
Thresholds: White > 6.0

#### 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                       | 1.0        | 1.0        | 0          | 0          | 1.0        | 0          | 0          | 0          |
| Critical hours                                | 1291.5     | 2208.0     | 2209.0     | 2165.2     | 353.0      | 2208.0     | 1792.2     | 2159.0     |
| <b>Indicator value</b>                        | <b>1.9</b> | <b>2.7</b> | <b>1.8</b> | <b>1.8</b> | <b>2.0</b> | <b>1.0</b> | <b>1.1</b> | <b>1.1</b> |

Licensee Comments: none

### Unplanned Scrams with Complications



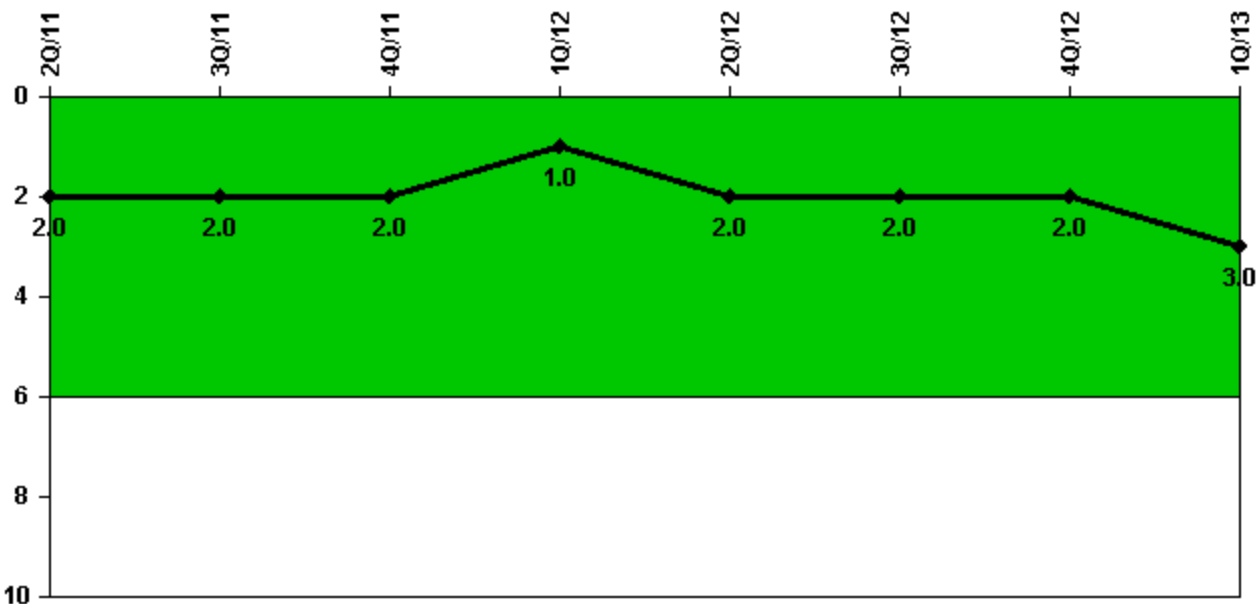
Thresholds: White > 1.0

#### Notes

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

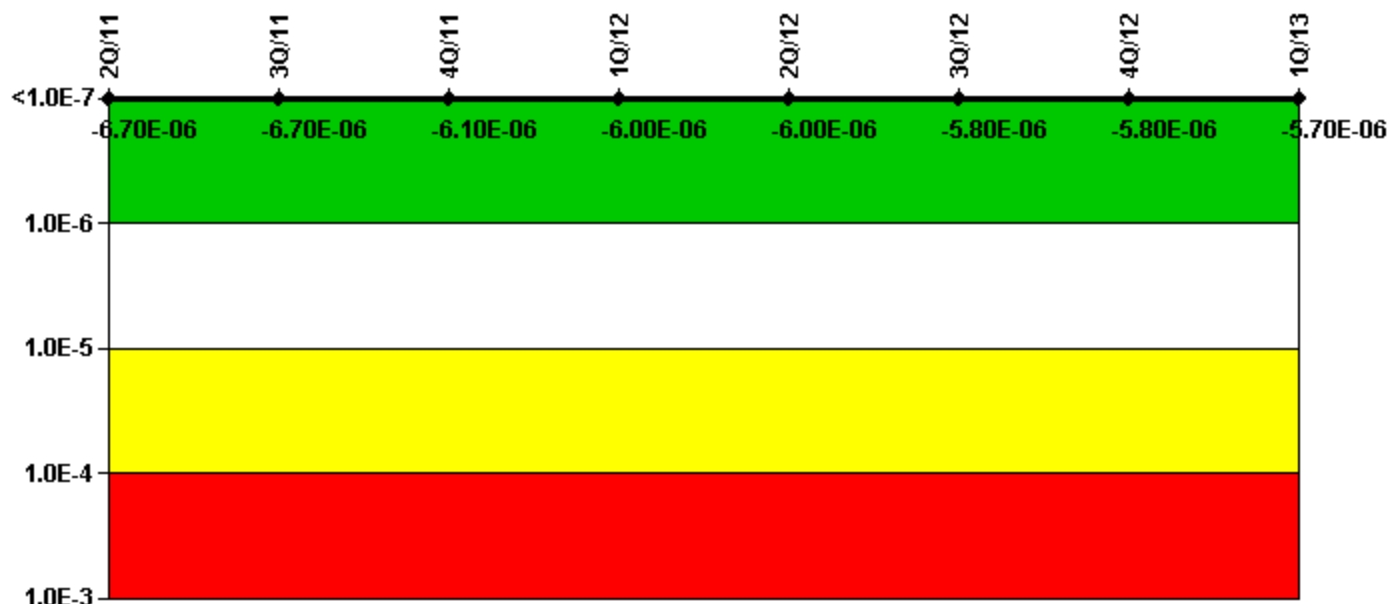
Licensee Comments:

1Q/13: LER 387/2012-010-00:Both Trains of Control Structure HVAC at Susquehanna Were Rendered Inoperable, submitted on February 12, 2013

2Q/12: LER 387/2012-001-00, Both Control Structure Chillers Inoperable, was submitted on May 23, 2012. LER 387/2012-002-00, "B" Control Structure Chiller Inoperable Concurrent with "A" Emergency Diesel Generator Out of Service, was submitted to the NRC on June 4, 2012.

2Q/11: LER 50-387/2011-003, HPCI Valve Packing, was submitted to the NRC on April 26, 2011.

### 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 ( $\Delta$ CDF)   | -2.11E-08 | 3.96E-10  | 1.92E-07  | 1.92E-07  | 2.13E-07  | 2.04E-07  | 2.06E-07  | 2.14E-07  |
| URI ( $\Delta$ CDF)   | -6.72E-06 | -6.75E-06 | -6.25E-06 | -6.24E-06 | -6.18E-06 | -6.03E-06 | -5.96E-06 | -5.87E-06 |
| PLE   | NO        | NO        | NO        | NO        | NO        | NO        | NO        | NO        |
| Indicator value   | -6.70E-06 | -6.70E-06 | -6.10E-06 | -6.00E-06 | -6.00E-06 | -5.80E-06 | -5.80E-06 | -5.70E-06 |

#### Licensee Comments:

1Q/13: Risk Cap Invoked.

4Q/12: Risk Cap Invoked.

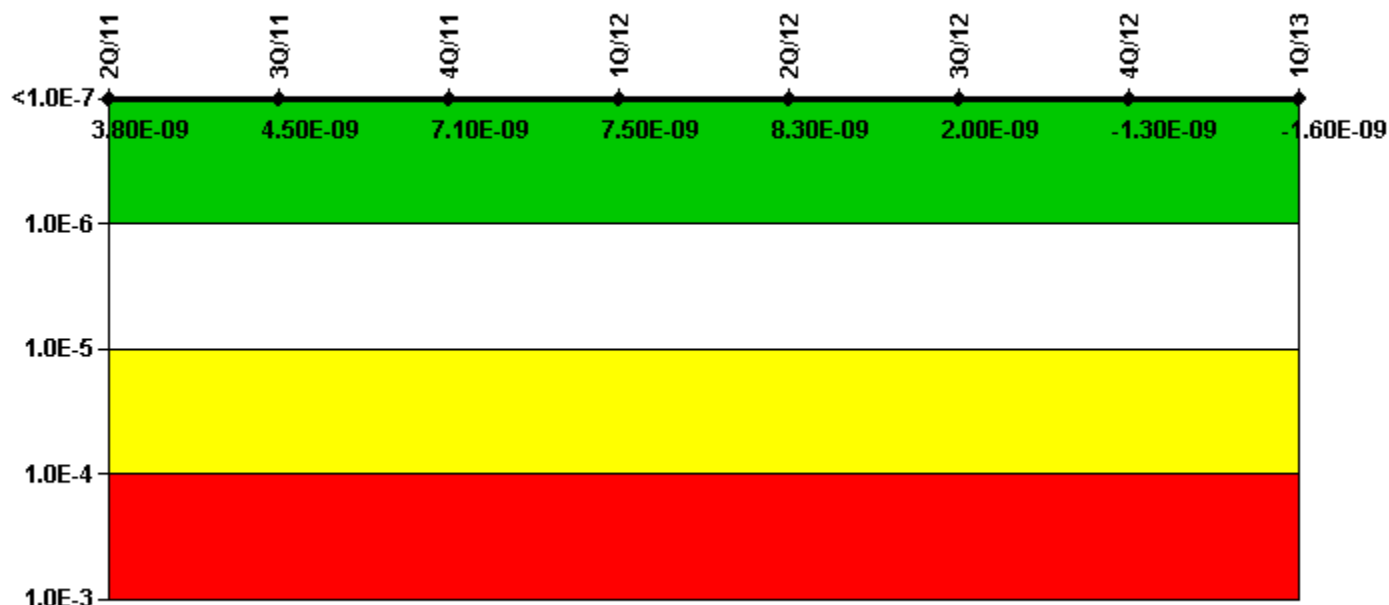
3Q/12: Risk Cap Invoked.

2Q/12: Risk Cap Invoked.

1Q/12: Risk Cap Invoked.

4Q/11: Risk Cap Invoked. The 3Q2011 Emergency AC Power System data is revised to include additional unavailable hours for the "C" diesel generator in September 2011. There is no safety significance associated with this change. The PI color was green before the data revision and it remains green after the change.

### Mitigating Systems Performance Index, High Pressure Injection System



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

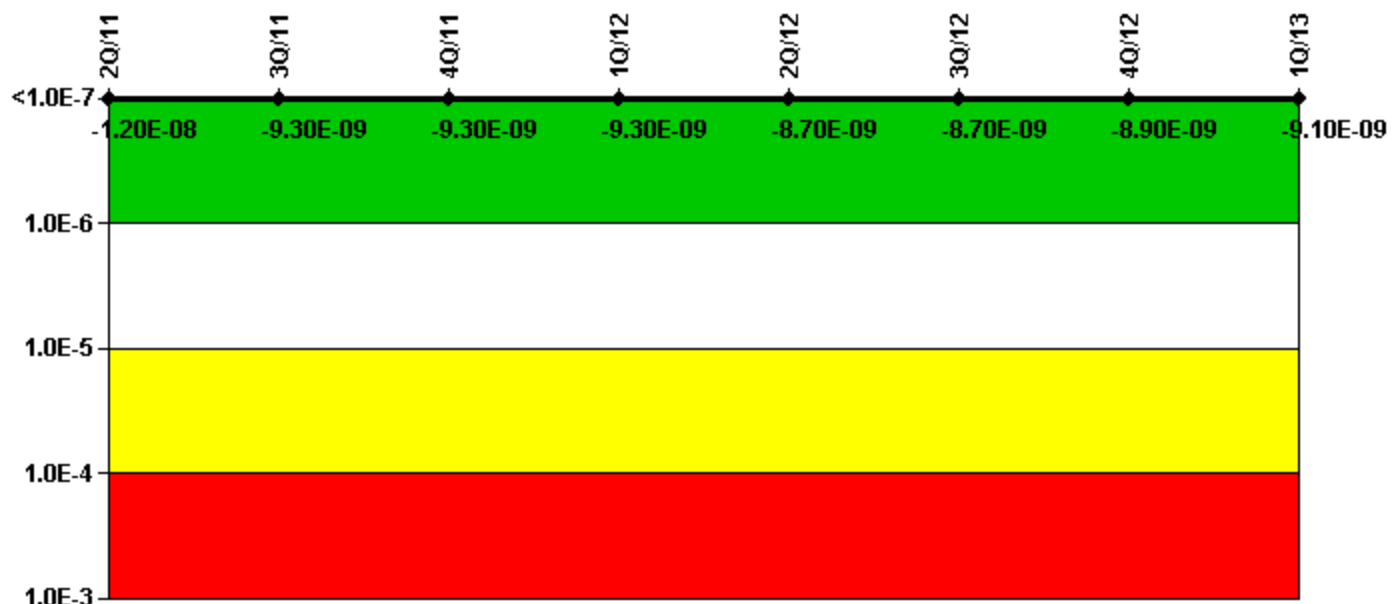
#### Notes

| 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)  | 1.04E-08  | 1.11E-08  | 1.40E-08  | 1.42E-08  | 1.50E-08  | 8.70E-09  | 5.38E-09  | 5.07E-09  |
| URI ( $\Delta$ CDF)  | -6.61E-09 | -6.61E-09 | -6.89E-09 | -6.67E-09 | -6.71E-09 | -6.71E-09 | -6.71E-09 | -6.65E-09 |
| PLE  | NO        | NO        | NO        | NO        | NO        | NO        | NO        | NO        |
| Indicator value  | 3.80E-09  | 4.50E-09  | 7.10E-09  | 7.50E-09  | 8.30E-09  | 2.00E-09  | -1.30E-09 | -1.60E-09 |

Licensee Comments:

4Q/11: The 3Q2010 data is revised due to a data entry error for ESF Non-Test demands. There is no safety significance associated with this change. The PI color was green before the data revision and it remains green after the change

### Mitigating Systems Performance Index, Heat Removal System



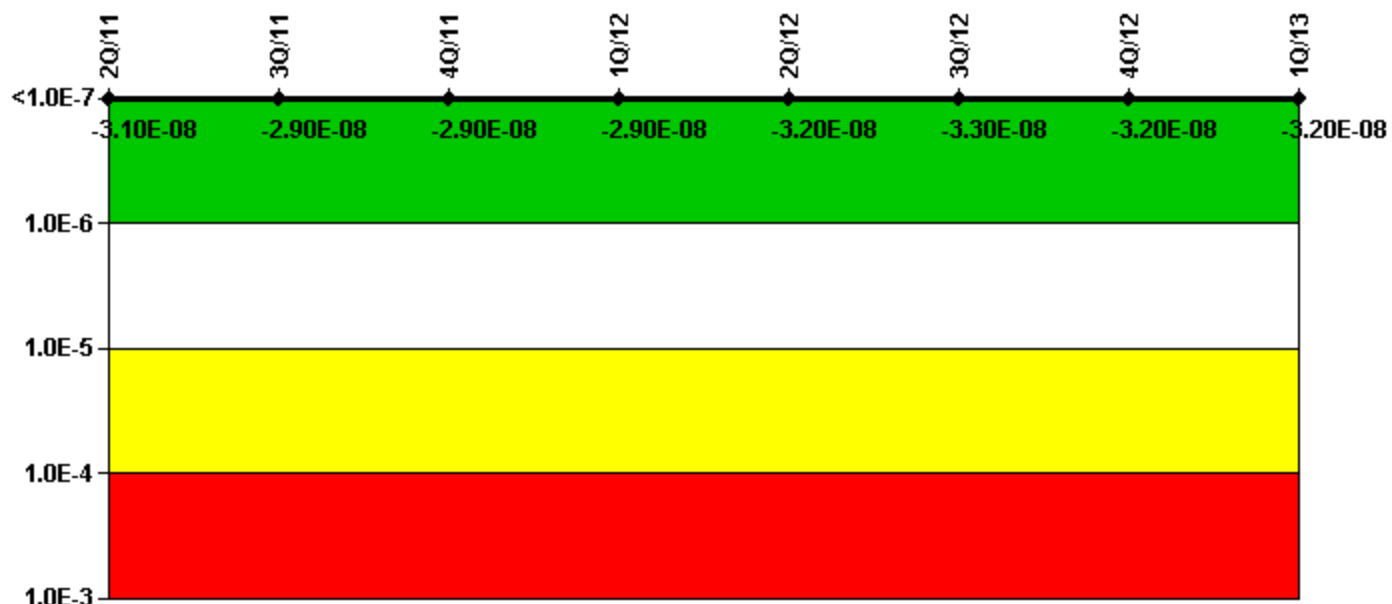
Thresholds: White > 1.00E-6 Yellow > 1.00E-5 Red > 1.00E-4

#### 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 ( $\Delta$ CDF)                                       | -4.06E-09 | -8.88E-10 | -8.88E-10 | -8.89E-10 | -2.68E-10 | -2.62E-10 | -5.55E-10 | -6.68E-10 |
| URI ( $\Delta$ CDF)                                       | -8.14E-09 | -8.39E-09 | -8.39E-09 | -8.39E-09 | -8.39E-09 | -8.39E-09 | -8.39E-09 | -8.39E-09 |
| PLE   | NO        | NO        | NO        | NO        | NO        | NO        | NO        | NO        |
| Indicator value   | -1.20E-08 | -9.30E-09 | -9.30E-09 | -9.30E-09 | -8.70E-09 | -8.70E-09 | -8.90E-09 | -9.10E-09 |

Licensee Comments: none

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



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

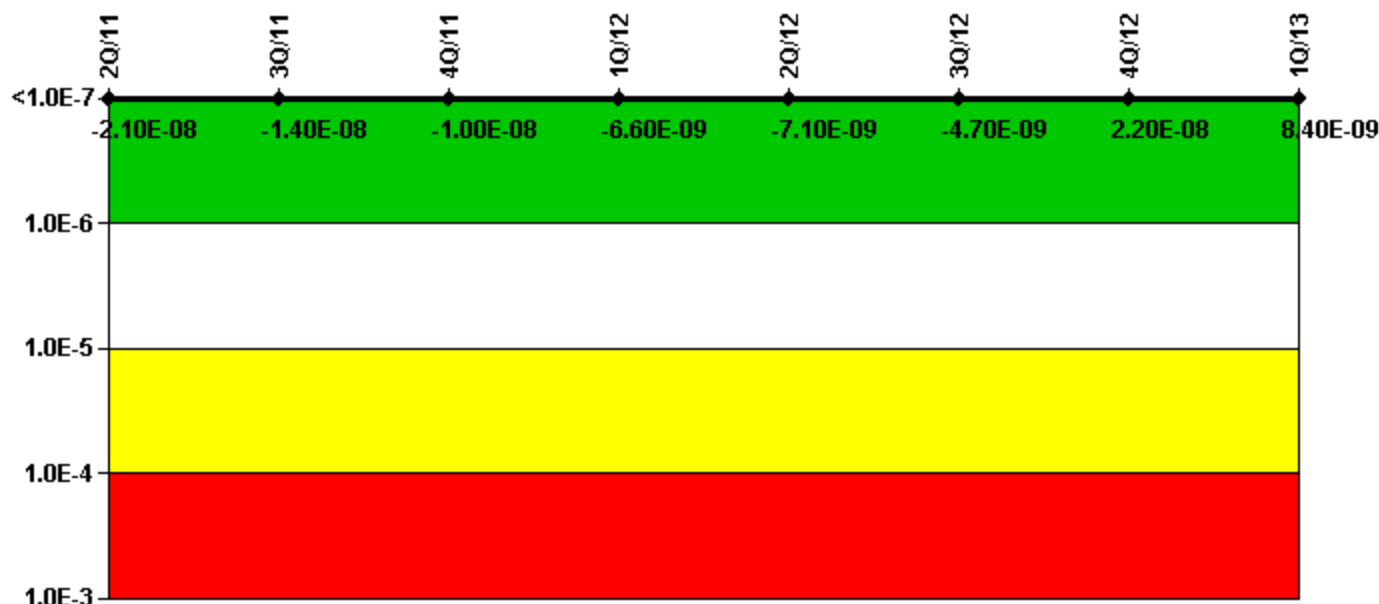
#### Notes

| Mitigating Systems Performance Index, Residual Heat Removal System | 2Q/11     | 3Q/11     | 4Q/11     | 1Q/12     | 2Q/12     | 3Q/12     | 4Q/12     | 1Q/13     |
|--|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| UAI ( $\Delta$ CDF)  | -8.44E-10 | 1.85E-09  | 1.85E-09  | 1.85E-09  | 2.25E-09  | 1.38E-09  | 2.40E-09  | 1.58E-09  |
| URI ( $\Delta$ CDF)  | -2.97E-08 | -3.06E-08 | -3.07E-08 | -3.13E-08 | -3.40E-08 | -3.40E-08 | -3.43E-08 | -3.34E-08 |
| PLE  | NO        | NO        | NO        | NO        | NO        | NO        | NO        | NO        |
| Indicator value  | -3.10E-08 | -2.90E-08 | -2.90E-08 | -2.90E-08 | -3.20E-08 | -3.30E-08 | -3.20E-08 | -3.20E-08 |

Licensee Comments: none



## Mitigating Systems Performance Index, Cooling Water Systems



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

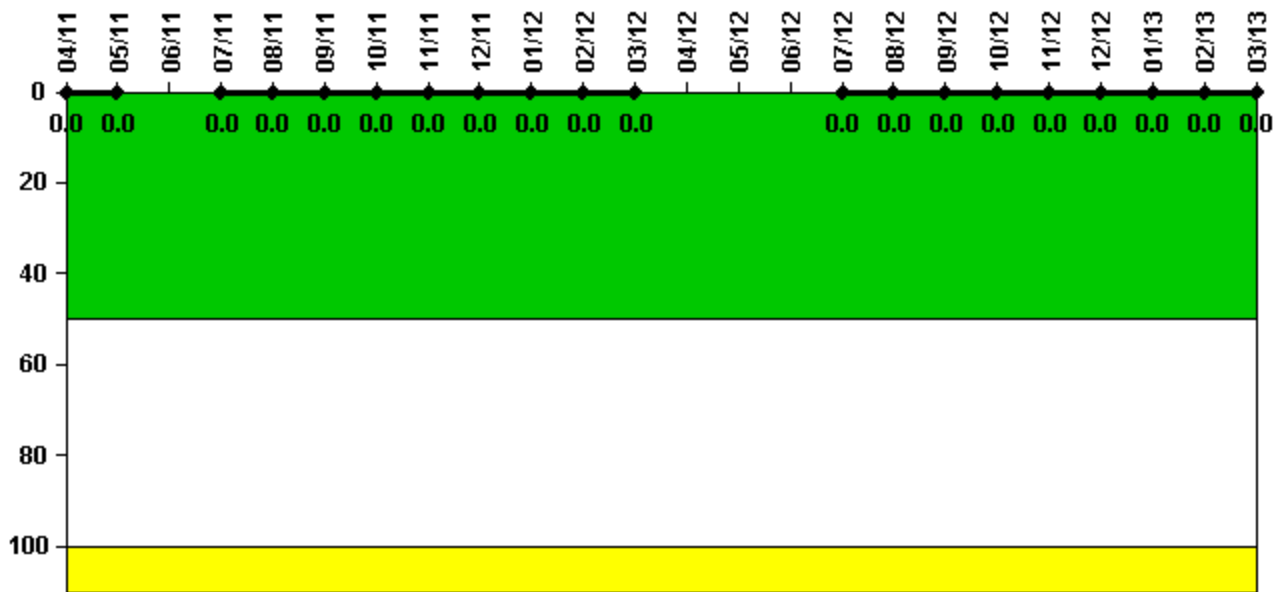
### Notes

| Mitigating Systems Performance Index, Cooling Water Systems | 2Q/11     | 3Q/11     | 4Q/11     | 1Q/12     | 2Q/12     | 3Q/12     | 4Q/12     | 1Q/13     |
|---|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| UAI ( $\Delta$ CDF)   | 1.10E-08  | 1.85E-08  | 2.25E-08  | 2.64E-08  | 2.68E-08  | 2.94E-08  | 5.67E-08  | 4.30E-08  |
| URI ( $\Delta$ CDF)   | -3.24E-08 | -3.29E-08 | -3.30E-08 | -3.30E-08 | -3.38E-08 | -3.42E-08 | -3.47E-08 | -3.46E-08 |
| PLE   | NO        | NO        | NO        | NO        | NO        | NO        | NO        | NO        |
| Indicator value   | -2.10E-08 | -1.40E-08 | -1.00E-08 | -6.60E-09 | -7.10E-09 | -4.70E-09 | 2.20E-08  | 8.40E-09  |

Licensee Comments:

4Q/11: Previously reported data for 3Q2009, 2Q2010, and 3Q2010 is revised for operational non-test strokes of valves HV01224A1 and HV01224B1. This change provides more conservative values for the stroke count. There is no safety significance associated with this change. The PI color was green before the data revision and it remains green after the change.

### Reactor Coolant System Activity



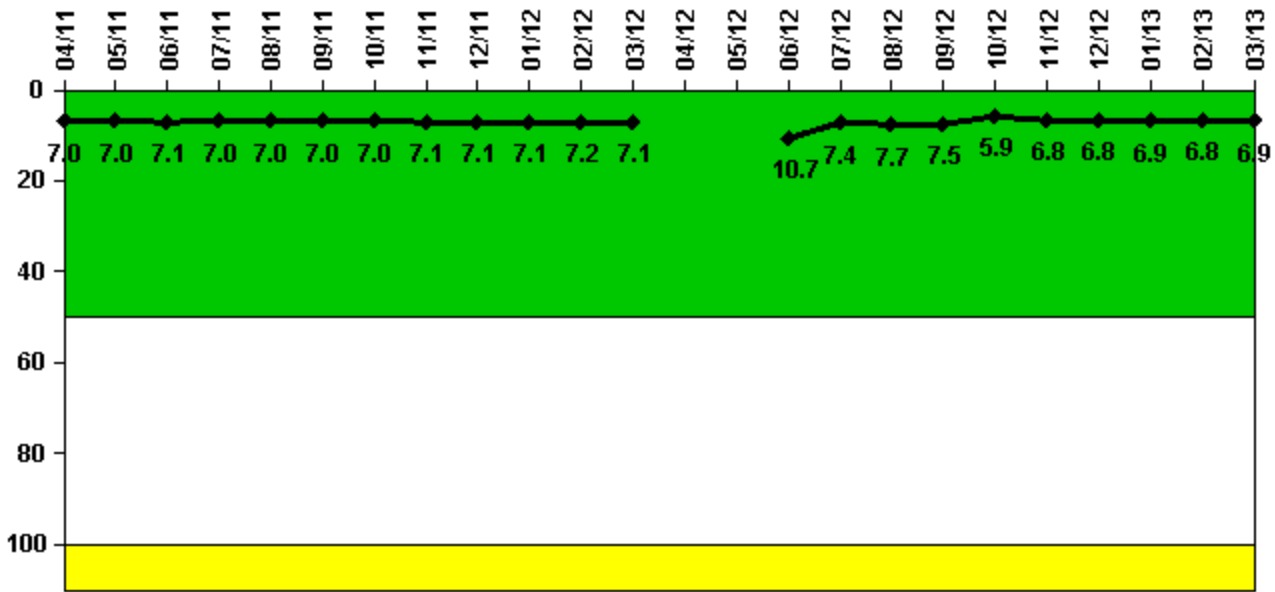
Thresholds: White > 50.0 Yellow > 100.0

#### 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                | 0.000007 | 0.000008 | N/A  | 0.000006 | 0.000007 | 0.000007 | 0.000007 | 0.000007 | 0.000007 | 0.000008 | 0.000008 | 0.000007 |
| Technical specification limit   | 0.2      | 0.2      | 0.2  | 0.2      | 0.2      | 0.2      | 0.2      | 0.2      | 0.2      | 0.2      | 0.2      | 0.2      |
| Indicator value                 | 0        | 0        | N/A  | 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                | N/A      | N/A      | N/A  | 0.000003 | 0.000005 | 0.000006 | 0.000005 | 0.000006 | 0.000007 | 0.000006 | 0.000007 | 0.000007 |
| Technical specification limit   | 0.2      | 0.2      | 0.2  | 0.2      | 0.2      | 0.2      | 0.2      | 0.2      | 0.2      | 0.2      | 0.2      | 0.2      |
| Indicator value                 | N/A      | N/A      | N/A  | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |

Licensee Comments: none

### Reactor Coolant System Leakage



Thresholds: White > 50.0 Yellow > 100.0

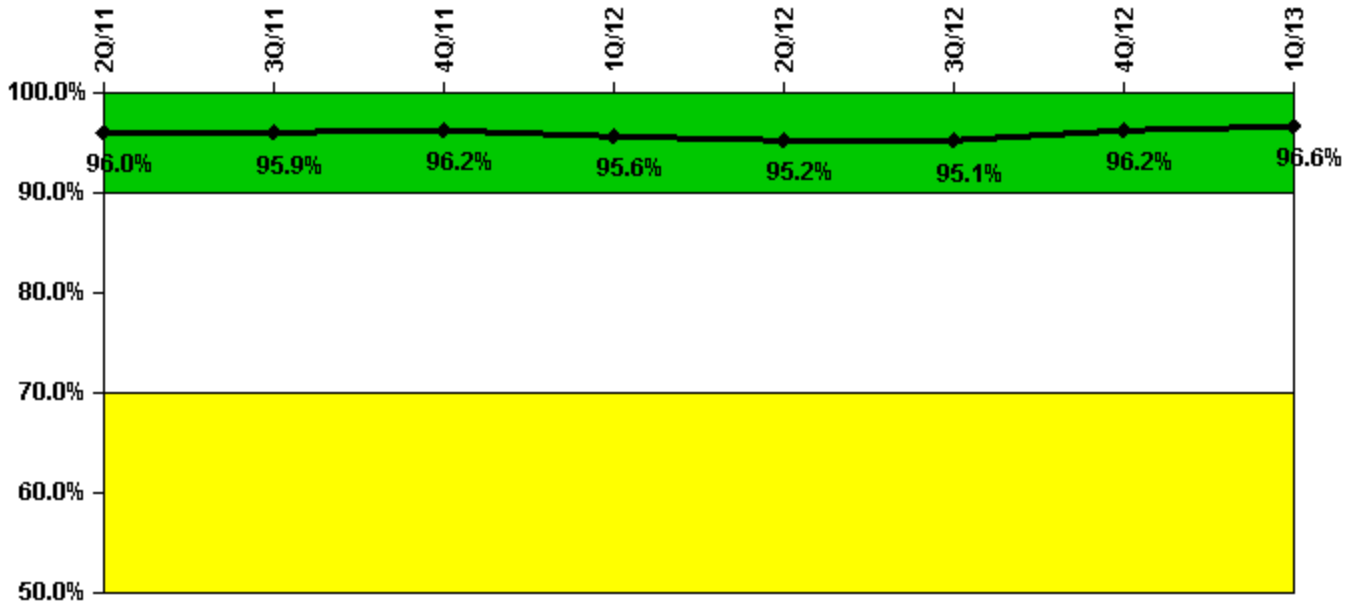
#### Notes

| Reactor Coolant System Leakage | 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                | 1.740 | 1.760 | 1.780 | 1.740 | 1.750 | 1.760 | 1.760 | 1.770 | 1.770 | 1.770 | 1.790 | 1.780 |
| Technical specification limit  | 25.0  | 25.0  | 25.0  | 25.0  | 25.0  | 25.0  | 25.0  | 25.0  | 25.0  | 25.0  | 25.0  | 25.0  |
| Indicator value                | 7.0   | 7.0   | 7.1   | 7.0   | 7.0   | 7.0   | 7.0   | 7.1   | 7.1   | 7.1   | 7.2   | 7.1   |
| 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                | N/A   | N/A   | 2.680 | 1.860 | 1.920 | 1.880 | 1.478 | 1.710 | 1.700 | 1.730 | 1.710 | 1.720 |
| Technical specification limit  | 25.0  | 25.0  | 25.0  | 25.0  | 25.0  | 25.0  | 25.0  | 25.0  | 25.0  | 25.0  | 25.0  | 25.0  |
| Indicator value                | N/A   | N/A   | 10.7  | 7.4   | 7.7   | 7.5   | 5.9   | 6.8   | 6.8   | 6.9   | 6.8   | 6.9   |

#### Licensee Comments:

12/11: Previously reported data for Reactor Coolant System Leakage for the period from 1Q2010 through 2Q2011 is revised to provide the correct value for maximum monthly identified leakage. There is no safety significance associated with this change. The PI color was green before the data revision and it remains green after the change.

### Drill/Exercise Performance



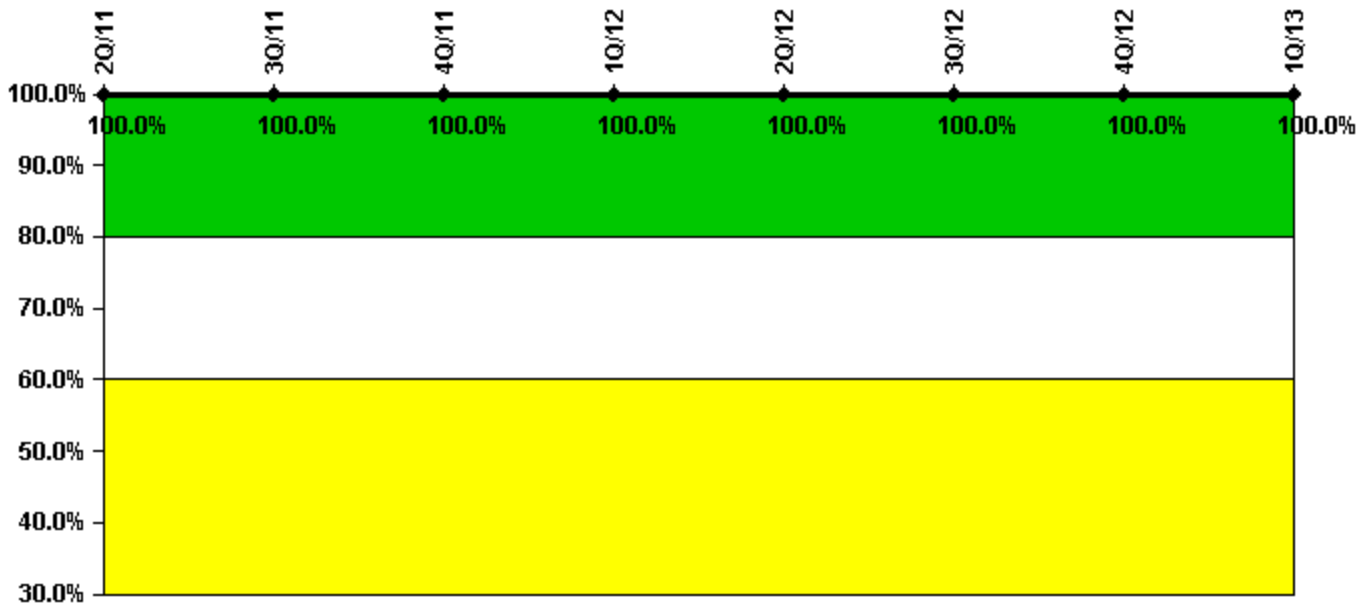
Thresholds: White < 90.0% Yellow < 70.0%

#### Notes

| Drill/Exercise Performance | 2Q/11        | 3Q/11        | 4Q/11        | 1Q/12        | 2Q/12        | 3Q/12        | 4Q/12        | 1Q/13        |
|----------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Successful opportunities   | 21.0         | 21.0         | 10.0         | 23.0         | 12.0         | 32.0         | 7.0          | 18.0         |
| Total opportunities        | 21.0         | 22.0         | 10.0         | 25.0         | 12.0         | 33.0         | 8.0          | 18.0         |
|                            |              |              |              |              |              |              |              |              |
| <b>Indicator value</b>     | <b>96.0%</b> | <b>95.9%</b> | <b>96.2%</b> | <b>95.6%</b> | <b>95.2%</b> | <b>95.1%</b> | <b>96.2%</b> | <b>96.6%</b> |

Licensee Comments: none

### ERO Drill Participation



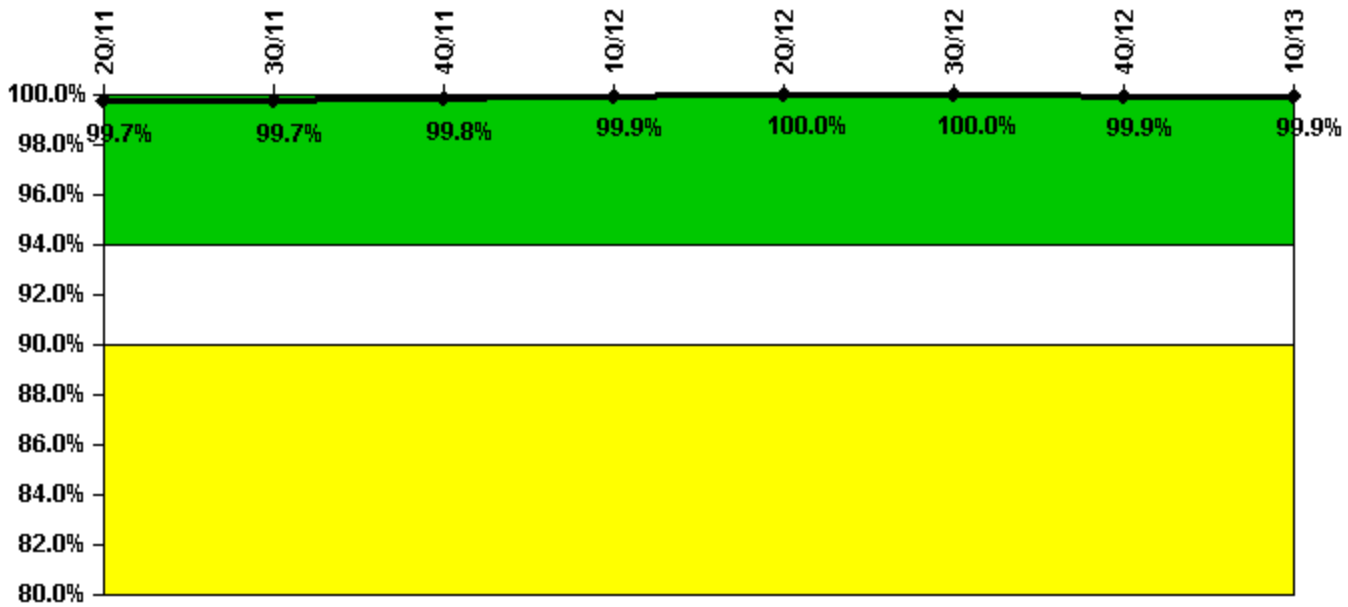
Thresholds: White < 80.0% Yellow < 60.0%

#### Notes

| ERO Drill Participation     | 2Q/11  | 3Q/11  | 4Q/11  | 1Q/12  | 2Q/12  | 3Q/12  | 4Q/12  | 1Q/13  |
|-----------------------------|--------|--------|--------|--------|--------|--------|--------|--------|
| Participating Key personnel | 74.0   | 72.0   | 71.0   | 75.0   | 75.0   | 74.0   | 77.0   | 80.0   |
| Total Key personnel         | 74.0   | 72.0   | 71.0   | 75.0   | 75.0   | 74.0   | 77.0   | 80.0   |
| Indicator value             | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |

Licensee Comments: none

### Alert & Notification System



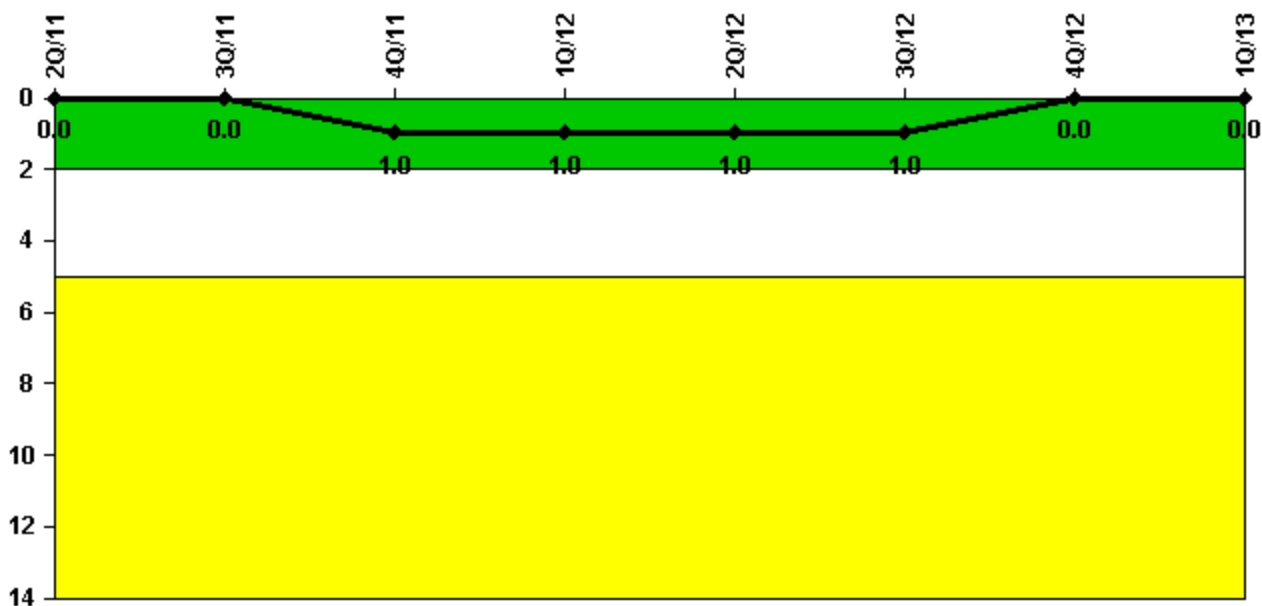
Thresholds: White < 94.0% Yellow < 90.0%

#### Notes

| Alert & Notification System | 2Q/11 | 3Q/11 | 4Q/11 | 1Q/12 | 2Q/12  | 3Q/12  | 4Q/12 | 1Q/13 |
|-----------------------------|-------|-------|-------|-------|--------|--------|-------|-------|
| Successful siren-tests      | 606   | 607   | 608   | 608   | 532    | 607    | 531   | 608   |
| Total sirens-tests          | 608   | 608   | 608   | 608   | 532    | 608    | 532   | 608   |
| Indicator value             | 99.7% | 99.7% | 99.8% | 99.9% | 100.0% | 100.0% | 99.9% | 99.9% |

Licensee Comments: none

### Occupational Exposure Control Effectiveness



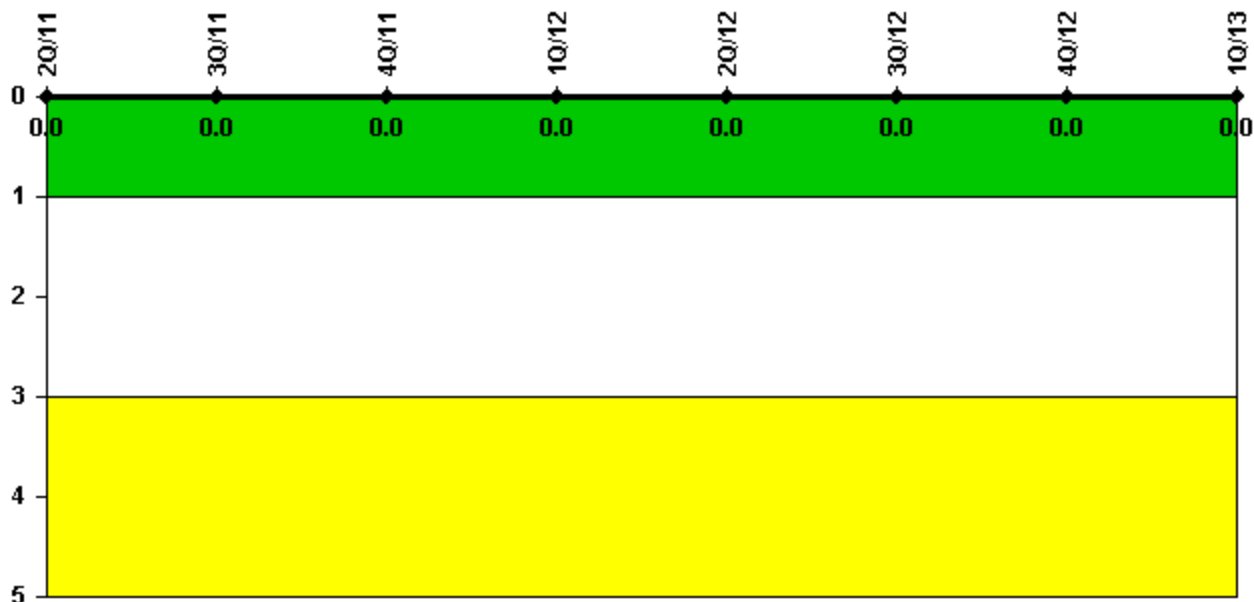
Thresholds: White > 2.0 Yellow > 5.0

#### 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        | 1        | 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>0</b> | <b>0</b> | <b>1</b> | <b>1</b> | <b>1</b> | <b>1</b> | <b>0</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*