

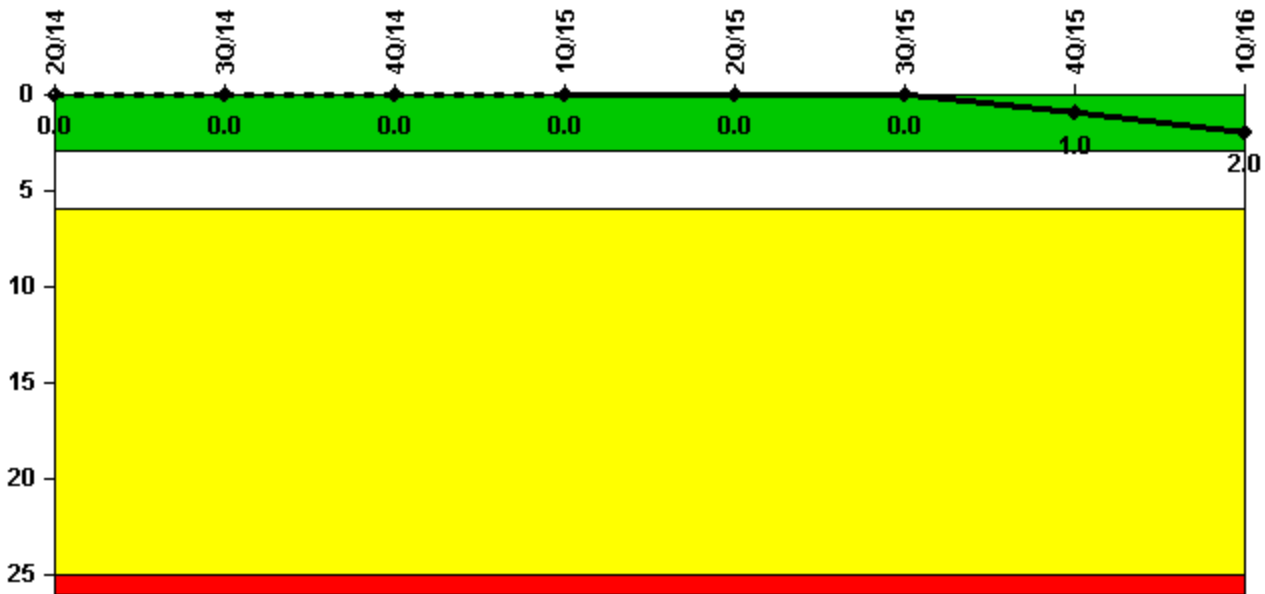
# South Texas 1

## 1Q/2016 Performance Indicators

The solid trend line represents the current reporting period.

Licensee's General Comments: none

### Unplanned Scrams per 7000 Critical Hrs



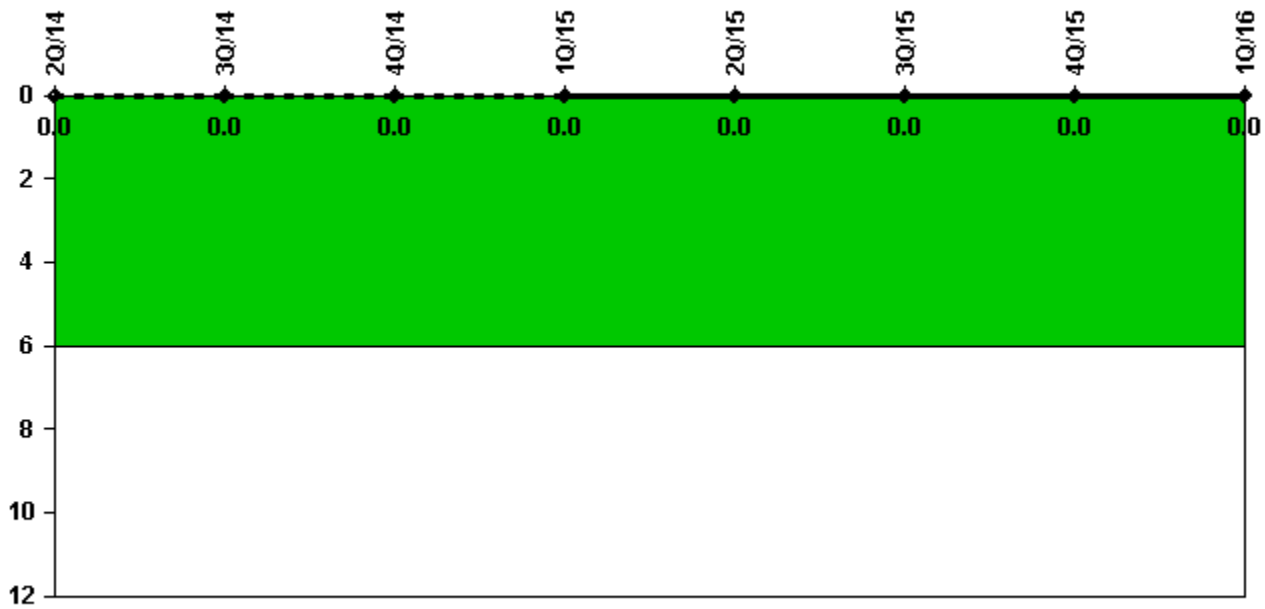
Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

### Notes

| Unplanned Scrams per 7000 Critical Hrs | 2Q/14 | 3Q/14  | 4Q/14  | 1Q/15  | 2Q/15  | 3Q/15  | 4Q/15 | 1Q/16  |
|--|-------|--------|--------|--------|--------|--------|-------|--------|
| Unplanned scrams                       | 0     | 0      | 0      | 0      | 0      | 0      | 1.0   | 1.0    |
| Critical hours                         | 823.4 | 2208.0 | 2209.0 | 2159.0 | 2184.0 | 2208.0 | 627.1 | 2111.7 |
| Indicator value                        | 0     | 0      | 0      | 0      | 0      | 0      | 1.0   | 2.0    |

Licensee Comments: none

### Unplanned Power Changes per 7000 Critical Hrs



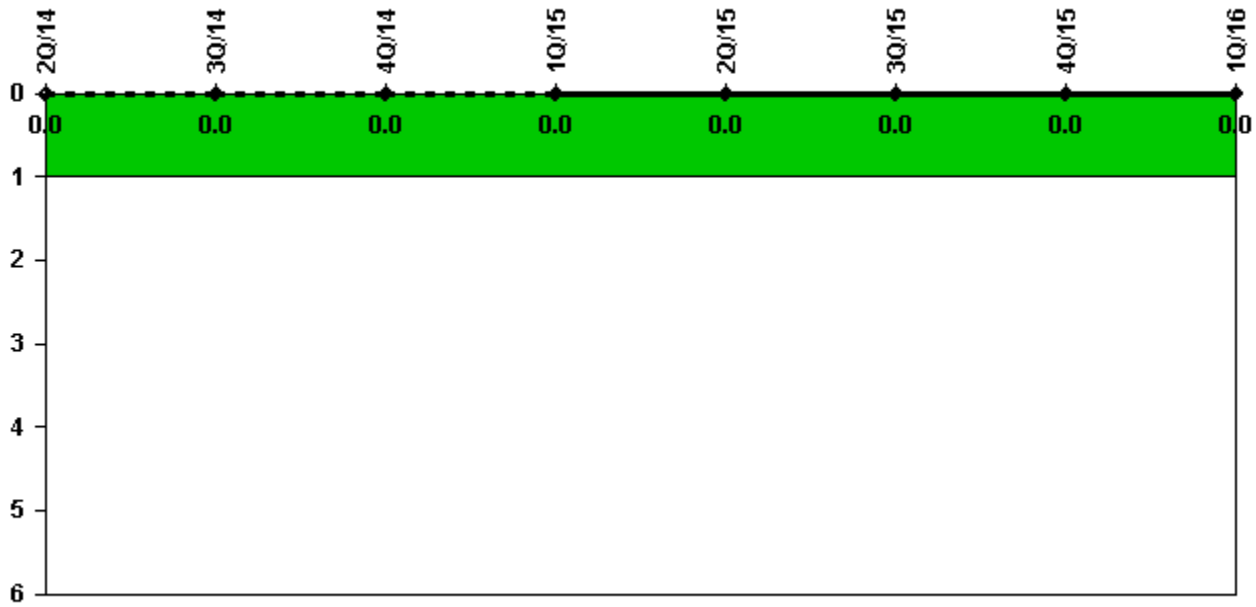
Thresholds: White > 6.0

#### Notes

| Unplanned Power Changes per 7000 Critical Hrs | 2Q/14    | 3Q/14    | 4Q/14    | 1Q/15    | 2Q/15    | 3Q/15    | 4Q/15    | 1Q/16    |
|---|----------|----------|----------|----------|----------|----------|----------|----------|
| Unplanned power changes                       | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| Critical hours                                | 823.4    | 2208.0   | 2209.0   | 2159.0   | 2184.0   | 2208.0   | 627.1    | 2111.7   |
| <b>Indicator value</b>                        | <b>0</b> | <b>0</b> | <b>0</b> | <b>0</b> | <b>0</b> | <b>0</b> | <b>0</b> | <b>0</b> |

Licensee Comments: none

### Unplanned Scrams with Complications



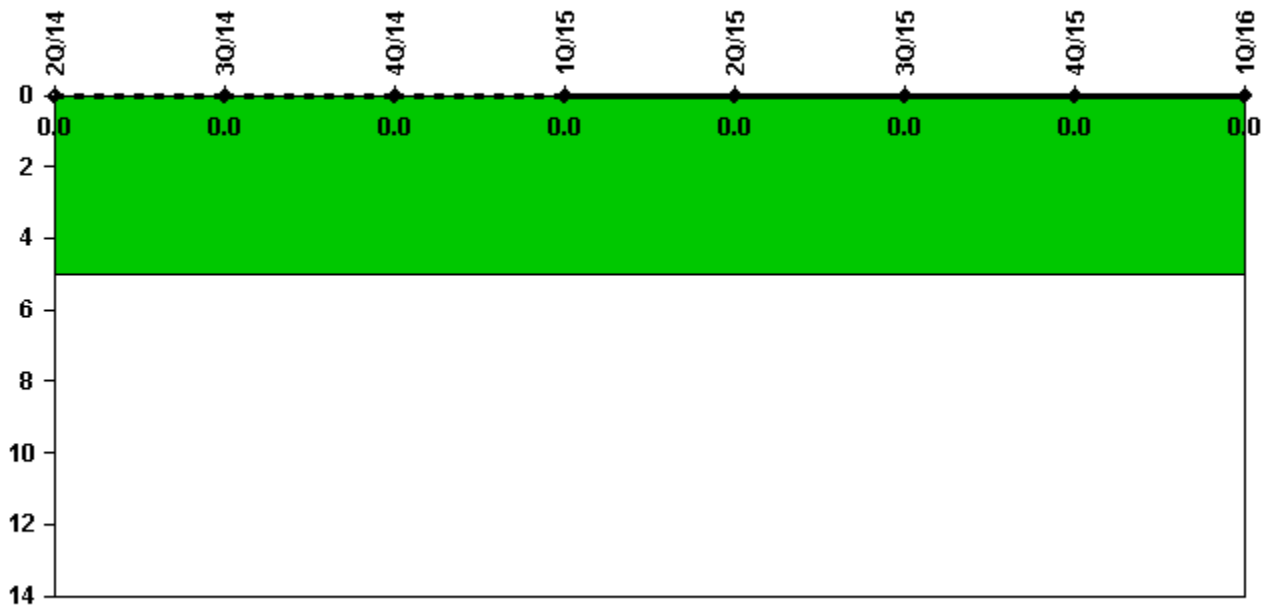
Thresholds: White > 1.0

#### Notes

| Unplanned Scrams with Complications | 2Q/14      | 3Q/14      | 4Q/14      | 1Q/15      | 2Q/15      | 3Q/15      | 4Q/15      | 1Q/16      |
|-------------------------------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Scrams with complications           | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 0          |
|                                     |            |            |            |            |            |            |            |            |
| <b>Indicator value</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> | <b>0.0</b> |

Licensee Comments: none

### Safety System Functional Failures (PWR)



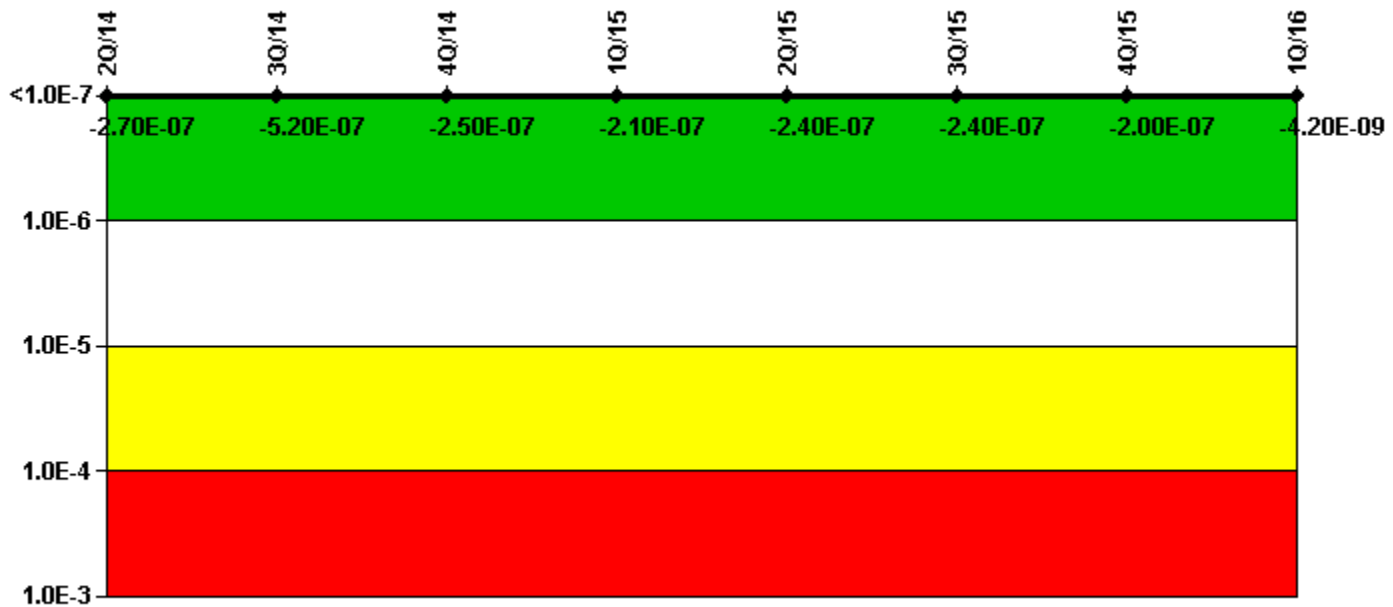
Thresholds: White > 5.0

#### Notes

| Safety System Functional Failures (PWR) | 2Q/14    | 3Q/14    | 4Q/14    | 1Q/15    | 2Q/15    | 3Q/15    | 4Q/15    | 1Q/16    |
|---|----------|----------|----------|----------|----------|----------|----------|----------|
| Safety System Functional Failures       | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>Indicator value</b>                  | <b>0</b> | <b>0</b> | <b>0</b> | <b>0</b> | <b>0</b> | <b>0</b> | <b>0</b> | <b>0</b> |

Licensee Comments: none

### 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/14     | 3Q/14     | 4Q/14     | 1Q/15     | 2Q/15     | 3Q/15     | 4Q/15     | 1Q/16     |
|---|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| UAI (ΔCDF)  | 6.17E-08  | 4.89E-08  | 7.08E-08  | 1.08E-07  | 7.99E-08  | 7.70E-08  | 1.24E-07  | 7.88E-08  |
| URI (ΔCDF)  | -3.32E-07 | -5.68E-07 | -3.20E-07 | -3.20E-07 | -3.20E-07 | -3.20E-07 | -3.20E-07 | -8.30E-08 |
| PLE   | NO        | NO        | NO        | NO        | NO        | NO        | NO        | NO        |
| Indicator value   | -2.70E-07 | -5.20E-07 | -2.50E-07 | -2.10E-07 | -2.40E-07 | -2.40E-07 | -2.00E-07 | -4.20E-09 |

#### Licensee Comments:

1Q/16: Changed PRA Parameter(s). Approved PRA Model Rev 8.1 and updated coefficients effective 1Q16.

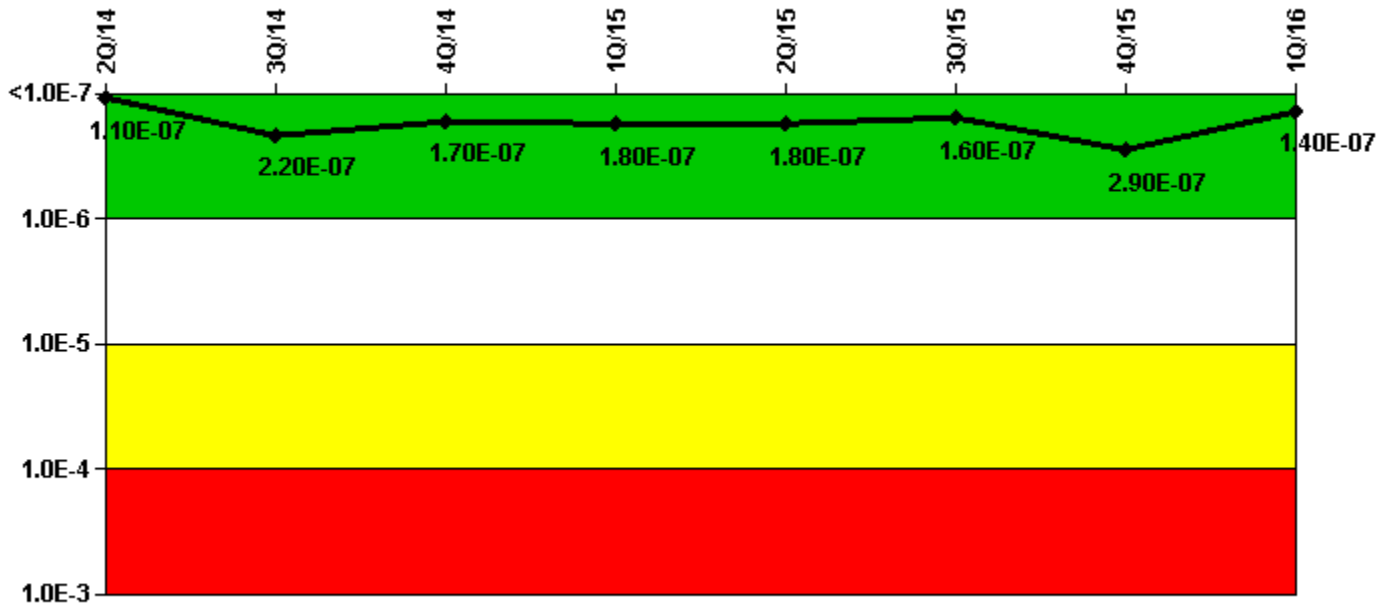
4Q/15: Changed PRA Parameter(s). The Planned UA Baseline coefficient for Unit 1 EDG B (DG 12) was revised to remove the planned UA baseline hours related to 15 year preventive maintenance from January 2013. This change will be effective 1Q16 (Reference CR 13-3103-4). The MSPI Bases Document was revised to the change in EDG B UA coefficient and to incorporate FAQ-14-01 regarding MSPI PRA Technical Adequacy (Reference CR 14-12028- 34).

4Q/14: The UABLP coefficient was revised for DG11 effective 1Q15 for 5 year maintenance. This is reflected in the revision to the MSPI Bases Document, Rev. 19.

3Q/14: Changed PRA Parameter(s). Correction - From 1Q13 to 3Q14, the baseline planned unavailability (UABLP) coefficient for DG12 was reported incorrectly. This did not affect the color of the indicator. CR 14-17344. In addition, the UABLP coefficient was revised for 4Q14 due to 5 year maintenance. This is reflected in a revision to the MSPI Bases Document, Rev. 18.

2Q/14: Changed PRA Parameter(s).

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



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

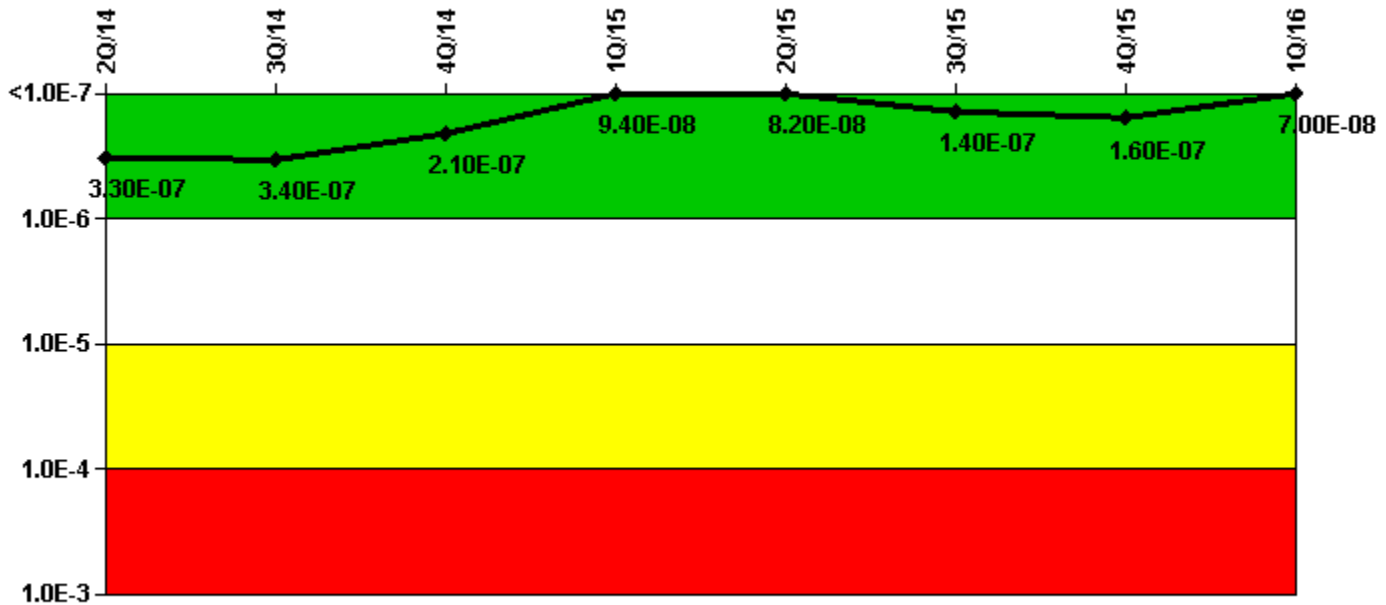
#### Notes

| Mitigating Systems Performance Index, High Pressure Injection System | 2Q/14     | 3Q/14     | 4Q/14     | 1Q/15     | 2Q/15     | 3Q/15     | 4Q/15     | 1Q/16     |
|--|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| UAI (ΔCDF)   | 1.35E-07  | 2.50E-07  | 2.00E-07  | 2.07E-07  | 2.07E-07  | 1.84E-07  | 3.11E-07  | 1.63E-07  |
| URI (ΔCDF)   | -2.53E-08 | -2.53E-08 | -2.53E-08 | -2.53E-08 | -2.53E-08 | -2.53E-08 | -2.53E-08 | -2.13E-08 |
| PLE  | NO        | NO        | NO        | NO        | NO        | NO        | NO        | NO        |
| Indicator value  | 1.10E-07  | 2.20E-07  | 1.70E-07  | 1.80E-07  | 1.80E-07  | 1.60E-07  | 2.90E-07  | 1.40E-07  |

Licensee Comments:

1Q/16: Changed PRA Parameter(s). Approved PRA Model Rev 8.1 and updated coefficients effective 1Q16.

### Mitigating Systems Performance Index, Heat Removal System



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

#### Notes

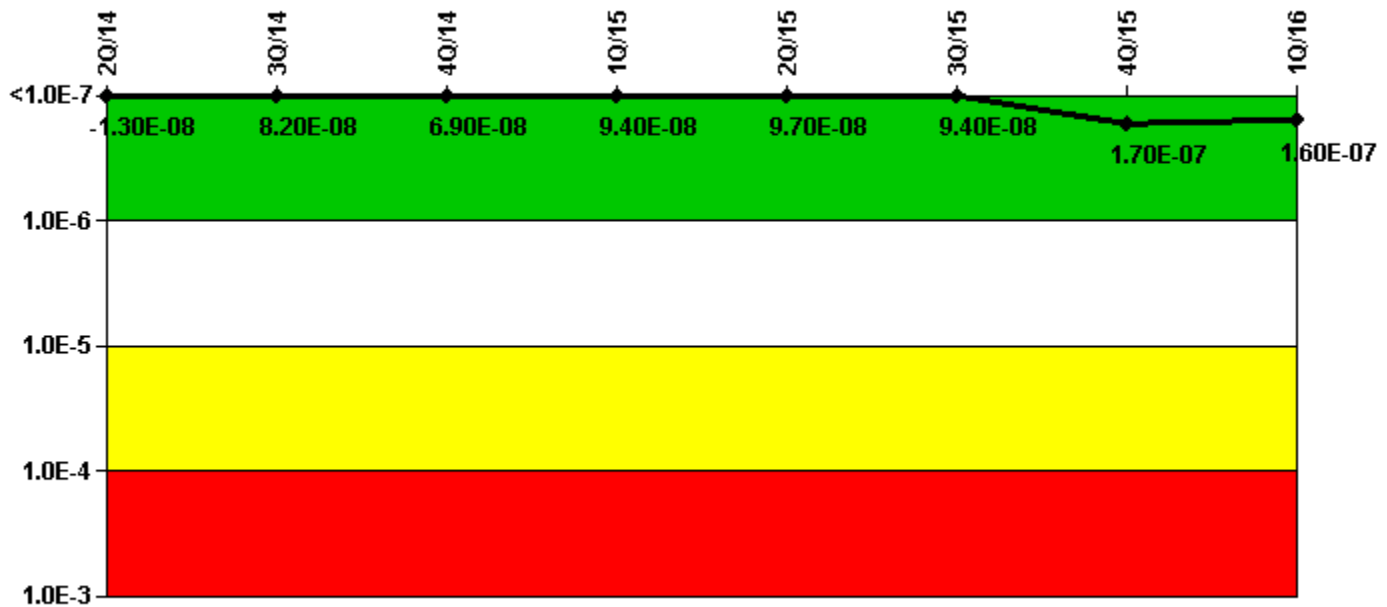
| Mitigating Systems Performance Index, Heat Removal System | 2Q/14           | 3Q/14           | 4Q/14           | 1Q/15           | 2Q/15           | 3Q/15           | 4Q/15           | 1Q/16           |
|---|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| UAI ( $\Delta$ CDF)                                       | 3.29E-07        | 3.40E-07        | 2.65E-07        | 1.49E-07        | 1.38E-07        | 1.93E-07        | 2.21E-07        | 1.43E-07        |
| URI ( $\Delta$ CDF)                                       | 1.89E-09        | 1.89E-09        | -5.58E-08       | -5.58E-08       | -5.58E-08       | -5.58E-08       | -5.68E-08       | -7.28E-08       |
| PLE   | NO              | NO              | NO              | NO              | NO              | NO              | NO              | NO              |
| <b>Indicator value</b>                                    | <b>3.30E-07</b> | <b>3.40E-07</b> | <b>2.10E-07</b> | <b>9.40E-08</b> | <b>8.20E-08</b> | <b>1.40E-07</b> | <b>1.60E-07</b> | <b>7.00E-08</b> |

#### Licensee Comments:

1Q/16: Changed PRA Parameter(s). Approved PRA Model Rev 8.1 and updated coefficients effective 1Q16.

3Q/15: Engineering is evaluating whether AFW-B degraded condition reported in CR 15-21784 in September 2015 impacted an MSPI monitored function.

### 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/14       | 3Q/14       | 4Q/14       | 1Q/15       | 2Q/15       | 3Q/15       | 4Q/15       | 1Q/16       |
|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| UAI ( $\Delta$ CDF)  | $-1.17E-09$ | $9.34E-08$  | $8.09E-08$  | $1.06E-07$  | $1.08E-07$  | $1.06E-07$  | $1.85E-07$  | $1.72E-07$  |
| URI ( $\Delta$ CDF)  | $-1.14E-08$ | $-1.14E-08$ | $-1.14E-08$ | $-1.14E-08$ | $-1.14E-08$ | $-1.14E-08$ | $-1.14E-08$ | $-1.11E-08$ |
| PLE  | NO          | NO          | NO          | NO          | NO          | NO          | NO          | NO          |
| Indicator value  | $-1.30E-08$ | $8.20E-08$  | $6.90E-08$  | $9.40E-08$  | $9.70E-08$  | $9.40E-08$  | $1.70E-07$  | $1.60E-07$  |

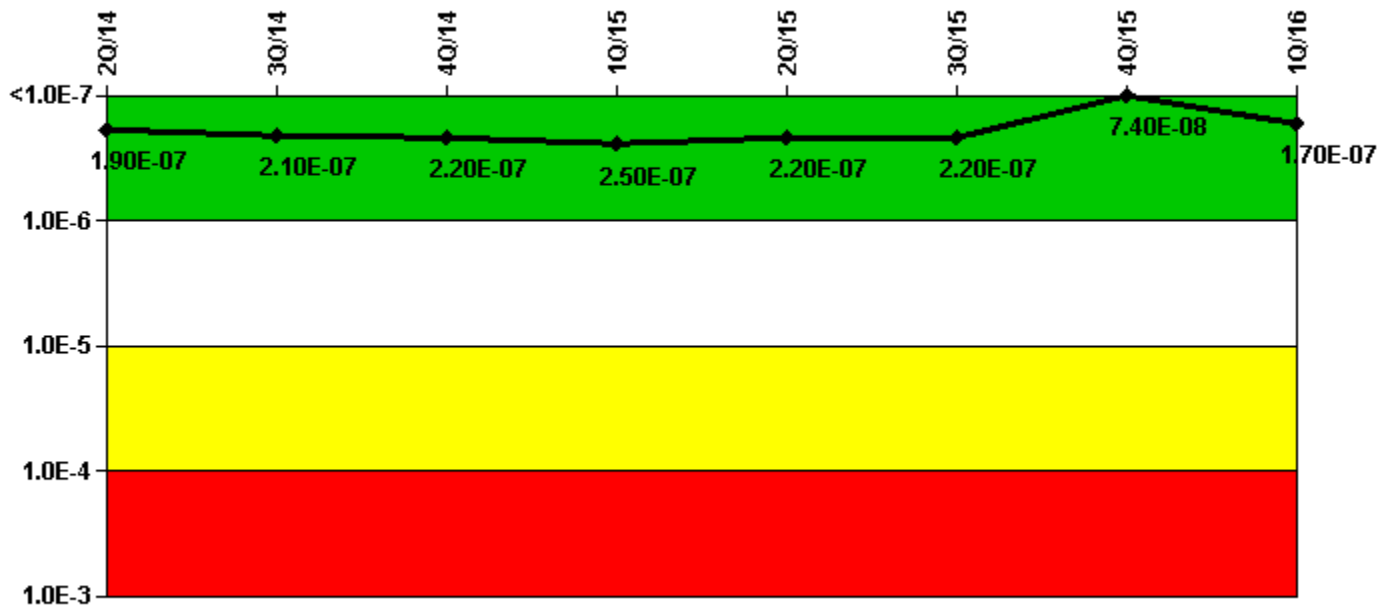
#### Licensee Comments:

1Q/16: Changed PRA Parameter(s). Approved PRA Model Rev 8.1 and updated coefficients effective 1Q16.

3Q/14: 2Q14 correction - Planned unavailable hours corrected for June 2014 for Low Head Safety Injection-C from 49.62 to 58.92. Data entry error. This did not change the color of the indicator. CR 14-16801



### 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/14    | 3Q/14    | 4Q/14    | 1Q/15    | 2Q/15    | 3Q/15    | 4Q/15     | 1Q/16     |
|---|----------|----------|----------|----------|----------|----------|-----------|-----------|
| UAI (ΔCDF)  | 8.25E-08 | 1.05E-07 | 1.15E-07 | 1.47E-07 | 1.16E-07 | 1.14E-07 | 1.12E-07  | 1.96E-07  |
| URI (ΔCDF)  | 1.06E-07 | 1.06E-07 | 1.06E-07 | 1.06E-07 | 1.06E-07 | 1.06E-07 | -3.81E-08 | -2.85E-08 |
| PLE   | NO       | NO       | NO       | NO       | NO       | NO       | NO        | NO        |
| Indicator value   | 1.90E-07 | 2.10E-07 | 2.20E-07 | 2.50E-07 | 2.20E-07 | 2.20E-07 | 7.40E-08  | 1.70E-07  |

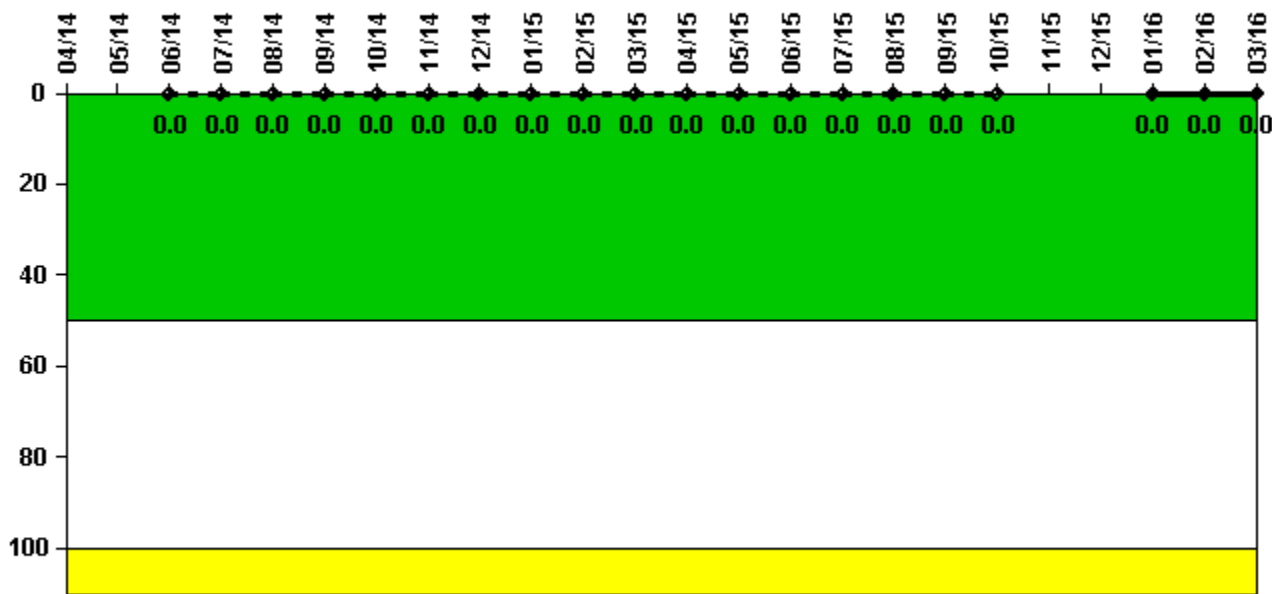
Licensee Comments:

1Q/16: Changed PRA Parameter(s). Approved PRA Model Rev 8.1 and updated coefficients effective 1Q16.

2Q/14: Revision 17 MSPI Bases Document - Revised Cooling Water System diagram to reflect removal of lube water strainers and supply line to pump bearings (CR 12-91-32)

2Q/14: Revision 17 MSPI Bases Document - Revised Cooling Water System diagram to reflect removal of lube water strainers and supply line to pump bearings (CR 12-91-32)

### Reactor Coolant System Activity



Thresholds: White > 50.0 Yellow > 100.0

#### Notes

| Reactor Coolant System Activity | 4/14 | 5/14 | 6/14     | 7/14     | 8/14     | 9/14     | 10/14    | 11/14    | 12/14    | 1/15     | 2/15     | 3/15     |
|---------------------------------|------|------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Maximum activity                | N/A  | N/A  | 0.000019 | 0.000023 | 0.000023 | 0.000025 | 0.000028 | 0.000028 | 0.000031 | 0.000031 | 0.000029 | 0.000033 |
| Technical specification limit   | 1.0  | 1.0  | 1.0      | 1.0      | 1.0      | 1.0      | 1.0      | 1.0      | 1.0      | 1.0      | 1.0      | 1.0      |
| Indicator value                 | N/A  | N/A  | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |

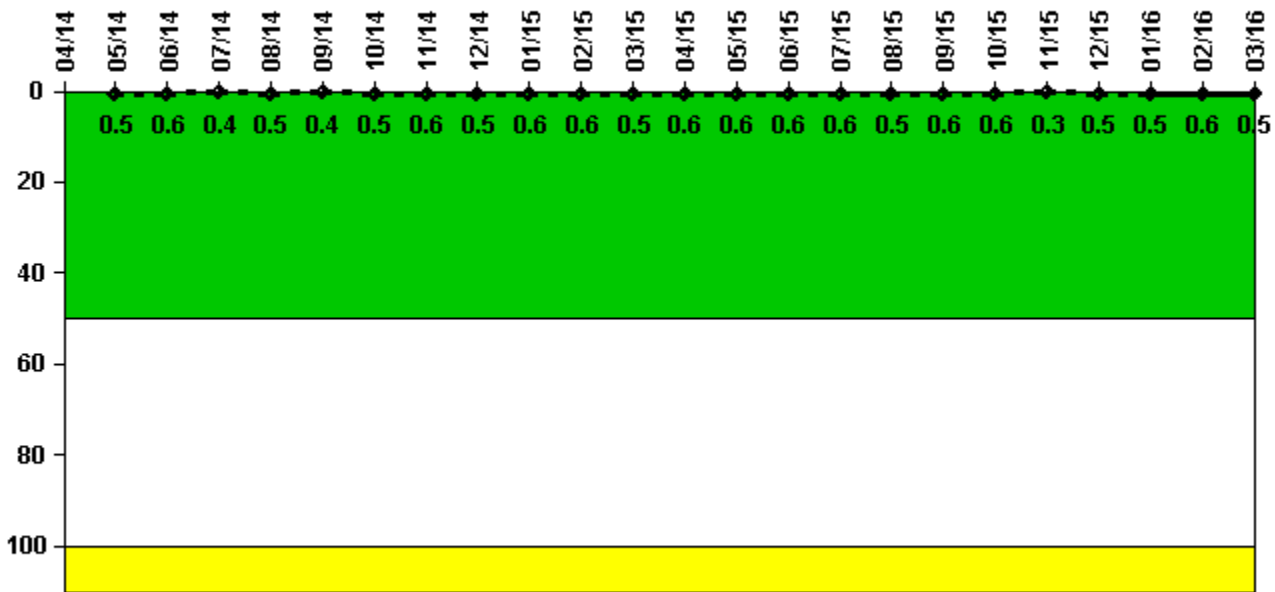
| Reactor Coolant System Activity | 4/15     | 5/15     | 6/15     | 7/15     | 8/15     | 9/15     | 10/15    | 11/15 | 12/15 | 1/16     | 2/16     | 3/16     |
|---------------------------------|----------|----------|----------|----------|----------|----------|----------|-------|-------|----------|----------|----------|
| Maximum activity                | 0.000031 | 0.000033 | 0.000031 | 0.000032 | 0.000032 | 0.000035 | 0.000031 | N/A   | N/A   | 0.000018 | 0.000018 | 0.000014 |
| Technical specification limit   | 1.0      | 1.0      | 1.0      | 1.0      | 1.0      | 1.0      | 1.0      | 1.0   | 1.0   | 1.0      | 1.0      | 1.0      |
| Indicator value                 | 0        | 0        | 0        | 0        | 0        | 0        | 0        | N/A   | N/A   | 0        | 0        | 0        |

#### Licensee Comments:

12/15: No steady state data in November or December 2015. Unit 1 Refueling Outage 1RE19.

6/14: Unit 1 in a Refueling Outage April and May 2014. Plant conditions did not require activity to be calculated.

### Reactor Coolant System Leakage



Thresholds: White > 50.0 Yellow > 100.0

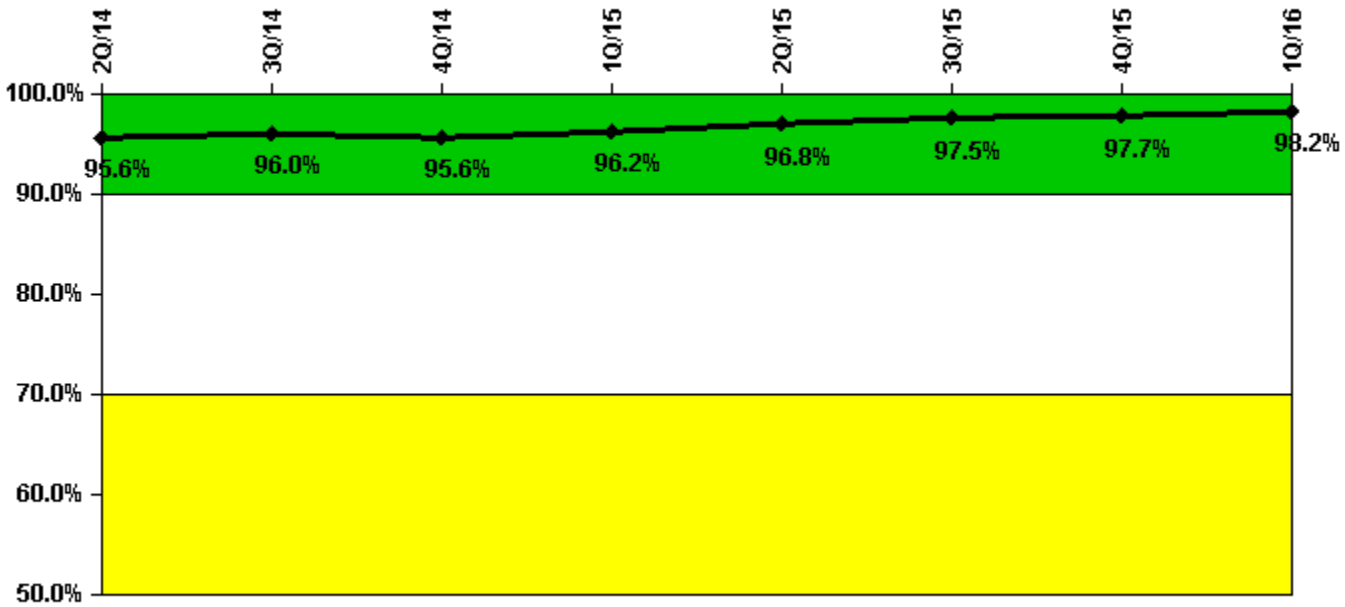
#### Notes

| Reactor Coolant System Leakage | 4/14  | 5/14  | 6/14  | 7/14  | 8/14  | 9/14  | 10/14 | 11/14 | 12/14 | 1/15  | 2/15  | 3/15  |
|--------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Maximum leakage                | N/A   | 0.048 | 0.060 | 0.042 | 0.050 | 0.041 | 0.053 | 0.064 | 0.048 | 0.056 | 0.060 | 0.046 |
| 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                | N/A   | 0.5   | 0.6   | 0.4   | 0.5   | 0.4   | 0.5   | 0.6   | 0.5   | 0.6   | 0.6   | 0.5   |
| 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                | 0.060 | 0.056 | 0.060 | 0.058 | 0.050 | 0.059 | 0.061 | 0.034 | 0.050 | 0.046 | 0.060 | 0.052 |
| 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                | 0.6   | 0.6   | 0.6   | 0.6   | 0.5   | 0.6   | 0.6   | 0.3   | 0.5   | 0.5   | 0.6   | 0.5   |

Licensee Comments:

6/14: Unit 1 in a Refueling Outage. No data for April 2014 due to plant conditions.

### Drill/Exercise Performance



Thresholds: White < 90.0% Yellow < 70.0%

#### Notes

| Drill/Exercise Performance | 2Q/14 | 3Q/14 | 4Q/14 | 1Q/15 | 2Q/15 | 3Q/15 | 4Q/15 | 1Q/16 |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Successful opportunities   | 59.0  | 69.0  | 46.0  | 104.0 | 91.0  | 60.0  | 2.0   | 10.0  |
| Total opportunities        | 61.0  | 70.0  | 48.0  | 106.0 | 91.0  | 61.0  | 2.0   | 10.0  |
| Indicator value            | 95.6% | 96.0% | 95.6% | 96.2% | 96.8% | 97.5% | 97.7% | 98.2% |

#### Licensee Comments:

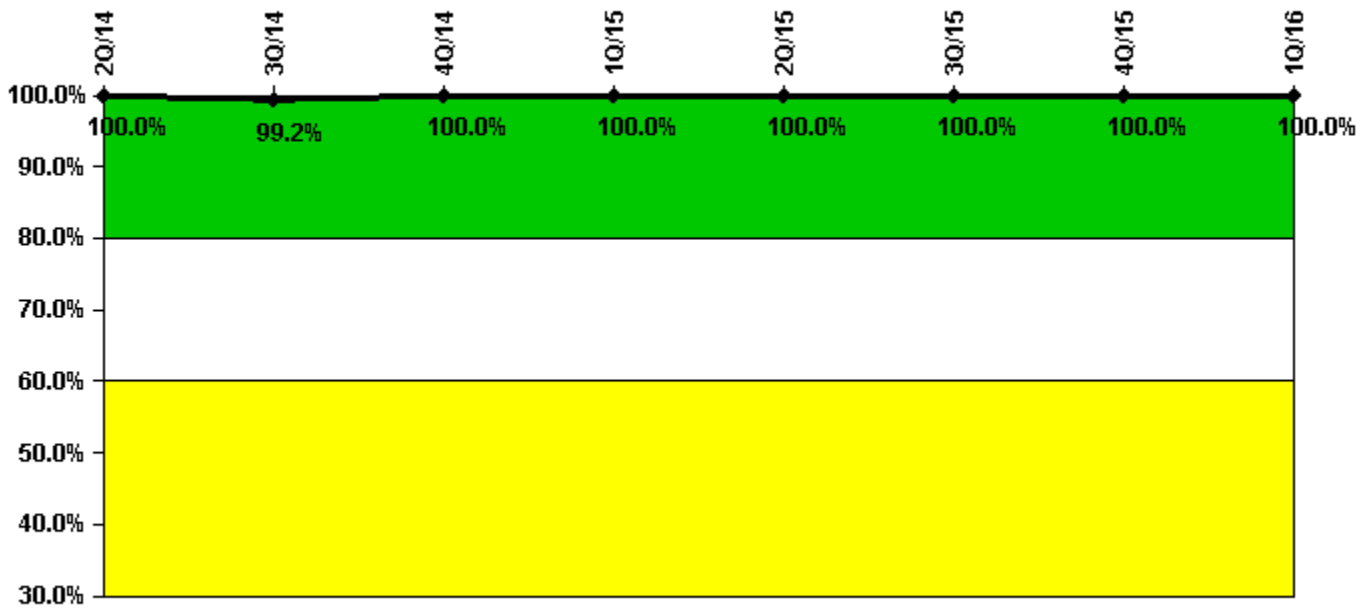
1Q/15: Corrected 4Q14 data DEP total opportunities from 50 to 46 and DEP total success from 52 to 48 due to administrative error. (CR 15-4048). This change did not affect the color of the indicator. Corrected 2Q14 data DEP total opportunities from 183 to 61 and DEP total success from 177 to 59 due data entry error (CR 15-2575). This change did not affect the color of the indicator.

4Q/14: Corrected 4Q14 data DEP total opportunities from 50 to 46 and DEP total success from 52 to 48 due to administrative error. (CR 15-4048). This change did not affect the color of the indicator.

3Q/14: Corrected data from 1Q14 from 38 to 37 successful drill, exercise and event opportunities. It was determined that a performance indicator for a drill classification was unsuccessful. CR 14-12671. This did not affect the color of the indicator.

2Q/14: Corrected 2Q14 data DEP total opportunities from 183 to 61 and DEP total success from 177 to 59 due data entry error (CR 15-2575). This change did not affect the color of the indicator.

### ERO Drill Participation



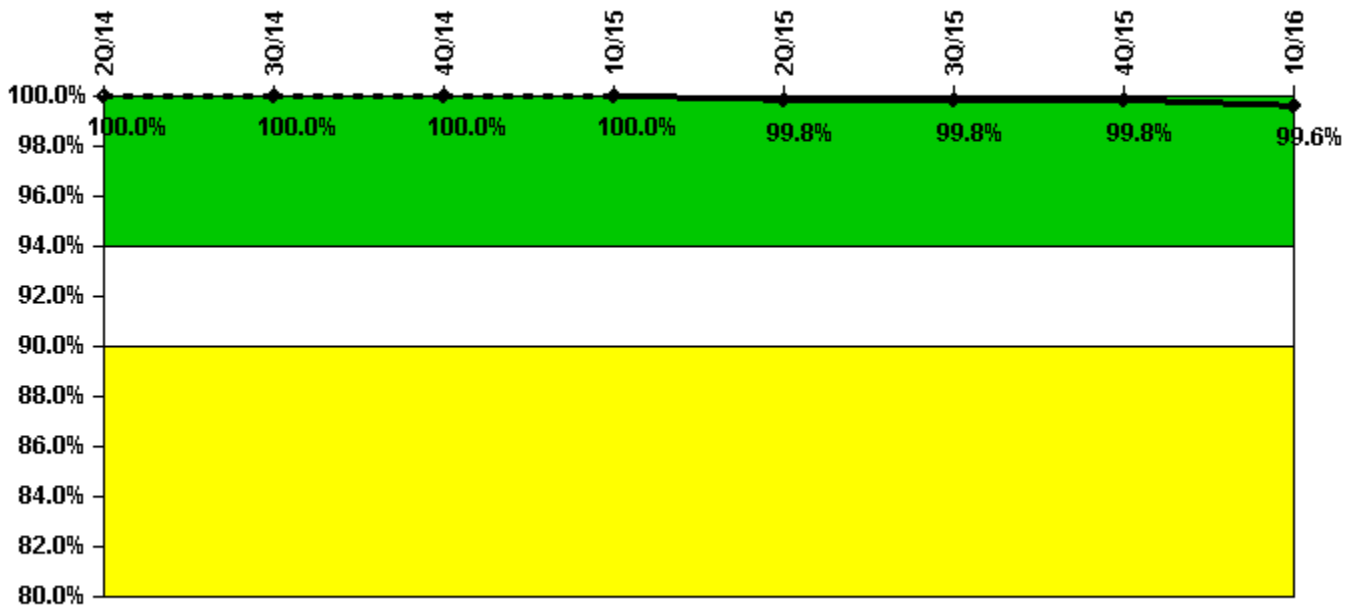
Thresholds: White < 80.0% Yellow < 60.0%

#### Notes

| ERO Drill Participation     | 2Q/14         | 3Q/14        | 4Q/14         | 1Q/15         | 2Q/15         | 3Q/15         | 4Q/15         | 1Q/16         |
|-----------------------------|---------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Participating Key personnel | 123.0         | 120.0        | 127.0         | 129.0         | 127.0         | 128.0         | 125.0         | 113.0         |
| Total Key personnel         | 123.0         | 121.0        | 127.0         | 129.0         | 127.0         | 128.0         | 125.0         | 113.0         |
|                             |               |              |               |               |               |               |               |               |
| <b>Indicator value</b>      | <b>100.0%</b> | <b>99.2%</b> | <b>100.0%</b> | <b>100.0%</b> | <b>100.0%</b> | <b>100.0%</b> | <b>100.0%</b> | <b>100.0%</b> |

Licensee Comments: none

### Alert & Notification System



Thresholds: White < 94.0% Yellow < 90.0%

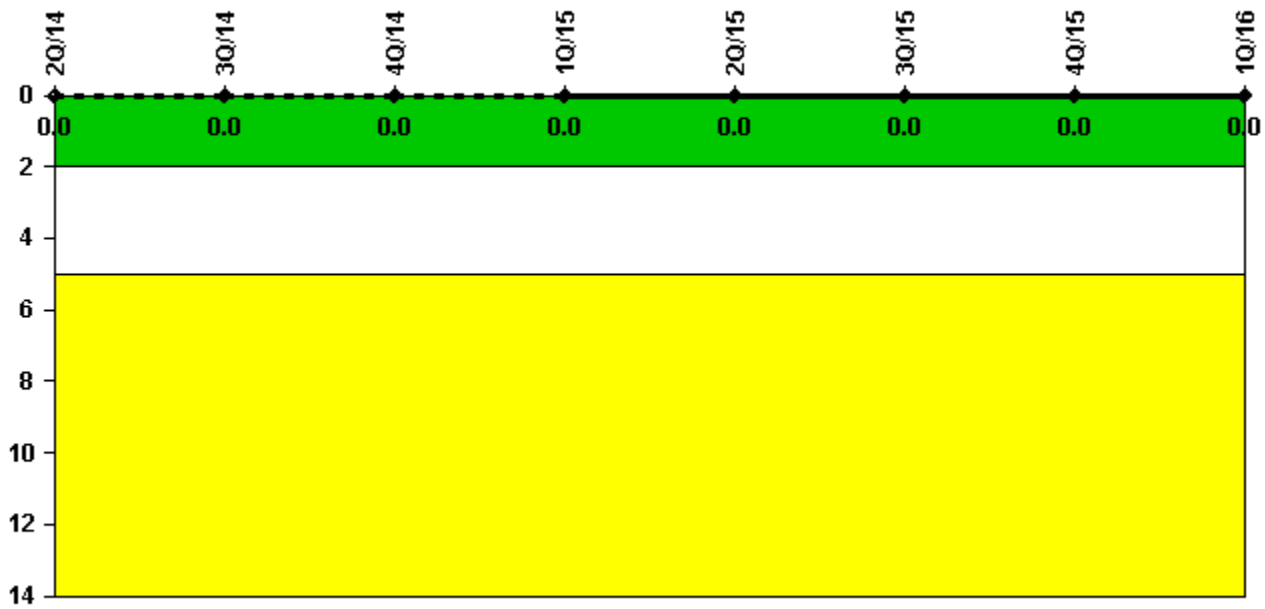
#### Notes

| Alert & Notification System | 2Q/14  | 3Q/14  | 4Q/14  | 1Q/15  | 2Q/15 | 3Q/15 | 4Q/15 | 1Q/16 |
|-----------------------------|--------|--------|--------|--------|-------|-------|-------|-------|
| Successful siren-tests      | 224    | 256    | 256    | 256    | 222   | 256   | 256   | 254   |
| Total sirens-tests          | 224    | 256    | 256    | 256    | 224   | 256   | 256   | 256   |
| Indicator value             | 100.0% | 100.0% | 100.0% | 100.0% | 99.8% | 99.8% | 99.8% | 99.6% |

Licensee Comments:

2Q/14: Corrected 2Q14 data Successful siren-tests from 672 to 224 and Total siren-tests from 672 to 224 (CR 15-2575). This change did not affect the color of the indicator.

### Occupational Exposure Control Effectiveness



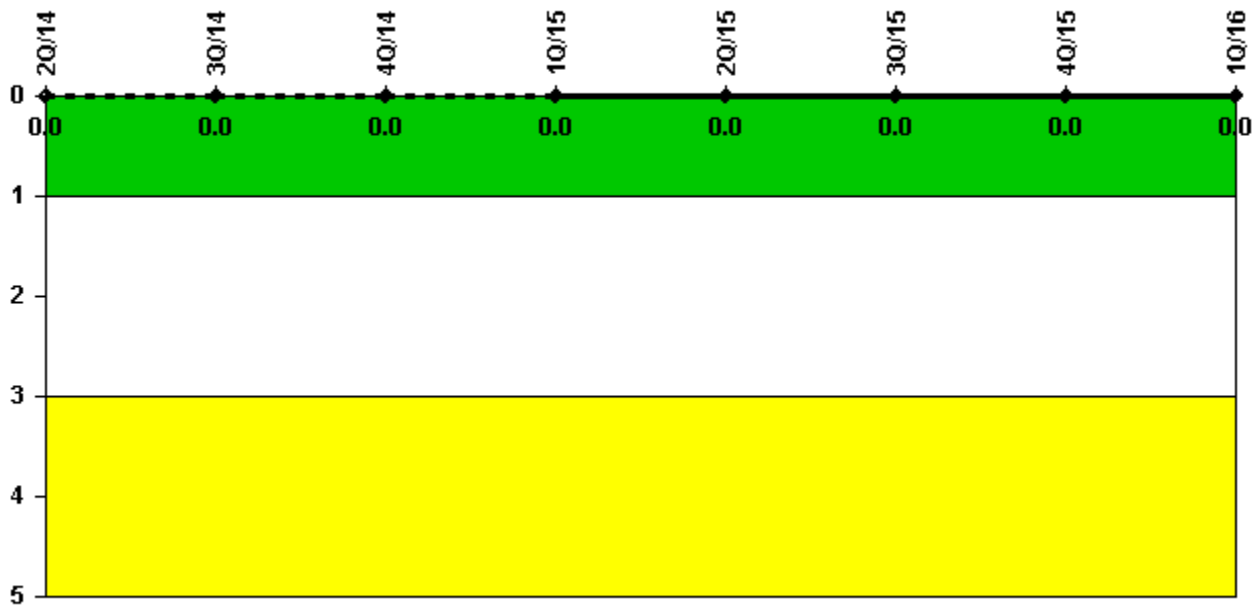
Thresholds: White > 2.0 Yellow > 5.0

#### Notes

| Occupational Exposure Control Effectiveness | 2Q/14    | 3Q/14    | 4Q/14    | 1Q/15    | 2Q/15    | 3Q/15    | 4Q/15    | 1Q/16    |
|---|----------|----------|----------|----------|----------|----------|----------|----------|
| 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>0</b> | <b>0</b> | <b>0</b> | <b>0</b> | <b>0</b> | <b>0</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/14 | 3Q/14 | 4Q/14 | 1Q/15 | 2Q/15 | 3Q/15 | 4Q/15 | 1Q/16 |
|---------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| 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, 2016*