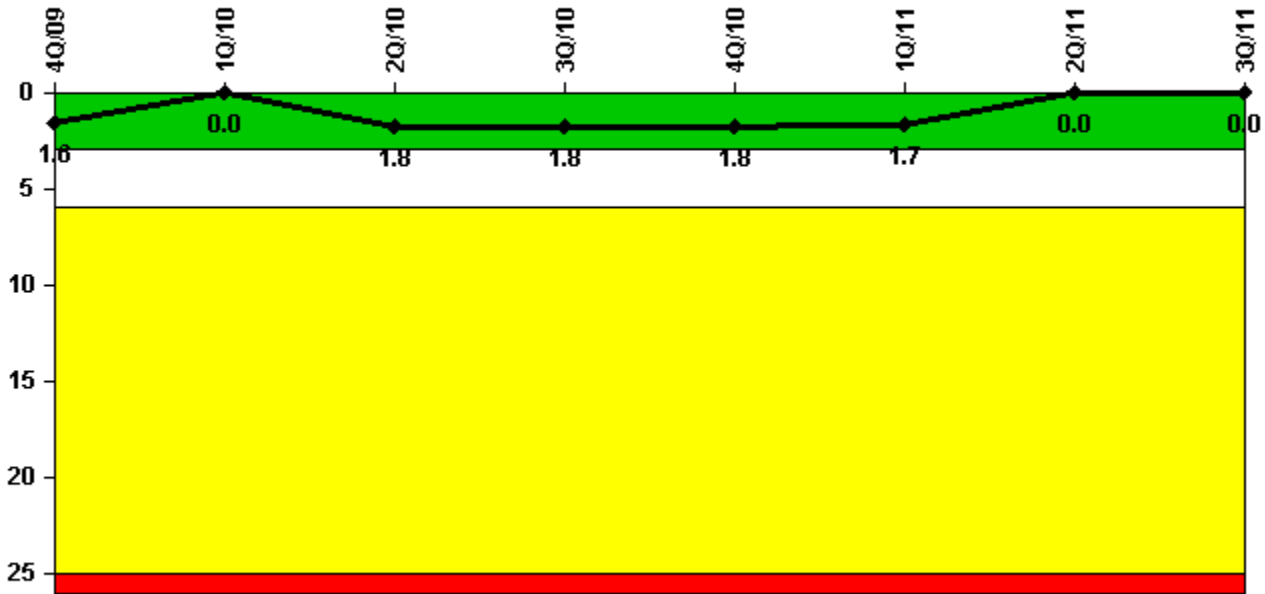


# Arkansas Nuclear 1

## 3Q/2011 Performance Indicators

Licensee's General Comments: none

### Unplanned Scrams per 7000 Critical Hrs



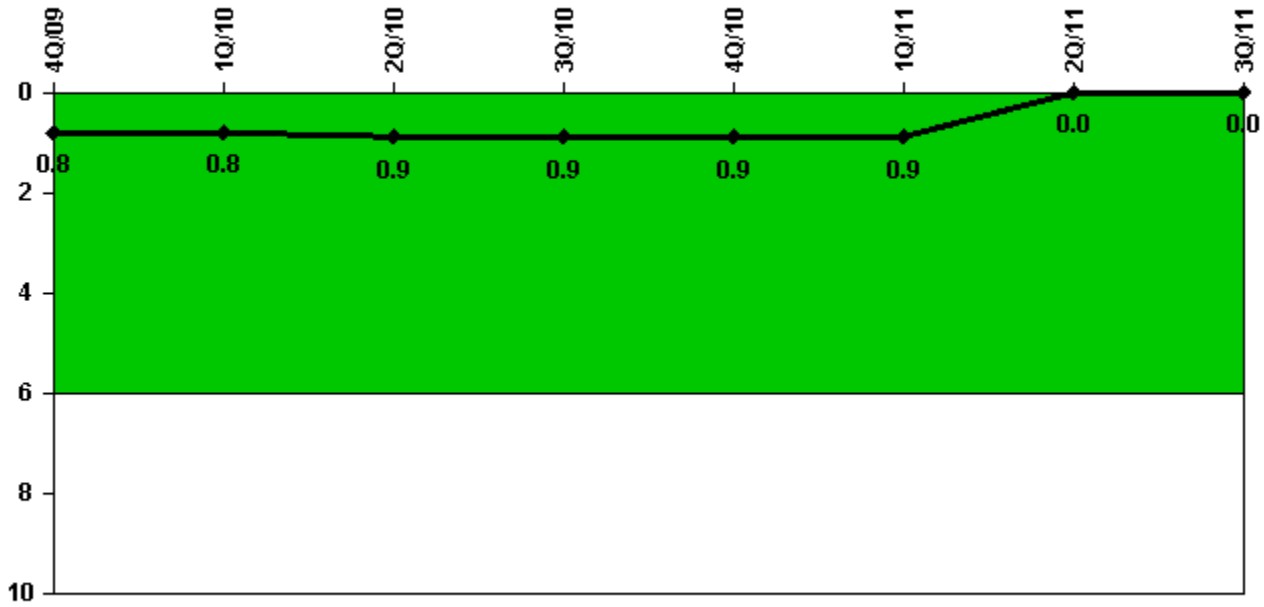
Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

### Notes

| Unplanned Scrams per 7000 Critical Hrs | 4Q/09  | 1Q/10  | 2Q/10  | 3Q/10  | 4Q/10  | 1Q/11  | 2Q/11  | 3Q/11  |
|--|--------|--------|--------|--------|--------|--------|--------|--------|
| Unplanned scrams                       | 0      | 0      | 2.0    | 0      | 0      | 0      | 0      | 0      |
| Critical hours                         | 2209.0 | 1903.0 | 1611.9 | 2208.0 | 2209.0 | 2159.0 | 2184.0 | 2208.0 |
| Indicator value                        | 1.6    | 0      | 1.8    | 1.8    | 1.8    | 1.7    | 0      | 0      |

Licensee Comments: none

## Unplanned Power Changes per 7000 Critical Hrs



Thresholds: White > 6.0

### Notes

| Unplanned Power Changes per 7000 Critical Hrs | 4Q/09  | 1Q/10  | 2Q/10  | 3Q/10  | 4Q/10  | 1Q/11  | 2Q/11  | 3Q/11  |
|---|--------|--------|--------|--------|--------|--------|--------|--------|
| Unplanned power changes                       | 0      | 0      | 1.0    | 0      | 0      | 0      | 0      | 0      |
| Critical hours                                | 2209.0 | 1903.0 | 1611.9 | 2208.0 | 2209.0 | 2159.0 | 2184.0 | 2208.0 |
| Indicator value                               | 0.8    | 0.8    | 0.9    | 0.9    | 0.9    | 0.9    | 0      | 0      |

Licensee Comments: none

## Unplanned Scrams with Complications



Thresholds: White > 1.0

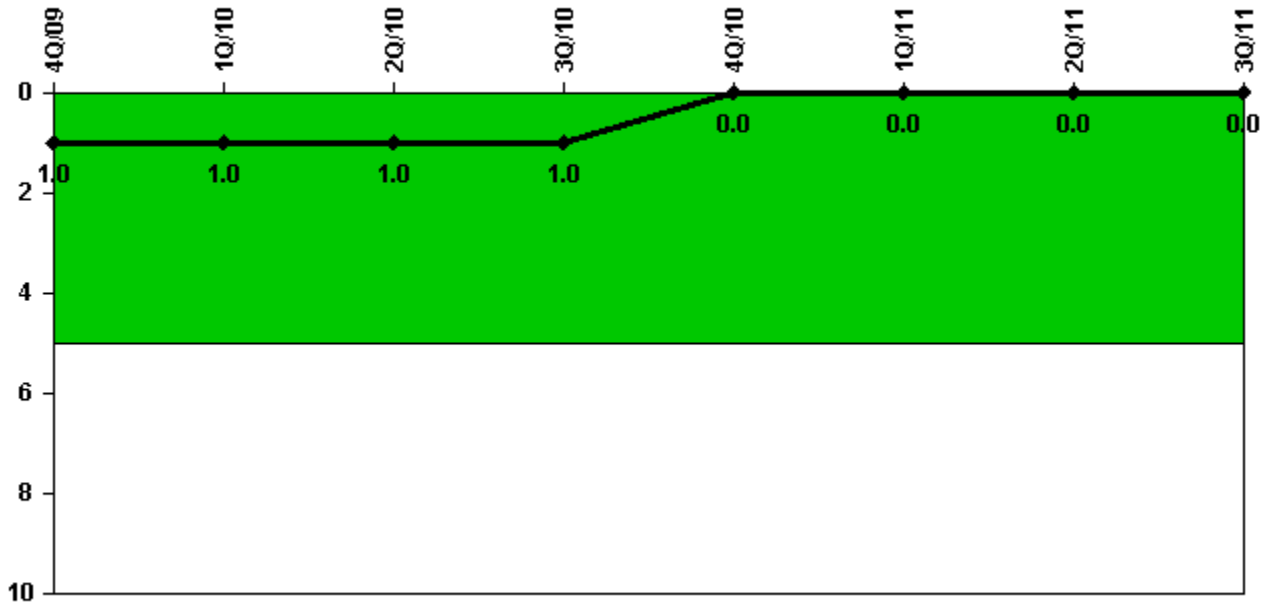
### Notes

| Unplanned Scrams with Complications | 4Q/09 | 1Q/10 | 2Q/10 | 3Q/10 | 4Q/10 | 1Q/11 | 2Q/11 | 3Q/11 |
|-------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| 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

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## Safety System Functional Failures (PWR)



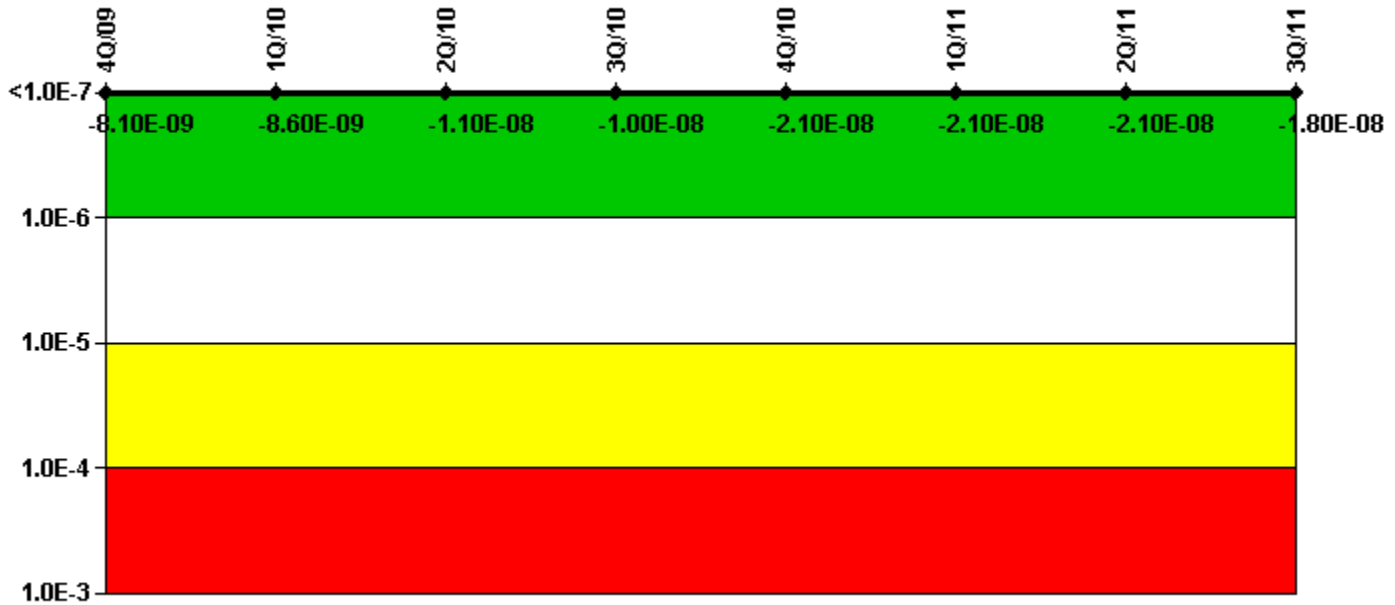
Thresholds: White > 5.0

### Notes

| Safety System Functional Failures (PWR) | 4Q/09 | 1Q/10 | 2Q/10 | 3Q/10 | 4Q/10 | 1Q/11 | 2Q/11 | 3Q/11 |
|---|-------|-------|-------|-------|-------|-------|-------|-------|
| Safety System Functional Failures       | 1     | 0     | 0     | 0     | 0     | 0     | 0     | 0     |
| Indicator value                         | 1     | 1     | 1     | 1     | 0     | 0     | 0     | 0     |

Licensee Comments: none

# Mitigating Systems Performance Index, Emergency AC Power System



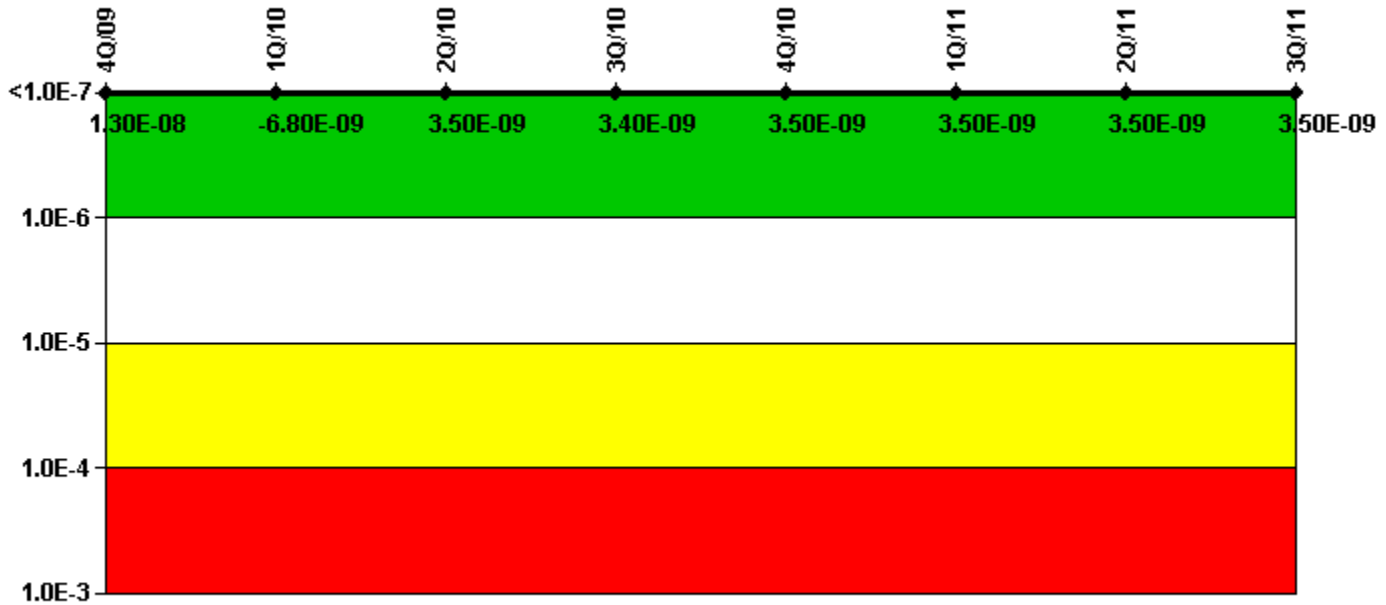
Thresholds: White > 1.00E-6 Yellow > 1.00E-5 Red > 1.00E-4

## Notes

| Mitigating Systems Performance Index, Emergency AC Power System | 4Q/09     | 1Q/10     | 2Q/10     | 3Q/10     | 4Q/10     | 1Q/11     | 2Q/11     | 3Q/11     |
|---|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| UAI ( $\Delta$ CDF)   | 1.90E-09  | 1.27E-09  | -2.11E-09 | -2.11E-09 | -2.38E-09 | -2.38E-09 | -2.38E-09 | 1.00E-09  |
| URI ( $\Delta$ CDF)   | -1.00E-08 | -9.84E-09 | -8.78E-09 | -8.22E-09 | -1.82E-08 | -1.82E-08 | -1.83E-08 | -1.90E-08 |
| PLE   | NO        | NO        | NO        | NO        | NO        | NO        | NO        | NO        |
| Indicator value   | -8.10E-09 | -8.60E-09 | -1.10E-08 | -1.00E-08 | -2.10E-08 | -2.10E-08 | -2.10E-08 | -1.80E-08 |

Licensee Comments: none

# Mitigating Systems Performance Index, High Pressure Injection System



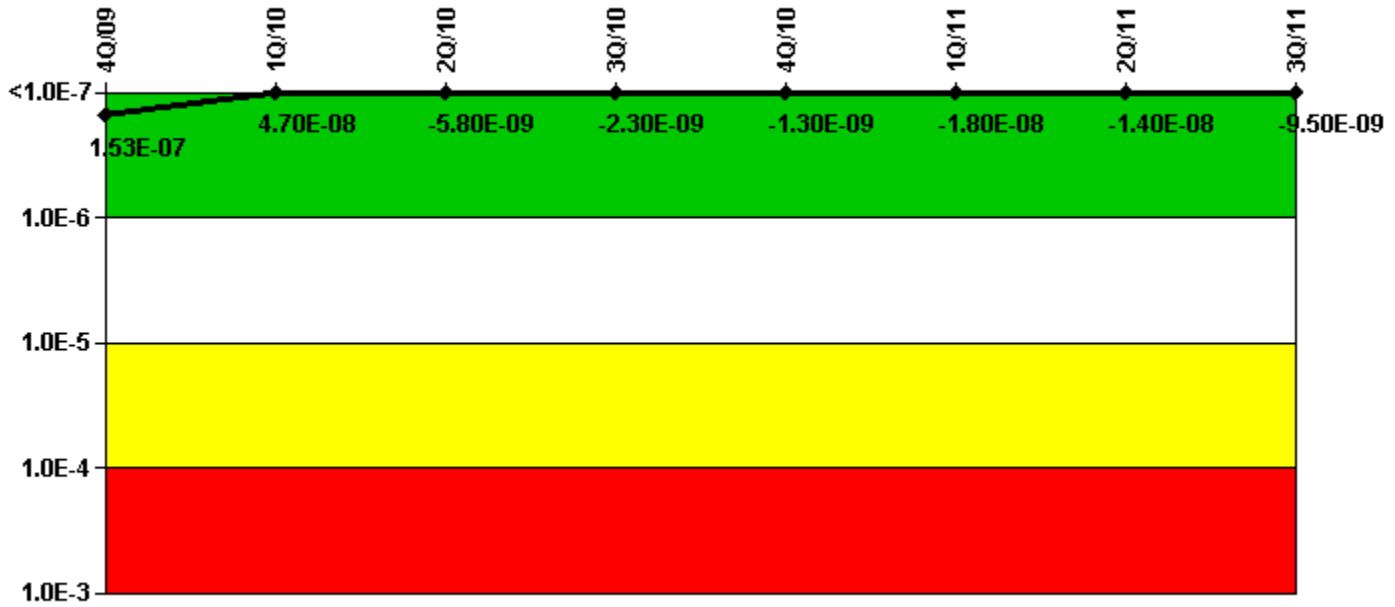
Thresholds: White > 1.00E-6 Yellow > 1.00E-5 Red > 1.00E-4

## Notes

| Mitigating Systems Performance Index, High Pressure Injection System | 4Q/09     | 1Q/10     | 2Q/10    | 3Q/10    | 4Q/10     | 1Q/11     | 2Q/11     | 3Q/11    |
|--|-----------|-----------|----------|----------|-----------|-----------|-----------|----------|
| UAI ( $\Delta$ CDF)  | 3.20E-08  | 2.12E-11  | 2.13E-11 | 1.78E-11 | -4.47E-12 | -4.45E-12 | -4.45E-12 | 8.63E-13 |
| URI ( $\Delta$ CDF)  | -1.90E-08 | -6.81E-09 | 3.46E-09 | 3.40E-09 | 3.54E-09  | 3.54E-09  | 3.51E-09  | 3.46E-09 |
| PLE  | NO        | NO        | NO       | NO       | NO        | NO        | NO        | NO       |
| Indicator value  | 1.30E-08  | -6.80E-09 | 3.50E-09 | 3.40E-09 | 3.50E-09  | 3.50E-09  | 3.50E-09  | 3.50E-09 |

Licensee Comments: none

# Mitigating Systems Performance Index, Heat Removal System



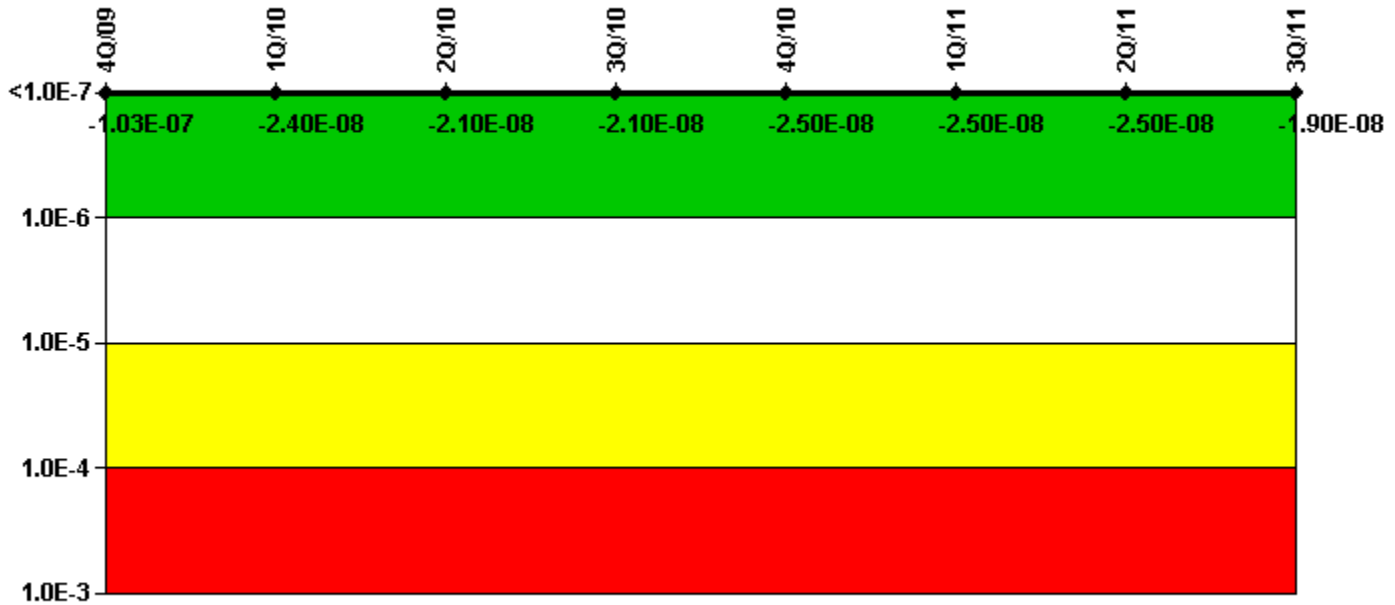
Thresholds: White > 1.00E-6 Yellow > 1.00E-5 Red > 1.00E-4

## Notes

| Mitigating Systems Performance Index, Heat Removal System | 4Q/09    | 1Q/10    | 2Q/10     | 3Q/10     | 4Q/10     | 1Q/11     | 2Q/11     | 3Q/11     |
|---|----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|
| UAI ( $\Delta$ CDF)                                       | 9.30E-08 | 2.70E-08 | 1.94E-08  | 2.47E-08  | 2.60E-08  | 9.71E-09  | 1.31E-08  | 1.77E-08  |
| URI ( $\Delta$ CDF)                                       | 6.00E-08 | 2.03E-08 | -2.51E-08 | -2.69E-08 | -2.73E-08 | -2.73E-08 | -2.72E-08 | -2.71E-08 |
| PLE   | NO       | NO       | NO        | NO        | NO        | NO        | NO        | NO        |
| Indicator value   | 1.53E-07 | 4.70E-08 | -5.80E-09 | -2.30E-09 | -1.30E-09 | -1.80E-08 | -1.40E-08 | -9.50E-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

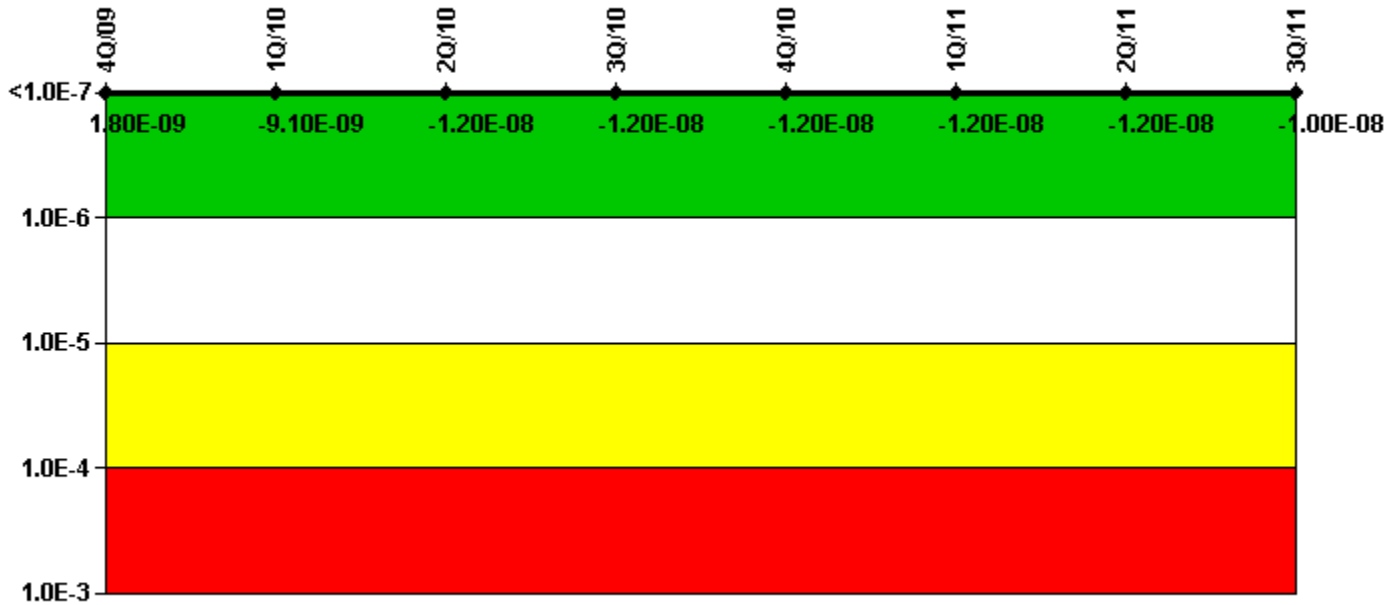
## Notes

| Mitigating Systems Performance Index, Residual Heat Removal System | 4Q/09     | 1Q/10     | 2Q/10     | 3Q/10     | 4Q/10     | 1Q/11     | 2Q/11     | 3Q/11     |
|--|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| UAI ( $\Delta$ CDF)  | -2.50E-09 | 1.52E-08  | 1.54E-08  | 1.55E-08  | 1.13E-08  | 1.14E-08  | 1.14E-08  | 1.79E-08  |
| URI ( $\Delta$ CDF)  | -1.00E-07 | -3.90E-08 | -3.67E-08 | -3.65E-08 | -3.65E-08 | -3.65E-08 | -3.65E-08 | -3.65E-08 |
| PLE  | NO        | NO        | NO        | NO        | NO        | NO        | NO        | NO        |
| Indicator value  | -1.03E-07 | -2.40E-08 | -2.10E-08 | -2.10E-08 | -2.50E-08 | -2.50E-08 | -2.50E-08 | -1.90E-08 |

Licensee Comments: none



# Mitigating Systems Performance Index, Cooling Water Systems



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

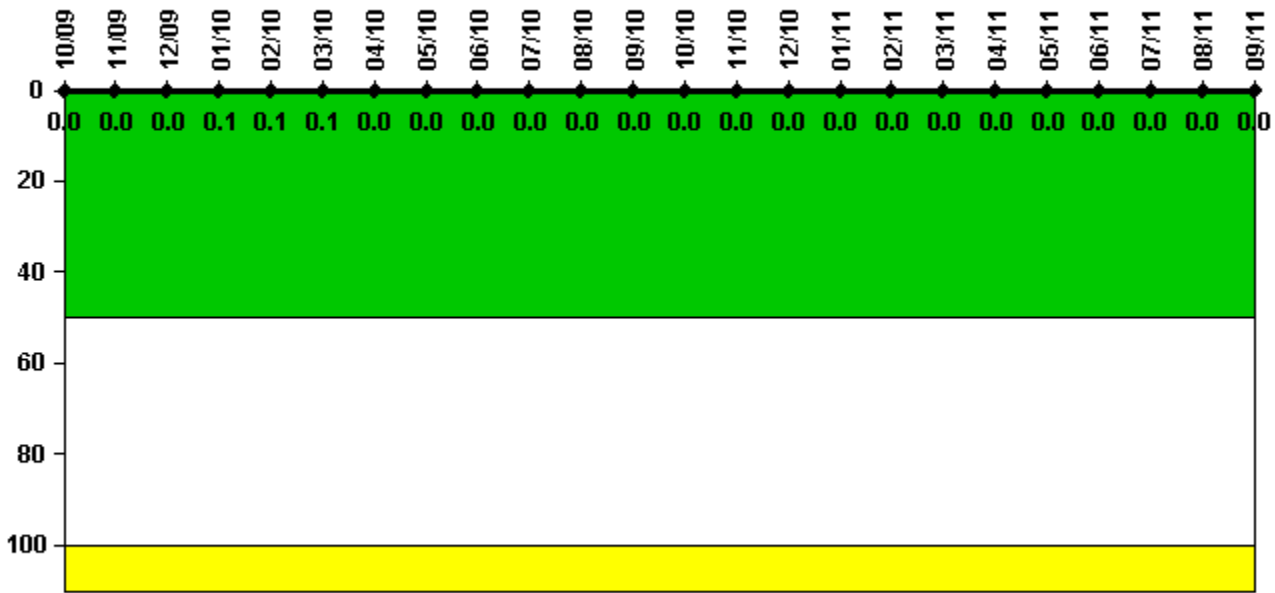
## Notes

| Mitigating Systems Performance Index, Cooling Water Systems | 4Q/09     | 1Q/10     | 2Q/10     | 3Q/10     | 4Q/10     | 1Q/11     | 2Q/11     | 3Q/11     |
|---|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| UAI ( $\Delta$ CDF)   | -2.00E-09 | -4.23E-09 | -4.22E-09 | -4.22E-09 | -4.22E-09 | -4.22E-09 | -4.22E-09 | -2.74E-09 |
| URI ( $\Delta$ CDF)   | 3.80E-09  | -4.84E-09 | -7.28E-09 | -7.30E-09 | -7.30E-09 | -7.30E-09 | -7.31E-09 | -7.31E-09 |
| PLE   | NO        | NO        | NO        | NO        | NO        | NO        | NO        | NO        |
| Indicator value   | 1.80E-09  | -9.10E-09 | -1.20E-08 | -1.20E-08 | -1.20E-08 | -1.20E-08 | -1.20E-08 | -1.00E-08 |

Licensee Comments:

3Q/11: As of the 3rd Quarter 2011 reporting period, the ANO-1 MSPI Basis Document was revised. The MSPI Cooling Water System is now defined as a two train system with a swing pump, instead of the previously defined multi-segment system.

# Reactor Coolant System Activity



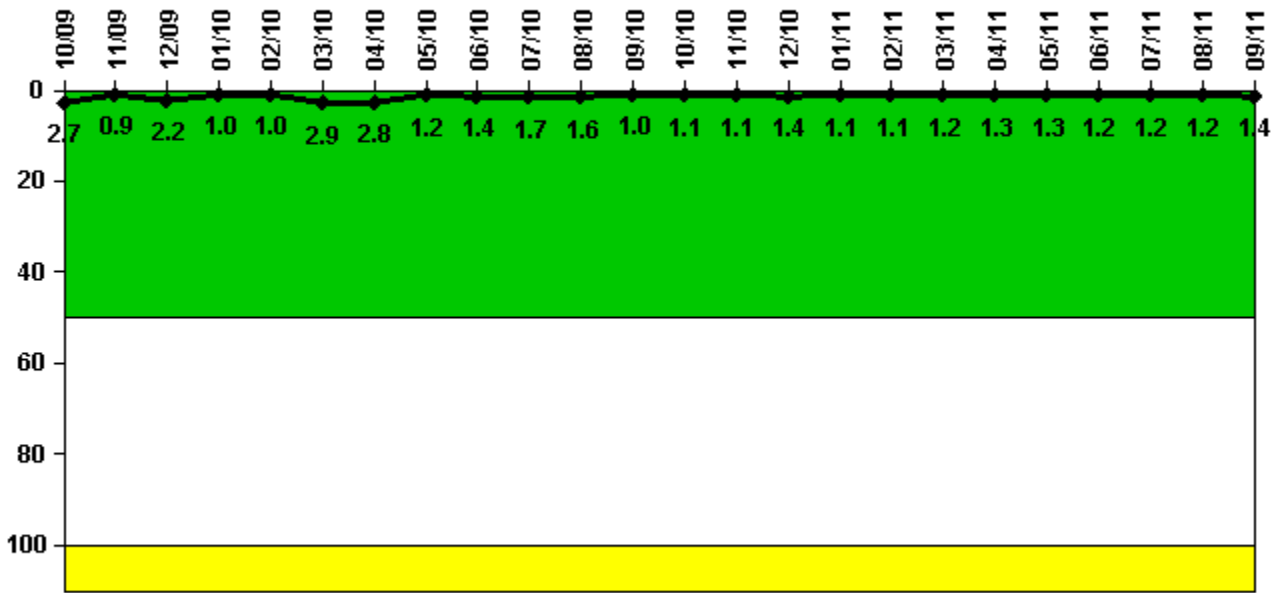
Thresholds: White > 50.0 Yellow > 100.0

## Notes

| Reactor Coolant System Activity | 10/09    | 11/09    | 12/09    | 1/10     | 2/10     | 3/10     | 4/10     | 5/10     | 6/10     | 7/10     | 8/10     | 9/10     |
|---------------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Maximum activity                | 0.000454 | 0.000486 | 0.000461 | 0.000542 | 0.000513 | 0.000880 | 0.000150 | 0.000192 | 0.000212 | 0.000231 | 0.000220 | 0.000307 |
| Technical specification limit   | 3.5      | 3.5      | 3.5      | 1.0      | 1.0      | 1.0      | 1.0      | 1.0      | 1.0      | 1.0      | 1.0      | 1.0      |
| Indicator value                 | 0        | 0        | 0        | 0.1      | 0.1      | 0.1      | 0        | 0        | 0        | 0        | 0        | 0        |
| Reactor Coolant System Activity | 10/10    | 11/10    | 12/10    | 1/11     | 2/11     | 3/11     | 4/11     | 5/11     | 6/11     | 7/11     | 8/11     | 9/11     |
| Maximum activity                | 0.000313 | 0.000372 | 0.000279 | 0.000301 | 0.000358 | 0.000354 | 0.000305 | 0.000300 | 0.000227 | 0.000226 | 0.000182 | 0.000268 |
| 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        | 0        | 0        | 0        | 0        | 0        |

Licensee Comments: none

## Reactor Coolant System Leakage



Thresholds: White > 50.0 Yellow > 100.0

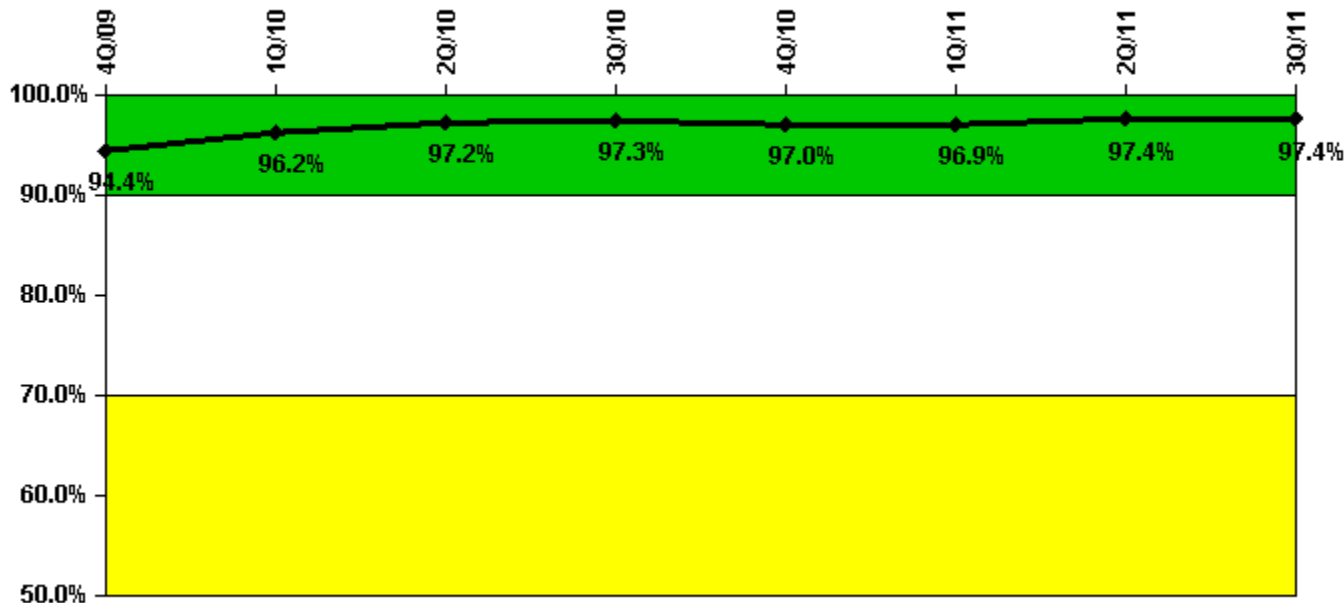
### Notes

|                                       |              |              |              |             |             |             |             |             |             |             |             |             |
|---------------------------------------|--------------|--------------|--------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <b>Reactor Coolant System Leakage</b> | <b>10/09</b> | <b>11/09</b> | <b>12/09</b> | <b>1/10</b> | <b>2/10</b> | <b>3/10</b> | <b>4/10</b> | <b>5/10</b> | <b>6/10</b> | <b>7/10</b> | <b>8/10</b> | <b>9/10</b> |
| Maximum leakage                       | 0.268        | 0.089        | 0.221        | 0.098       | 0.096       | 0.285       | 0.281       | 0.119       | 0.141       | 0.166       | 0.158       | 0.100       |
| 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                       | 2.7          | 0.9          | 2.2          | 1.0         | 1.0         | 2.9         | 2.8         | 1.2         | 1.4         | 1.7         | 1.6         | 1.0         |
| <b>Reactor Coolant System Leakage</b> | <b>10/10</b> | <b>11/10</b> | <b>12/10</b> | <b>1/11</b> | <b>2/11</b> | <b>3/11</b> | <b>4/11</b> | <b>5/11</b> | <b>6/11</b> | <b>7/11</b> | <b>8/11</b> | <b>9/11</b> |
| Maximum leakage                       | 0.109        | 0.113        | 0.141        | 0.114       | 0.114       | 0.116       | 0.125       | 0.127       | 0.118       | 0.116       | 0.124       | 0.143       |
| 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                       | 1.1          | 1.1          | 1.4          | 1.1         | 1.1         | 1.2         | 1.3         | 1.3         | 1.2         | 1.2         | 1.2         | 1.4         |

Licensee Comments:

9/11: Total Leakage is being reported in lieu of Identified Leakage.

## Drill/Exercise Performance



Thresholds: White < 90.0% Yellow < 70.0%

### Notes

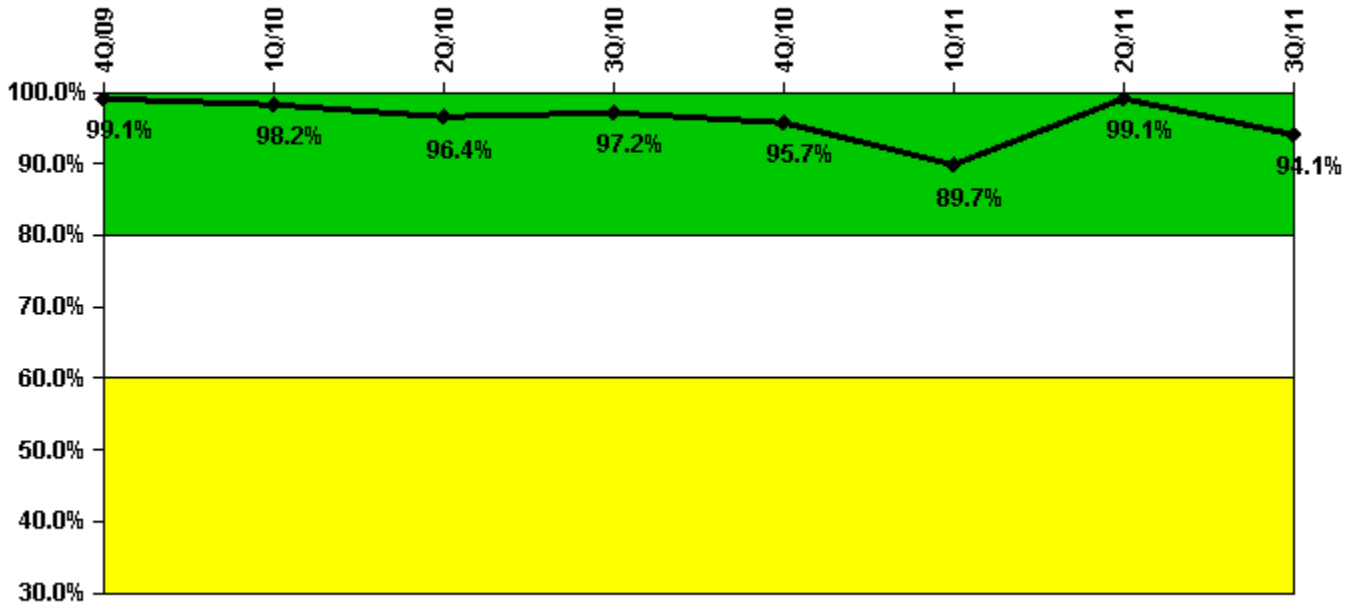
| Drill/Exercise Performance | 4Q/09 | 1Q/10 | 2Q/10 | 3Q/10 | 4Q/10 | 1Q/11 | 2Q/11 | 3Q/11 |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Successful opportunities   | 19.0  | 23.0  | 26.0  | 35.0  | 17.0  | 11.0  | 39.0  | 17.0  |
| Total opportunities        | 22.0  | 23.0  | 26.0  | 35.0  | 18.0  | 11.0  | 40.0  | 17.0  |
| Indicator value            | 94.4% | 96.2% | 97.2% | 97.3% | 97.0% | 96.9% | 97.4% | 97.4% |

### Licensee Comments:

3Q/11: The April 2011 ERO Drill Exercise Performance was revised with the 3rd quarter 2011 submittal. April Successful Drills and Total Drills were reduced from 11 each, to 10 each. This revision does not affect the indicator color.

2Q/11: The April 2011 ERO Drill Exercise Performance was revised with the 3rd quarter 2011 submittal. April Successful Drills and Total Drills were reduced from 11 each, to 10 each. This revision does not affect the indicator color.

## ERO Drill Participation



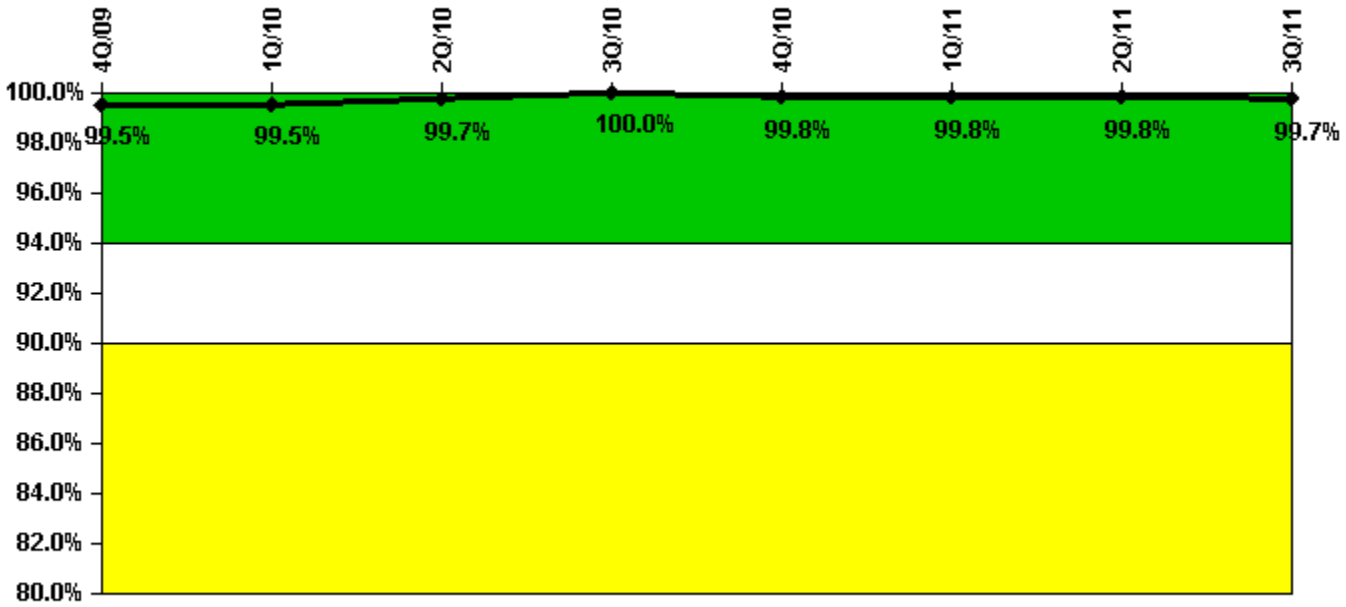
Thresholds: White < 80.0% Yellow < 60.0%

### Notes

| ERO Drill Participation     | 4Q/09 | 1Q/10 | 2Q/10 | 3Q/10 | 4Q/10 | 1Q/11 | 2Q/11 | 3Q/11 |
|-----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Participating Key personnel | 112.0 | 112.0 | 106.0 | 106.0 | 110.0 | 105.0 | 114.0 | 111.0 |
| Total Key personnel         | 113.0 | 114.0 | 110.0 | 109.0 | 115.0 | 117.0 | 115.0 | 118.0 |
|                             |       |       |       |       |       |       |       |       |
| Indicator value             | 99.1% | 98.2% | 96.4% | 97.2% | 95.7% | 89.7% | 99.1% | 94.1% |

Licensee Comments: none

# Alert & Notification System



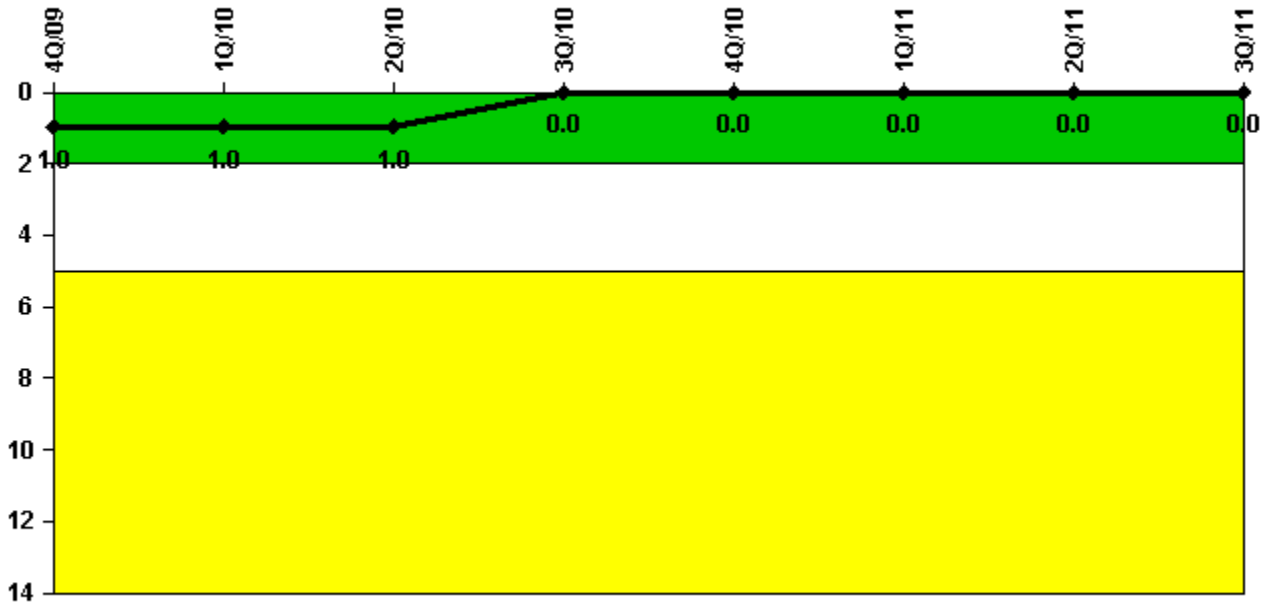
Thresholds: White < 94.0% Yellow < 90.0%

## Notes

| Alert & Notification System | 4Q/09 | 1Q/10 | 2Q/10 | 3Q/10  | 4Q/10 | 1Q/11 | 2Q/11 | 3Q/11 |
|-----------------------------|-------|-------|-------|--------|-------|-------|-------|-------|
| Successful siren-tests      | 147   | 147   | 147   | 147    | 146   | 147   | 147   | 146   |
| Total sirens-tests          | 147   | 147   | 147   | 147    | 147   | 147   | 147   | 147   |
|                             |       |       |       |        |       |       |       |       |
| Indicator value             | 99.5% | 99.5% | 99.7% | 100.0% | 99.8% | 99.8% | 99.8% | 99.7% |

Licensee Comments: none

# Occupational Exposure Control Effectiveness



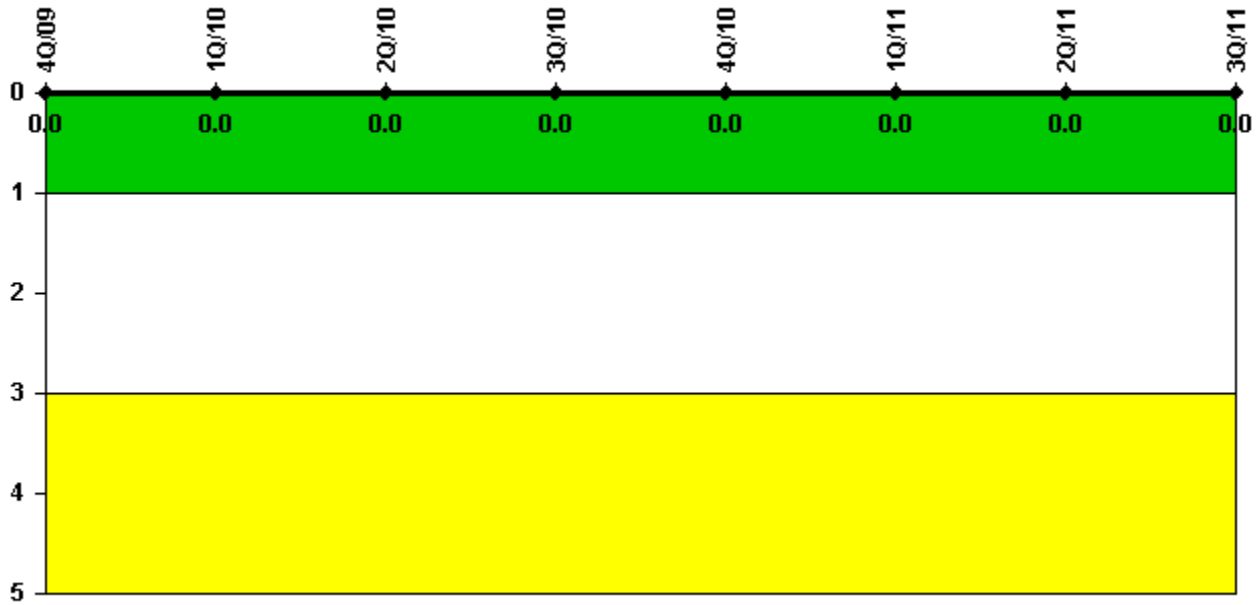
Thresholds: White > 2.0 Yellow > 5.0

## Notes

| Occupational Exposure Control Effectiveness | 4Q/09    | 1Q/10    | 2Q/10    | 3Q/10    | 4Q/10    | 1Q/11    | 2Q/11    | 3Q/11    |
|---|----------|----------|----------|----------|----------|----------|----------|----------|
| 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>1</b> | <b>1</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 | 4Q/09 | 1Q/10 | 2Q/10 | 3Q/10 | 4Q/10 | 1Q/11 | 2Q/11 | 3Q/11 |
|---------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| RETS/ODCM occurrences           | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     |
| Indicator value                 | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     |

Licensee Comments: none

[Security](#) information not publicly available.