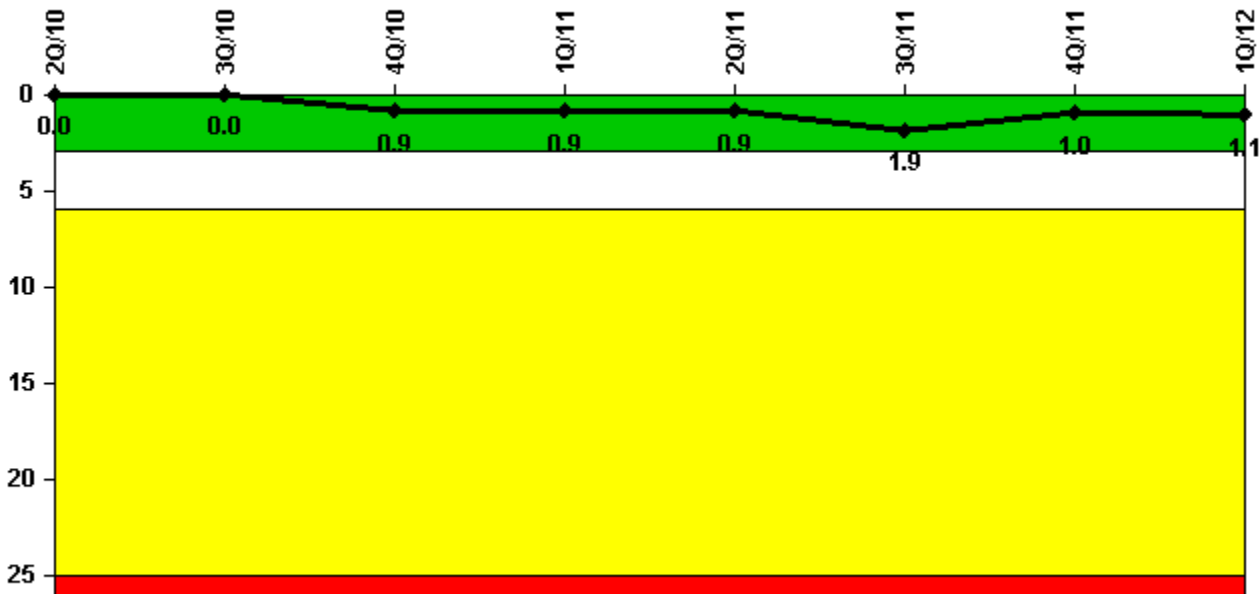


# North Anna 1

## 1Q/2012 Performance Indicators

Licensee's General Comments: none

### Unplanned Scrams per 7000 Critical Hrs



Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

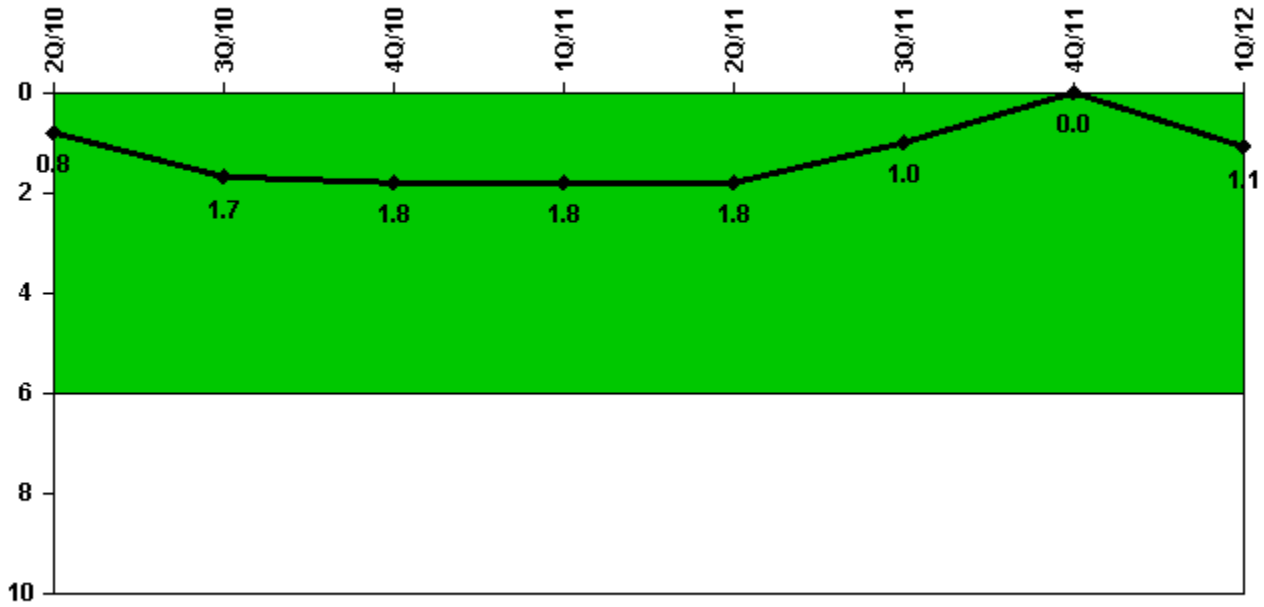
### Notes

| Unplanned Scrams per 7000 Critical Hrs | 2Q/10  | 3Q/10  | 4Q/10  | 1Q/11  | 2Q/11  | 3Q/11  | 4Q/11  | 1Q/12  |
|--|--------|--------|--------|--------|--------|--------|--------|--------|
| Unplanned scrams                       | 0      | 0      | 1.0    | 0      | 0      | 1.0    | 0      | 0      |
| Critical hours                         | 2184.0 | 1653.7 | 1696.2 | 2159.0 | 2184.0 | 1285.9 | 1149.1 | 1681.2 |
| Indicator value                        | 0      | 0      | 0.9    | 0.9    | 0.9    | 1.9    | 1.0    | 1.1    |

Licensee Comments: none

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## Unplanned Power Changes per 7000 Critical Hrs



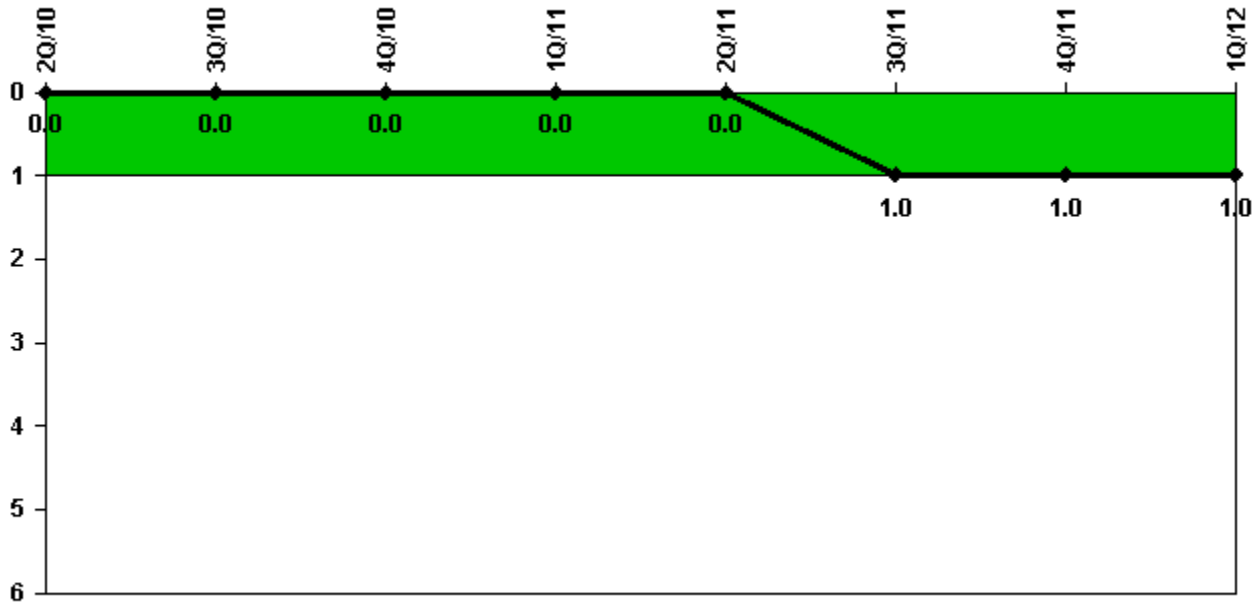
Thresholds: White > 6.0

### Notes

| Unplanned Power Changes per 7000 Critical Hrs | 2Q/10  | 3Q/10  | 4Q/10  | 1Q/11  | 2Q/11  | 3Q/11  | 4Q/11  | 1Q/12  |
|---|--------|--------|--------|--------|--------|--------|--------|--------|
| Unplanned power changes                       | 0      | 1.0    | 1.0    | 0      | 0      | 0      | 0      | 1.0    |
| Critical hours                                | 2184.0 | 1653.7 | 1696.2 | 2159.0 | 2184.0 | 1285.9 | 1149.1 | 1681.2 |
| Indicator value                               | 0.8    | 1.7    | 1.8    | 1.8    | 1.8    | 1.0    | 0      | 1.1    |

Licensee Comments: none

## Unplanned Scrams with Complications



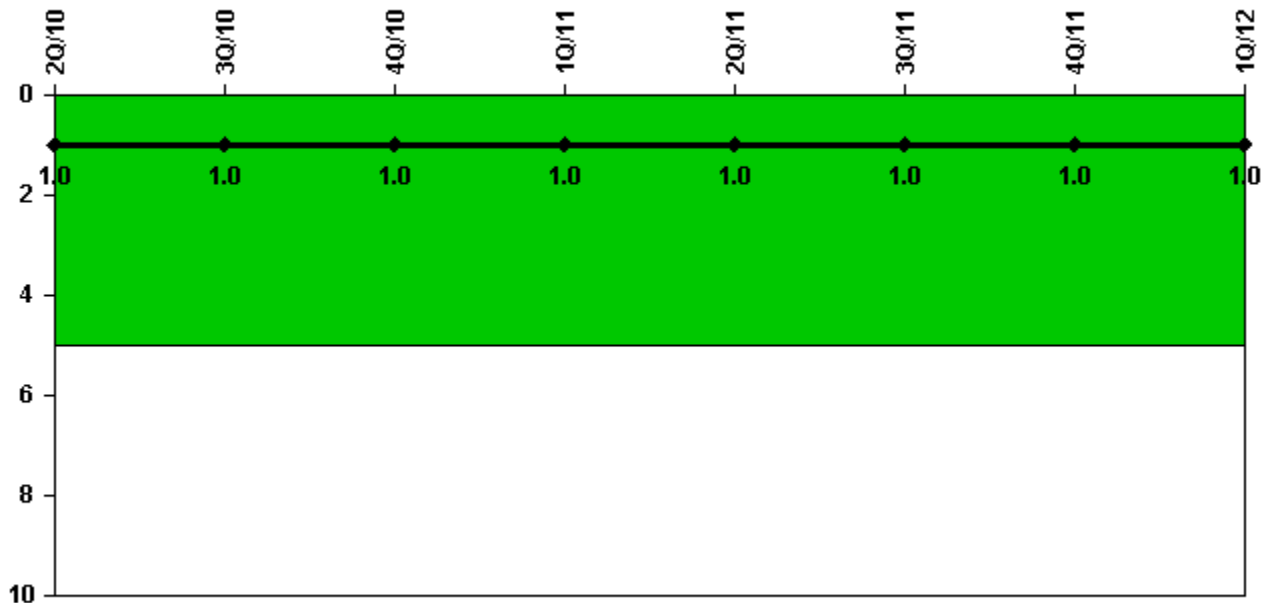
Thresholds: White > 1.0

### Notes

| Unplanned Scrams with Complications | 2Q/10 | 3Q/10 | 4Q/10 | 1Q/11 | 2Q/11 | 3Q/11 | 4Q/11 | 1Q/12 |
|-------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Scrams with complications           | 0     | 0     | 0     | 0     | 0     | 1.0   | 0     | 0     |
|                                     |       |       |       |       |       |       |       |       |
|                                     |       |       |       |       |       |       |       |       |
| Indicator value                     | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 1.0   | 1.0   | 1.0   |

Licensee Comments: none

## Safety System Functional Failures (PWR)



Thresholds: White > 5.0

### Notes

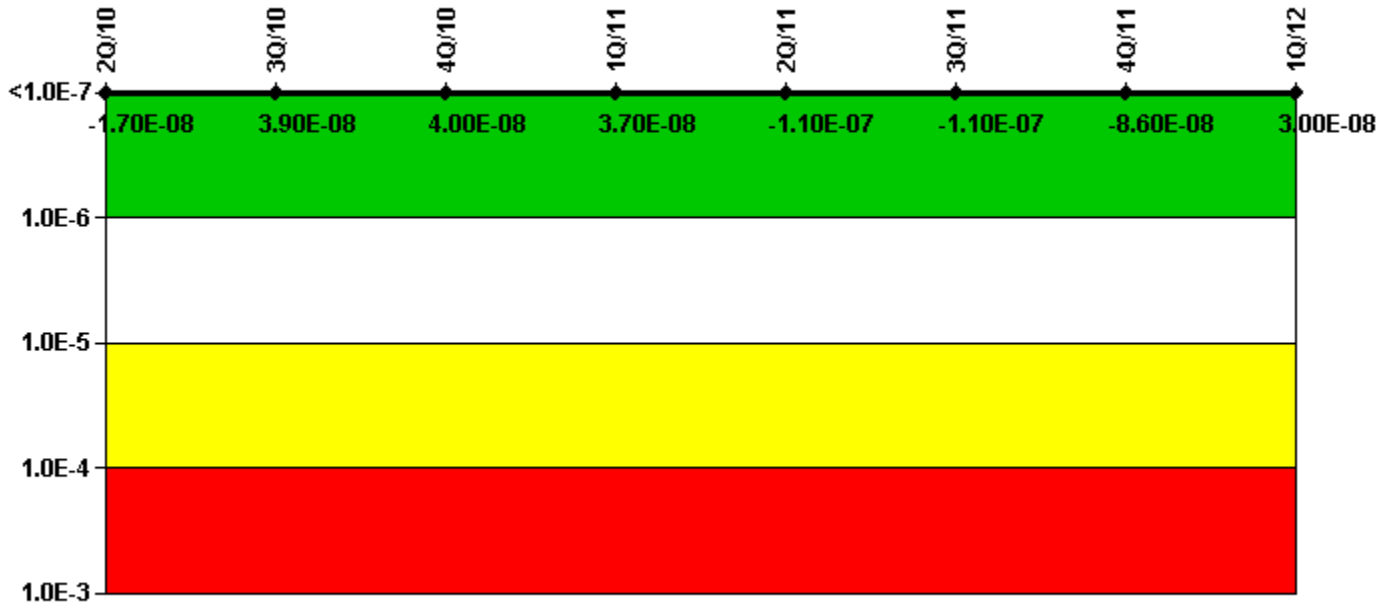
| Safety System Functional Failures (PWR) | 2Q/10 | 3Q/10 | 4Q/10 | 1Q/11 | 2Q/11 | 3Q/11 | 4Q/11 | 1Q/12 |
|---|-------|-------|-------|-------|-------|-------|-------|-------|
| Safety System Functional Failures       | 0     | 0     | 1     | 0     | 0     | 0     | 1     | 0     |
| Indicator value                         | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     |

Licensee Comments:

4Q/11: Dual unit trip with loss of offsite power from seismic event on 8/23/11. LER N1-2011-003-00.

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# Mitigating Systems Performance Index, Emergency AC Power System



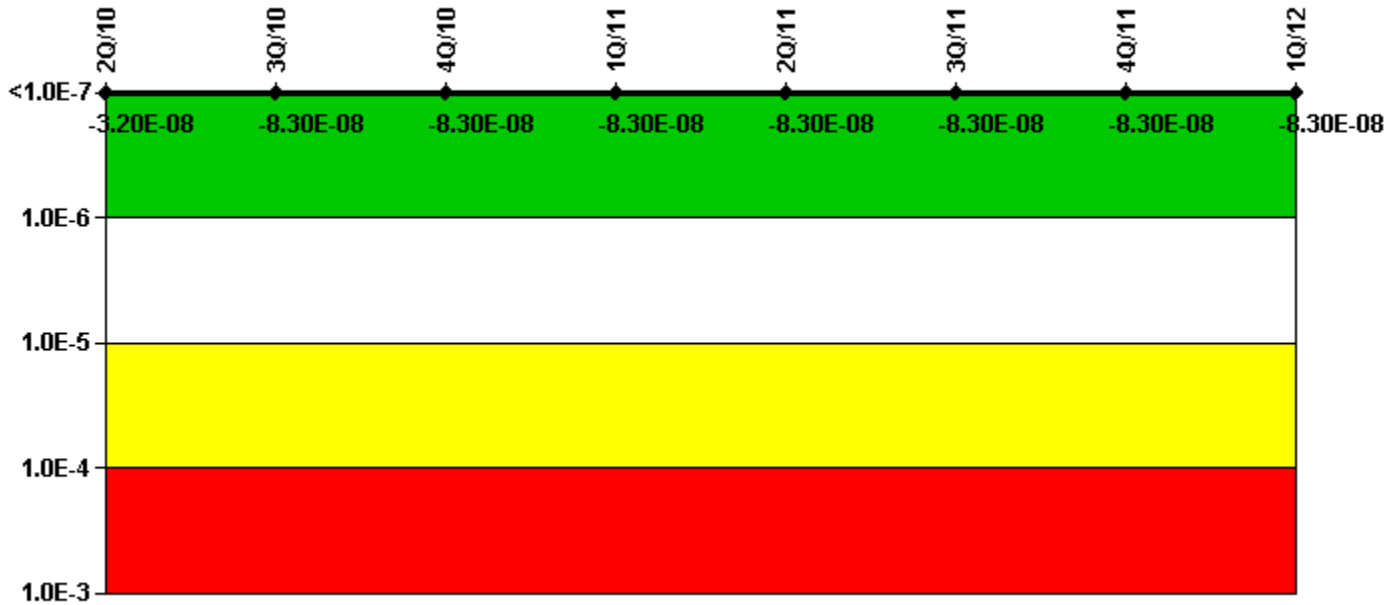
Thresholds: White > 1.00E-6 Yellow > 1.00E-5 Red > 1.00E-4

## Notes

| Mitigating Systems Performance Index, Emergency AC Power System | 2Q/10     | 3Q/10     | 4Q/10     | 1Q/11     | 2Q/11     | 3Q/11     | 4Q/11     | 1Q/12     |
|---|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| UAI ( $\Delta$ CDF)   | 5.90E-08  | 4.10E-08  | 4.16E-08  | 3.82E-08  | 5.34E-09  | 1.16E-08  | 3.59E-08  | 3.51E-08  |
| URI ( $\Delta$ CDF)   | -7.60E-08 | -1.96E-09 | -1.96E-09 | -1.73E-09 | -1.18E-07 | -1.22E-07 | -1.22E-07 | -5.55E-09 |
| PLE   | NO        | NO        | NO        | NO        | NO        | NO        | NO        | NO        |
| Indicator value   | -1.70E-08 | 3.90E-08  | 4.00E-08  | 3.70E-08  | -1.10E-07 | -1.10E-07 | -8.60E-08 | 3.00E-08  |

Licensee Comments: none

# Mitigating Systems Performance Index, High Pressure Injection System



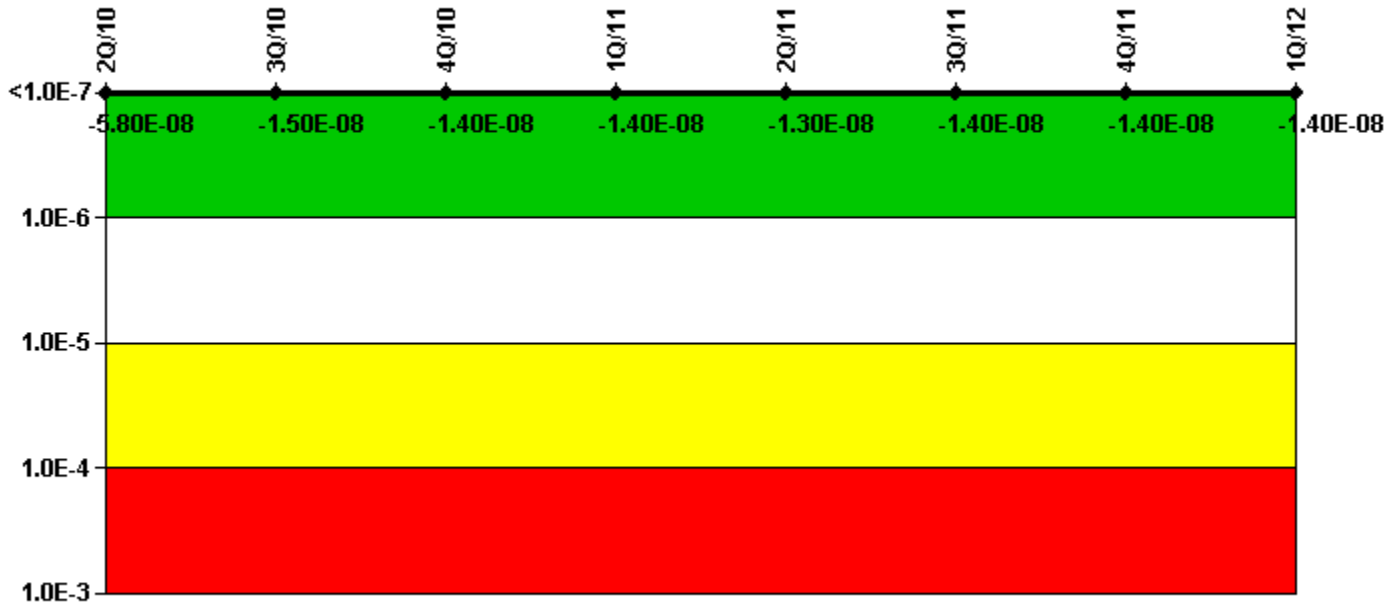
Thresholds: White > 1.00E-6 Yellow > 1.00E-5 Red > 1.00E-4

## Notes

| Mitigating Systems Performance Index, High Pressure Injection System | 2Q/10     | 3Q/10     | 4Q/10     | 1Q/11     | 2Q/11     | 3Q/11     | 4Q/11     | 1Q/12     |
|--|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| UAI ( $\Delta$ CDF)  | -2.26E-08 | -7.00E-08 | -7.00E-08 | -7.00E-08 | -7.00E-08 | -7.00E-08 | -7.00E-08 | -7.00E-08 |
| URI ( $\Delta$ CDF)  | -9.08E-09 | -1.28E-08 | -1.28E-08 | -1.28E-08 | -1.28E-08 | -1.28E-08 | -1.28E-08 | -1.28E-08 |
| PLE  | NO        | NO        | NO        | NO        | NO        | NO        | NO        | NO        |
| Indicator value  | -3.20E-08 | -8.30E-08 | -8.30E-08 | -8.30E-08 | -8.30E-08 | -8.30E-08 | -8.30E-08 | -8.30E-08 |

Licensee Comments: none

# Mitigating Systems Performance Index, Heat Removal System



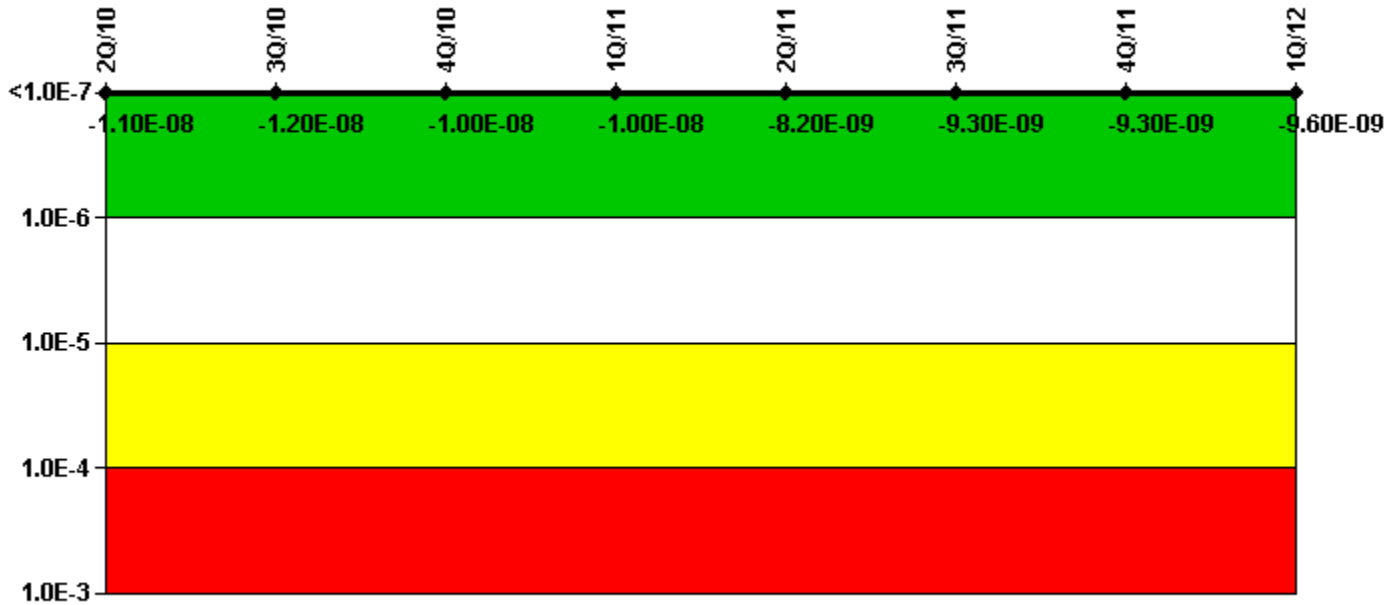
Thresholds: White > 1.00E-6 Yellow > 1.00E-5 Red > 1.00E-4

## Notes

| Mitigating Systems Performance Index, Heat Removal System | 2Q/10     | 3Q/10     | 4Q/10     | 1Q/11     | 2Q/11     | 3Q/11     | 4Q/11     | 1Q/12     |
|---|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| UAI ( $\Delta$ CDF)                                       | -2.24E-08 | -5.23E-09 | -5.23E-09 | -5.23E-09 | -3.25E-09 | -2.99E-09 | -3.01E-09 | -2.69E-09 |
| URI ( $\Delta$ CDF)                                       | -3.57E-08 | -9.60E-09 | -9.14E-09 | -9.14E-09 | -1.01E-08 | -1.12E-08 | -1.12E-08 | -1.12E-08 |
| PLE   | NO        | NO        | NO        | NO        | NO        | NO        | NO        | NO        |
| Indicator value   | -5.80E-08 | -1.50E-08 | -1.40E-08 | -1.40E-08 | -1.30E-08 | -1.40E-08 | -1.40E-08 | -1.40E-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

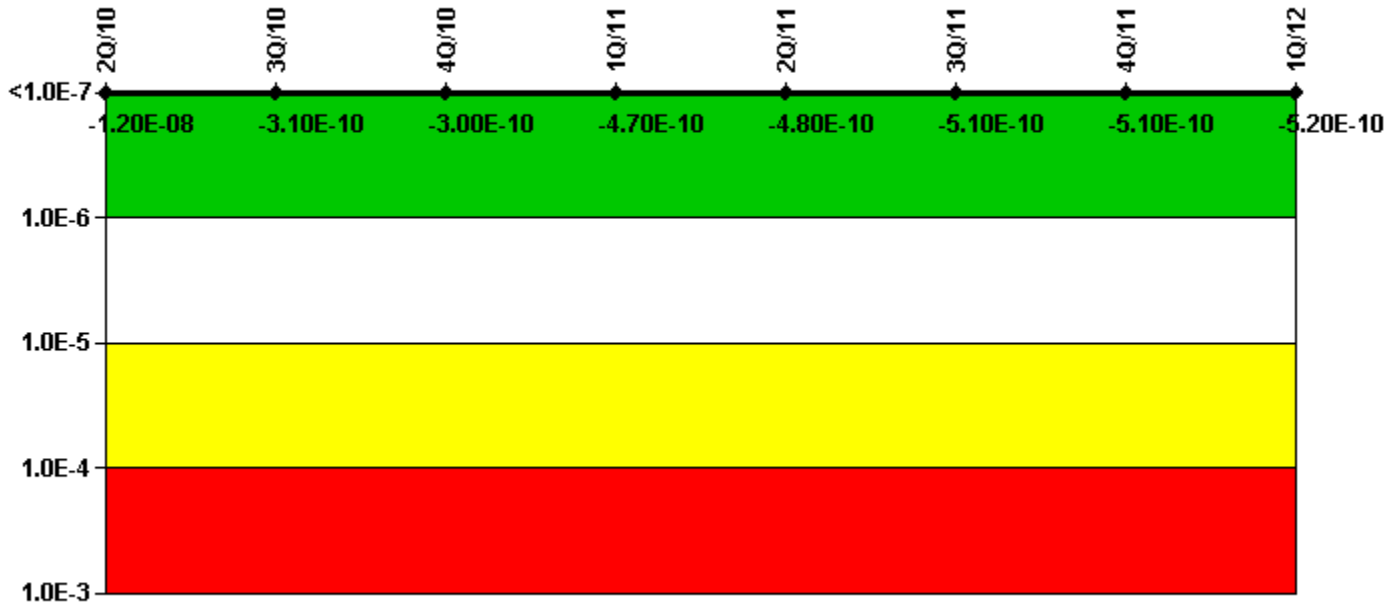
## Notes

| Mitigating Systems Performance Index, Residual Heat Removal System | 2Q/10     | 3Q/10     | 4Q/10     | 1Q/11     | 2Q/11     | 3Q/11     | 4Q/11     | 1Q/12     |
|--|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| UAI ( $\Delta$ CDF)  | -3.87E-09 | -3.75E-09 | -2.47E-09 | -2.47E-09 | -4.26E-10 | -1.55E-09 | -1.57E-09 | -2.36E-09 |
| URI ( $\Delta$ CDF)  | -7.61E-09 | -7.86E-09 | -7.75E-09 | -7.75E-09 | -7.75E-09 | -7.75E-09 | -7.75E-09 | -7.20E-09 |
| PLE  | NO        | NO        | NO        | NO        | NO        | NO        | NO        | NO        |
| Indicator value  | -1.10E-08 | -1.20E-08 | -1.00E-08 | -1.00E-08 | -8.20E-09 | -9.30E-09 | -9.30E-09 | -9.60E-09 |

Licensee Comments: none



# Mitigating Systems Performance Index, Cooling Water Systems



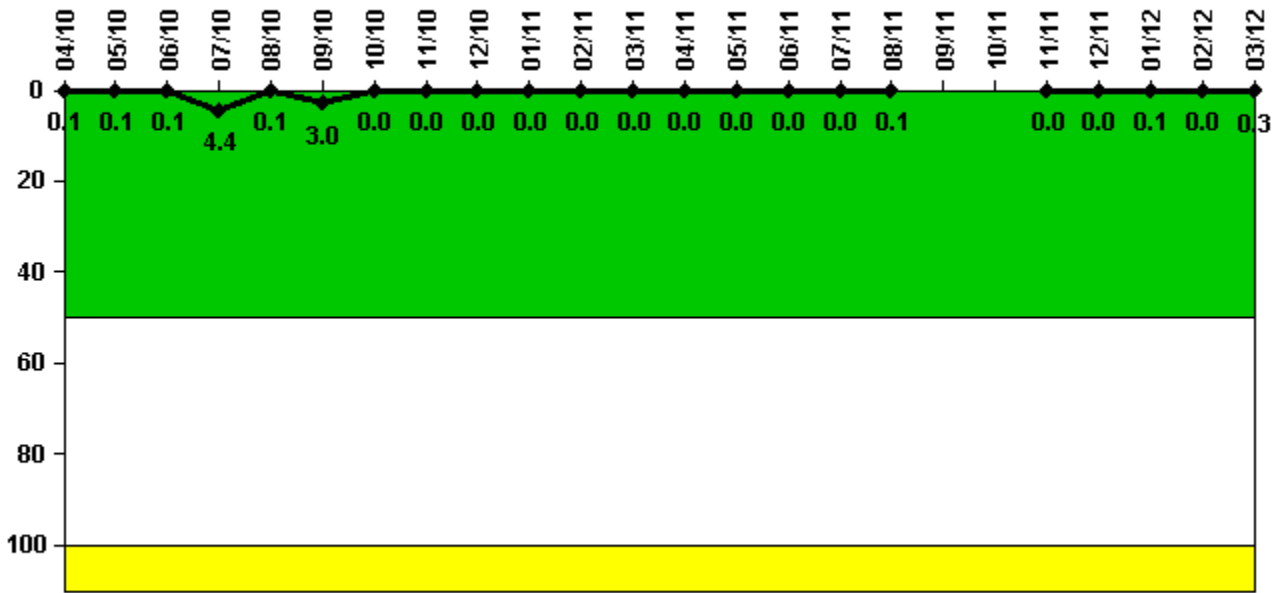
Thresholds: White > 1.00E-6 Yellow > 1.00E-5 Red > 1.00E-4

## Notes

| Mitigating Systems Performance Index, Cooling Water Systems | 2Q/10     | 3Q/10     | 4Q/10     | 1Q/11     | 2Q/11     | 3Q/11     | 4Q/11     | 1Q/12     |
|---|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| UAI ( $\Delta$ CDF)   | -1.42E-10 | -2.62E-11 | -1.38E-11 | -1.39E-11 | -1.94E-11 | -4.39E-11 | -4.52E-11 | -5.71E-11 |
| URI ( $\Delta$ CDF)   | -1.14E-08 | -2.85E-10 | -2.85E-10 | -4.60E-10 | -4.60E-10 | -4.62E-10 | -4.62E-10 | -4.62E-10 |
| PLE   | NO        | NO        | NO        | NO        | NO        | NO        | NO        | NO        |
| Indicator value   | -1.20E-08 | -3.10E-10 | -3.00E-10 | -4.70E-10 | -4.80E-10 | -5.10E-10 | -5.10E-10 | -5.20E-10 |

Licensee Comments: none

# Reactor Coolant System Activity



Thresholds: White > 50.0 Yellow > 100.0

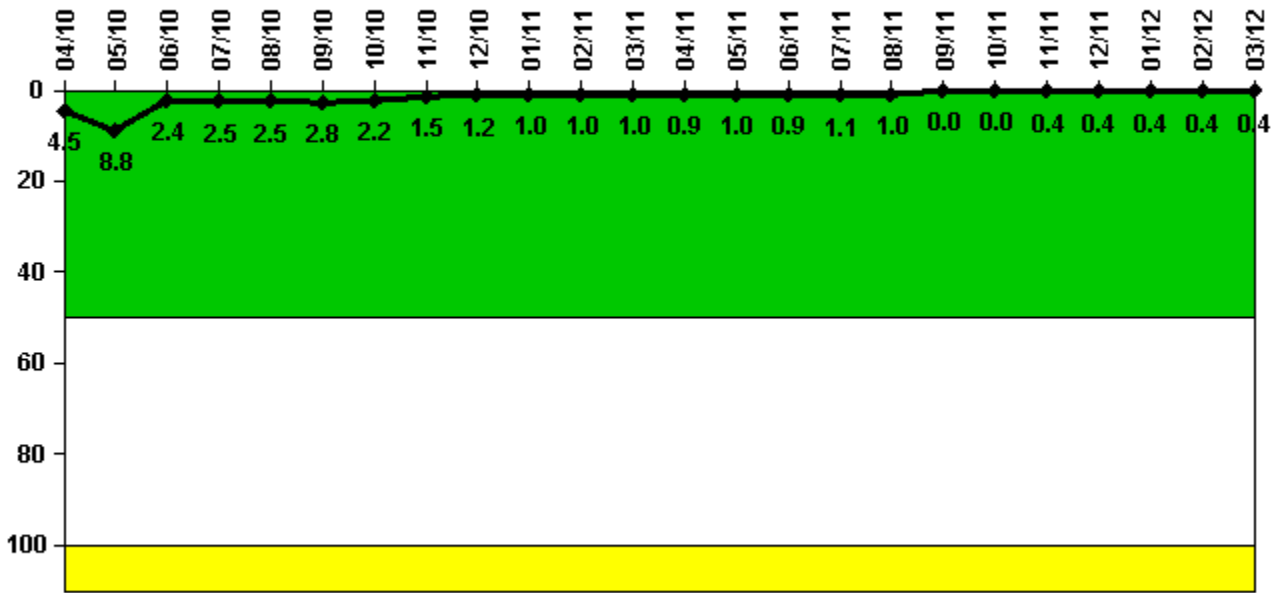
## Notes

| Reactor Coolant System Activity | 4/10     | 5/10     | 6/10     | 7/10     | 8/10     | 9/10     | 10/10    | 11/10    | 12/10    | 1/11     | 2/11     | 3/11     |
|---------------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Maximum activity                | 0.000535 | 0.000557 | 0.000527 | 0.043700 | 0.000800 | 0.029900 | 0.000166 | 0.000238 | 0.000203 | 0.000287 | 0.000216 | 0.000228 |
| 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                 | 0.1      | 0.1      | 0.1      | 4.4      | 0.1      | 3.0      | 0        | 0        | 0        | 0        | 0        | 0        |
| 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                | 0.000242 | 0.000245 | 0.000253 | 0.000266 | 0.000809 | N/A      | N/A      | 0.000379 | 0.000310 | 0.000611 | 0.000334 | 0.003350 |
| 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        | 0.1      | N/A      | N/A      | 0        | 0        | 0.1      | 0        | 0.3      |

Licensee Comments:

9/11: Unit offline August 23, 2011 through September 30, 2011

## Reactor Coolant System Leakage



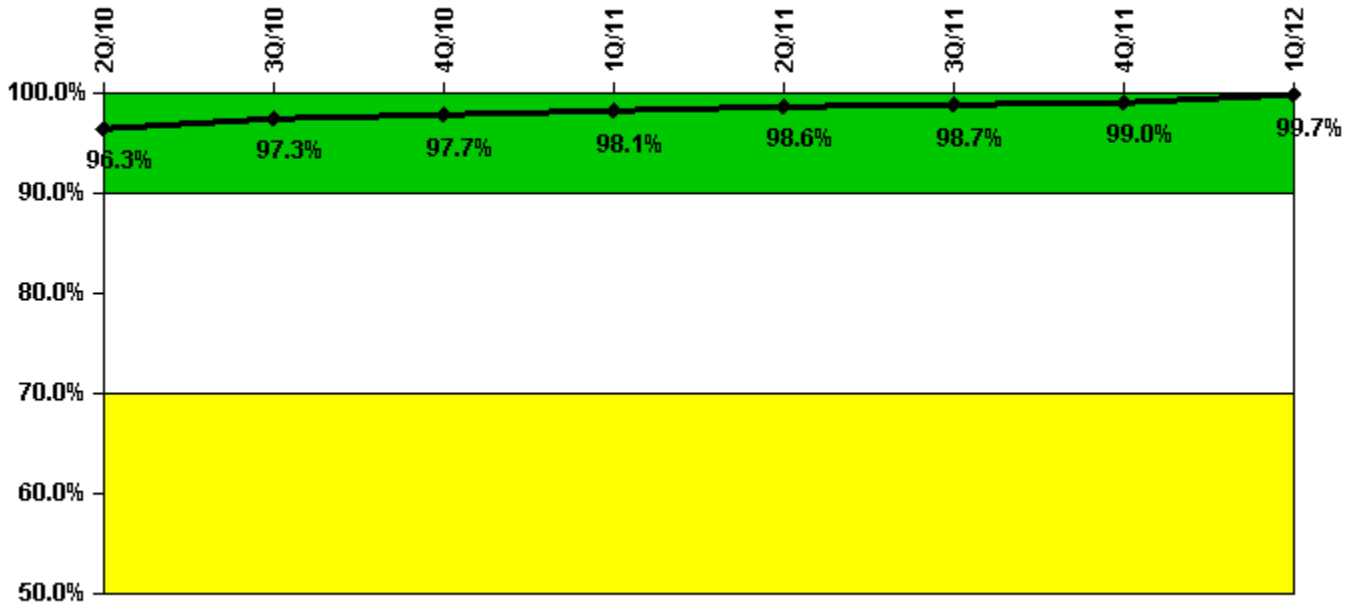
Thresholds: White > 50.0 Yellow > 100.0

### Notes

|                                       |             |             |             |             |             |             |              |              |              |             |             |             |
|---------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|--------------|--------------|-------------|-------------|-------------|
| <b>Reactor Coolant System Leakage</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> | <b>10/10</b> | <b>11/10</b> | <b>12/10</b> | <b>1/11</b> | <b>2/11</b> | <b>3/11</b> |
| Maximum leakage                       | 0.452       | 0.878       | 0.235       | 0.250       | 0.253       | 0.275       | 0.218        | 0.147        | 0.123        | 0.104       | 0.097       | 0.095       |
| 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                       | 4.5         | 8.8         | 2.4         | 2.5         | 2.5         | 2.8         | 2.2          | 1.5          | 1.2          | 1.0         | 1.0         | 1.0         |
| <b>Reactor Coolant System Leakage</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> | <b>10/11</b> | <b>11/11</b> | <b>12/11</b> | <b>1/12</b> | <b>2/12</b> | <b>3/12</b> |
| Maximum leakage                       | 0.094       | 0.099       | 0.093       | 0.113       | 0.096       | 0           | 0            | 0.039        | 0.038        | 0.035       | 0.038       | 0.035       |
| 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                       | 0.9         | 1.0         | 0.9         | 1.1         | 1.0         | 0           | 0            | 0.4          | 0.4          | 0.4         | 0.4         | 0.4         |

Licensee Comments: none

## Drill/Exercise Performance



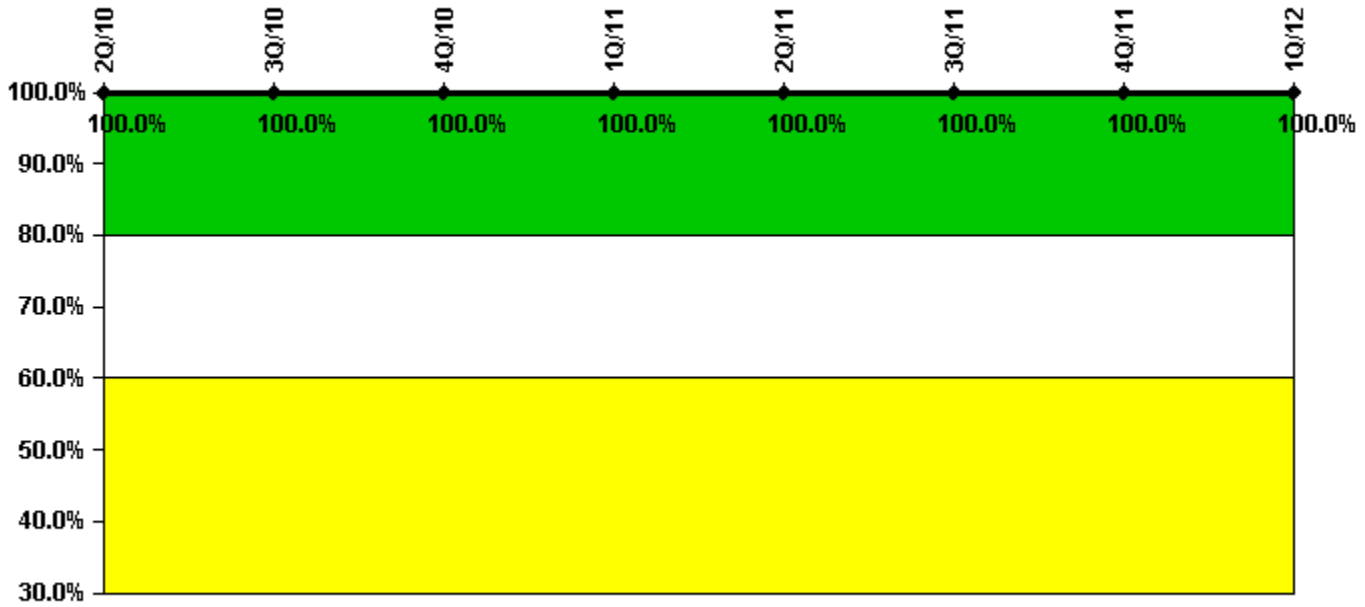
Thresholds: White < 90.0% Yellow < 70.0%

### Notes

| Drill/Exercise Performance | 2Q/10 | 3Q/10 | 4Q/10 | 1Q/11 | 2Q/11 | 3Q/11 | 4Q/11 | 1Q/12 |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Successful opportunities   | 50.0  | 38.0  | 46.0  | 47.0  | 64.0  | 8.0   | 8.0   | 31.0  |
| Total opportunities        | 50.0  | 39.0  | 46.0  | 47.0  | 64.0  | 8.0   | 8.0   | 31.0  |
|                            |       |       |       |       |       |       |       |       |
| Indicator value            | 96.3% | 97.3% | 97.7% | 98.1% | 98.6% | 98.7% | 99.0% | 99.7% |

Licensee Comments: none

## ERO Drill Participation



Thresholds: White < 80.0% Yellow < 60.0%

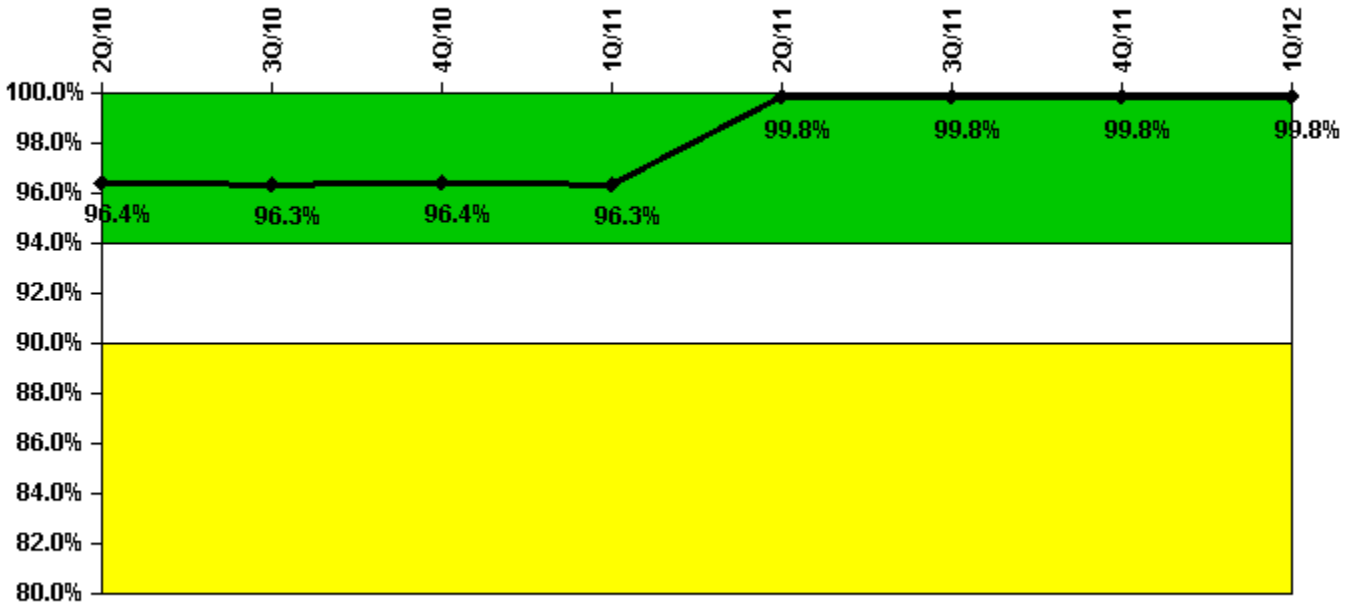
### Notes

| ERO Drill Participation     | 2Q/10  | 3Q/10  | 4Q/10  | 1Q/11  | 2Q/11  | 3Q/11  | 4Q/11  | 1Q/12  |
|-----------------------------|--------|--------|--------|--------|--------|--------|--------|--------|
| Participating Key personnel | 175.0  | 165.0  | 163.0  | 168.0  | 166.0  | 171.0  | 168.0  | 164.0  |
| Total Key personnel         | 175.0  | 165.0  | 163.0  | 168.0  | 166.0  | 171.0  | 168.0  | 164.0  |
|                             |        |        |        |        |        |        |        |        |
| Indicator value             | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |

Licensee Comments: none

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# Alert & Notification System



Thresholds: White < 94.0% Yellow < 90.0%

## Notes

| Alert & Notification System | 2Q/10 | 3Q/10 | 4Q/10 | 1Q/11 | 2Q/11 | 3Q/11 | 4Q/11 | 1Q/12 |
|-----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Successful siren-tests      | 408   | 475   | 476   | 474   | 476   | 474   | 476   | 475   |
| Total sirens-tests          | 476   | 476   | 476   | 476   | 476   | 476   | 476   | 476   |
| Indicator value             | 96.4% | 96.3% | 96.4% | 96.3% | 99.8% | 99.8% | 99.8% | 99.8% |

Licensee Comments: none

# Occupational Exposure Control Effectiveness



Thresholds: White > 2.0 Yellow > 5.0

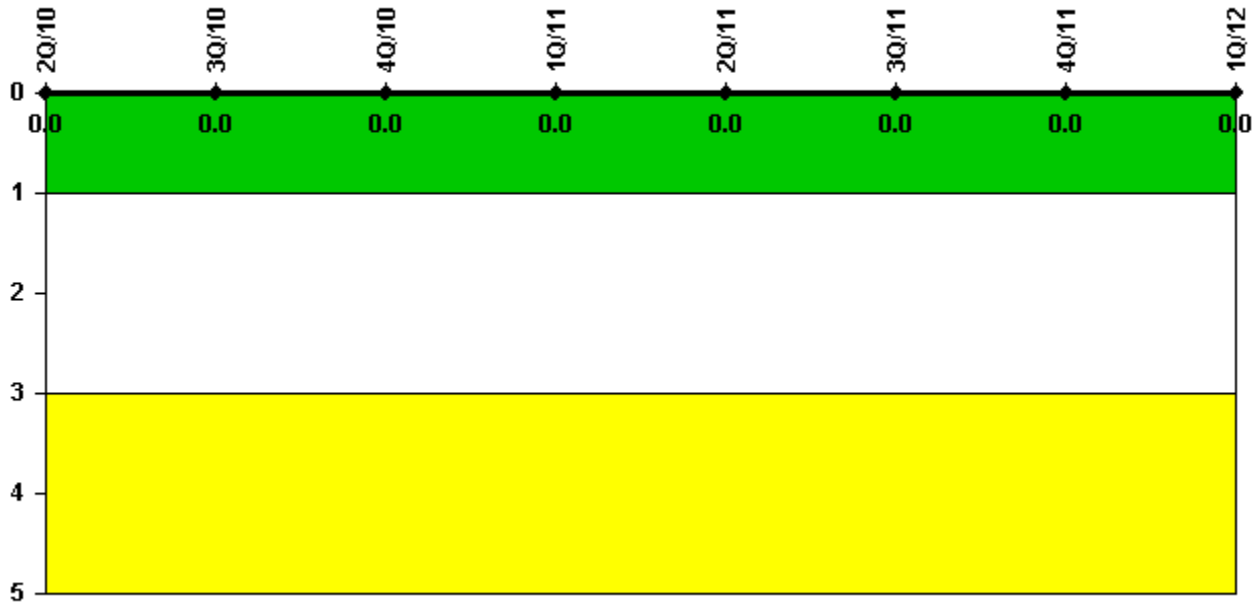
## Notes

| Occupational Exposure Control Effectiveness | 2Q/10    | 3Q/10    | 4Q/10    | 1Q/11    | 2Q/11    | 3Q/11    | 4Q/11    | 1Q/12    |
|---|----------|----------|----------|----------|----------|----------|----------|----------|
| 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

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## RETS/ODCM Radiological Effluent



Thresholds: White > 1.0 Yellow > 3.0

### Notes

| RETS/ODCM Radiological Effluent | 2Q/10 | 3Q/10 | 4Q/10 | 1Q/11 | 2Q/11 | 3Q/11 | 4Q/11 | 1Q/12 |
|---------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| 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.