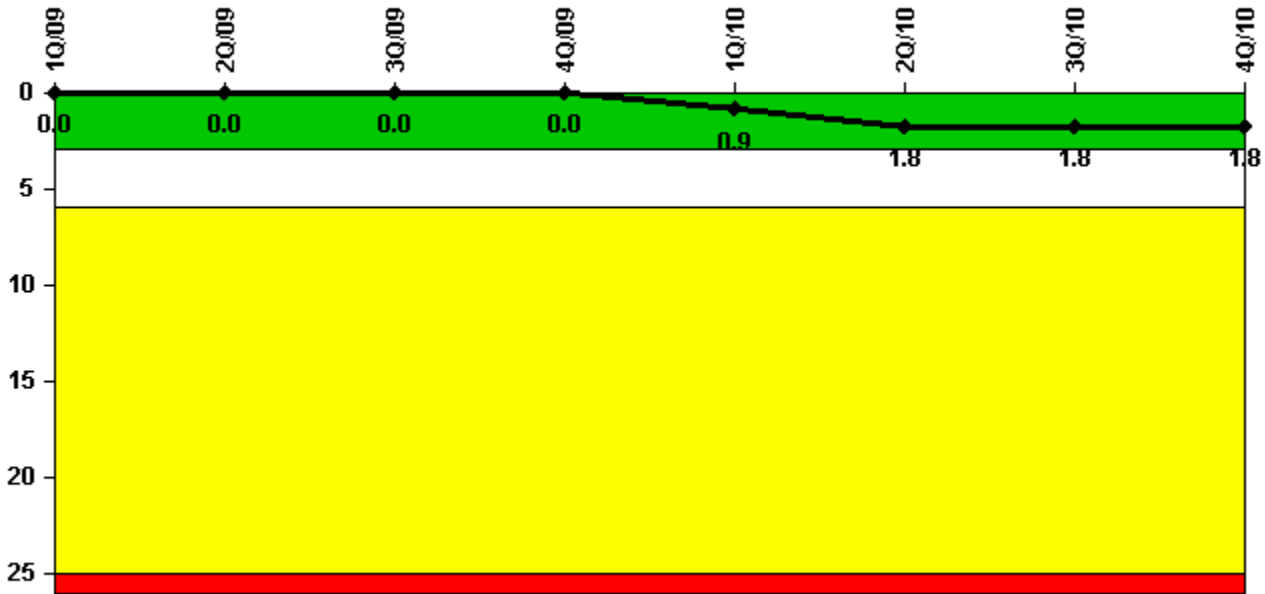


# Calvert Cliffs 1

## 4Q/2010 Performance Indicators

Licensee's General Comments: none

### Unplanned Scrams per 7000 Critical Hrs



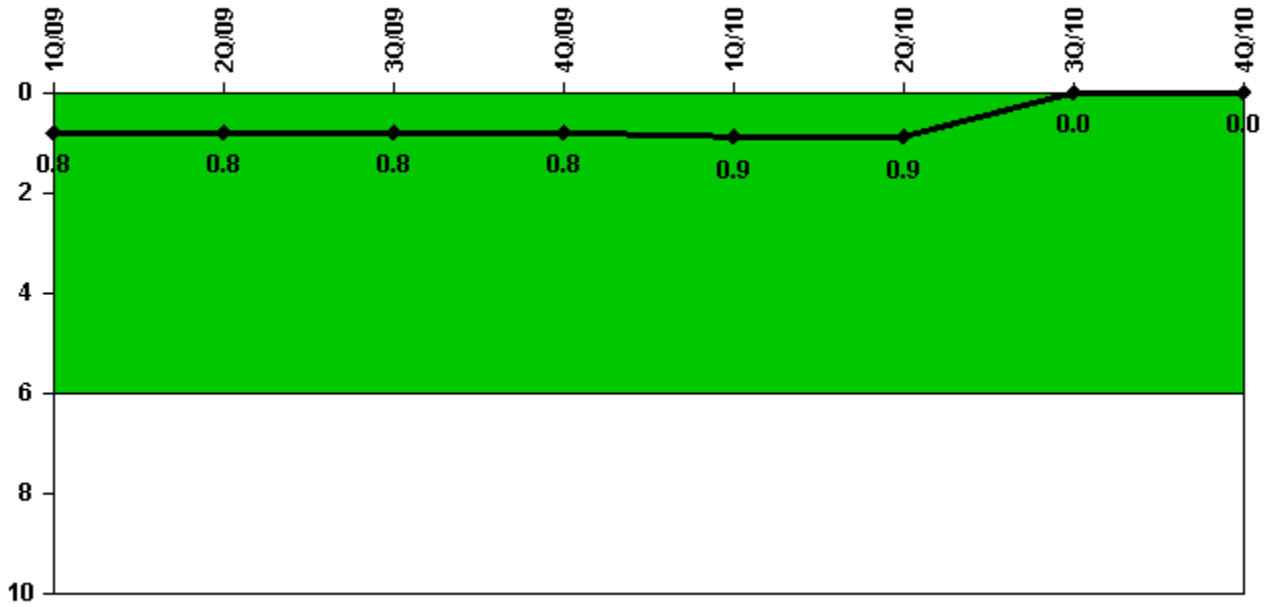
Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

### Notes

| Unplanned Scrams per 7000 Critical Hrs | 1Q/09  | 2Q/09  | 3Q/09  | 4Q/09  | 1Q/10  | 2Q/10  | 3Q/10  | 4Q/10  |
|----------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|
| Unplanned scrams                       | 0      | 0      | 0      | 0      | 1.0    | 1.0    | 0      | 0      |
| Critical hours                         | 2159.0 | 2184.0 | 2115.0 | 2209.0 | 1390.9 | 2031.4 | 2208.0 | 2209.0 |
| Indicator value                        | 0      | 0      | 0      | 0      | 0.9    | 1.8    | 1.8    | 1.8    |

Licensee Comments: none

## Unplanned Power Changes per 7000 Critical Hrs



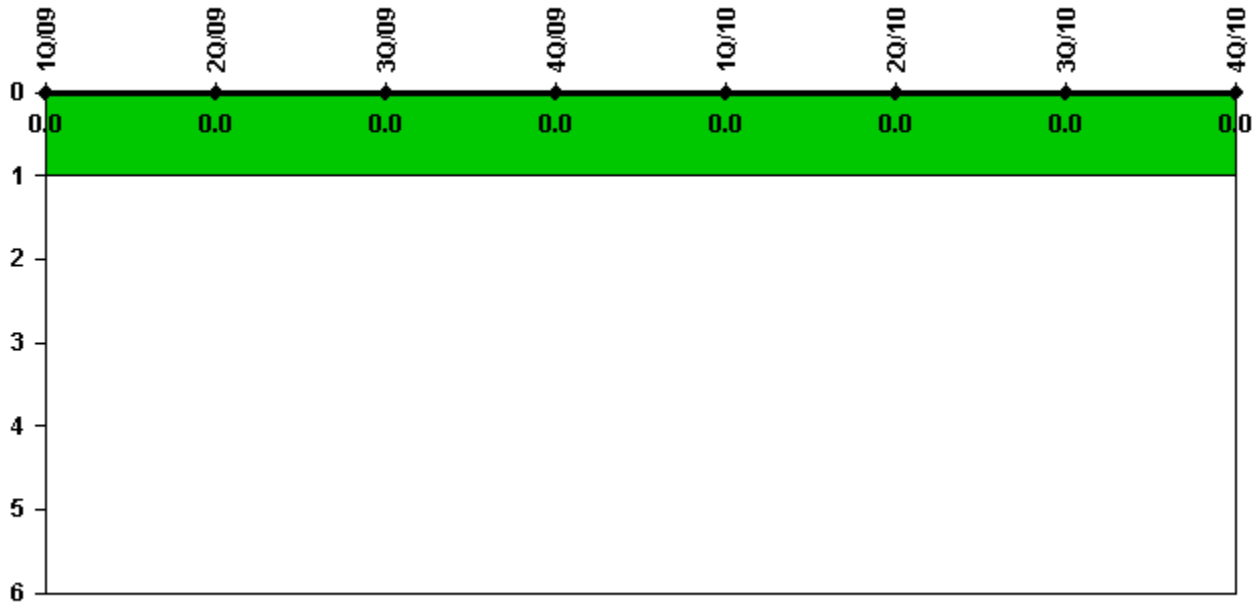
Thresholds: White > 6.0

### Notes

| Unplanned Power Changes per 7000 Critical Hrs | 1Q/09  | 2Q/09  | 3Q/09  | 4Q/09  | 1Q/10  | 2Q/10  | 3Q/10  | 4Q/10  |
|-----------------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|
| Unplanned power changes                       | 0      | 0      | 1.0    | 0      | 0      | 0      | 0      | 0      |
| Critical hours                                | 2159.0 | 2184.0 | 2115.0 | 2209.0 | 1390.9 | 2031.4 | 2208.0 | 2209.0 |
| Indicator value                               | 0.8    | 0.8    | 0.8    | 0.8    | 0.9    | 0.9    | 0      | 0      |

Licensee Comments: none

## Unplanned Scrams with Complications



Thresholds: White > 1.0

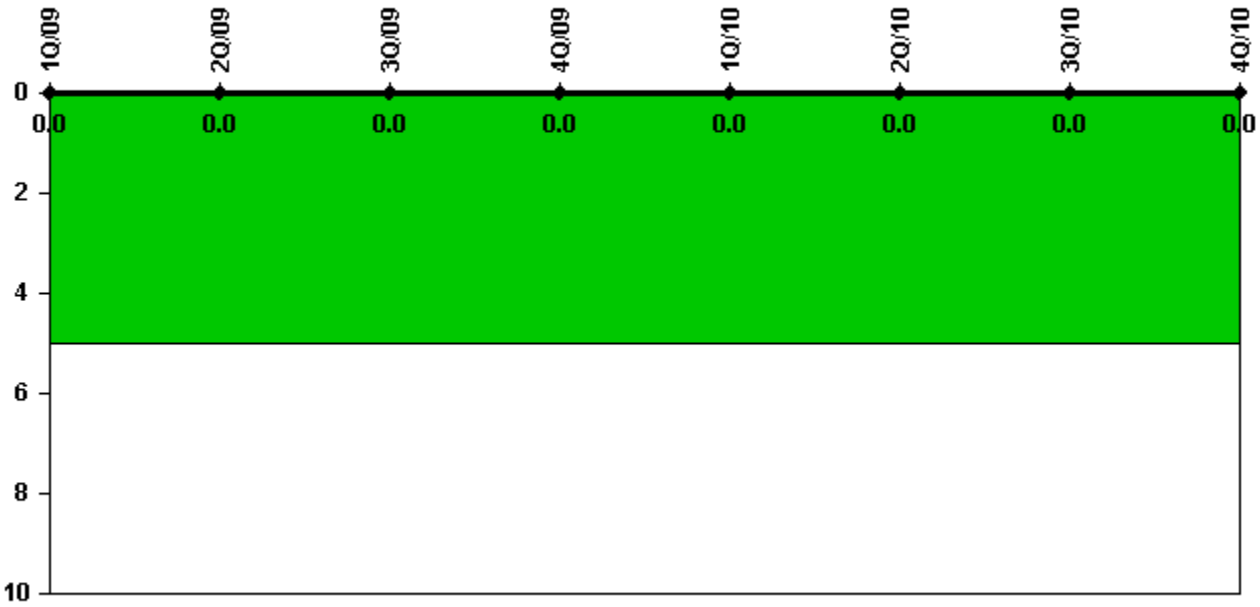
### Notes

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

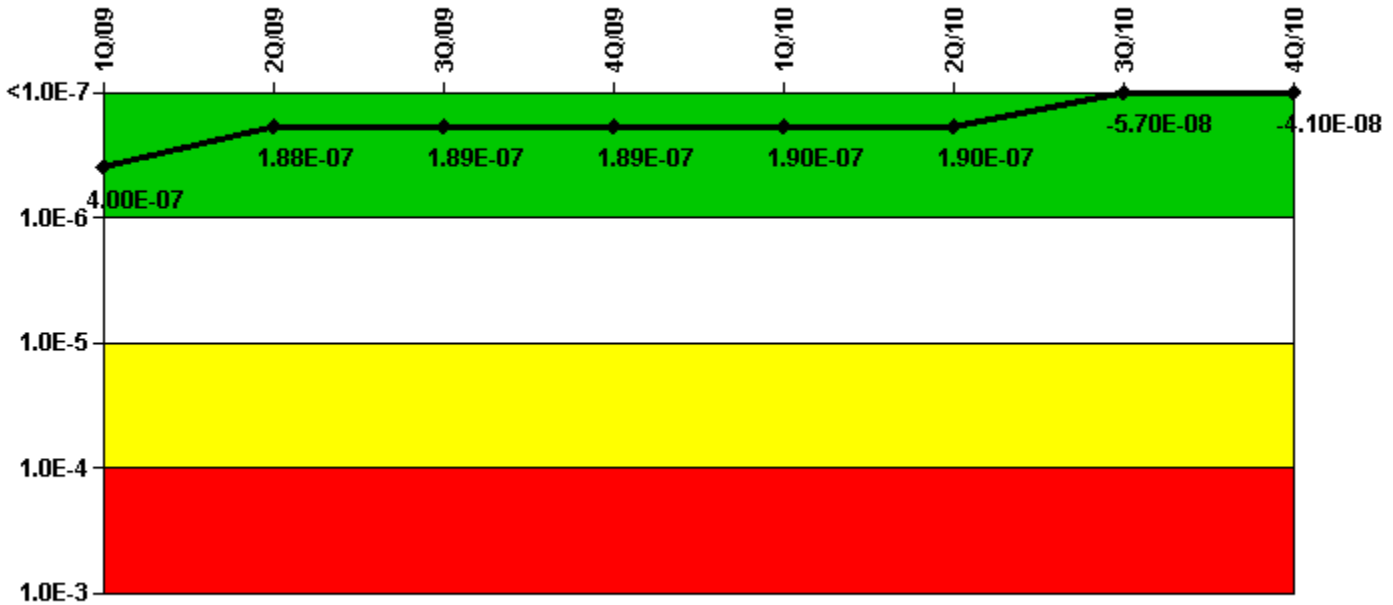
### Notes

| Safety System Functional Failures (PWR) | 1Q/09 | 2Q/09 | 3Q/09 | 4Q/09 | 1Q/10 | 2Q/10 | 3Q/10 | 4Q/10 |
|-----------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Safety System Functional Failures       | 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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# Mitigating Systems Performance Index, Emergency AC Power System



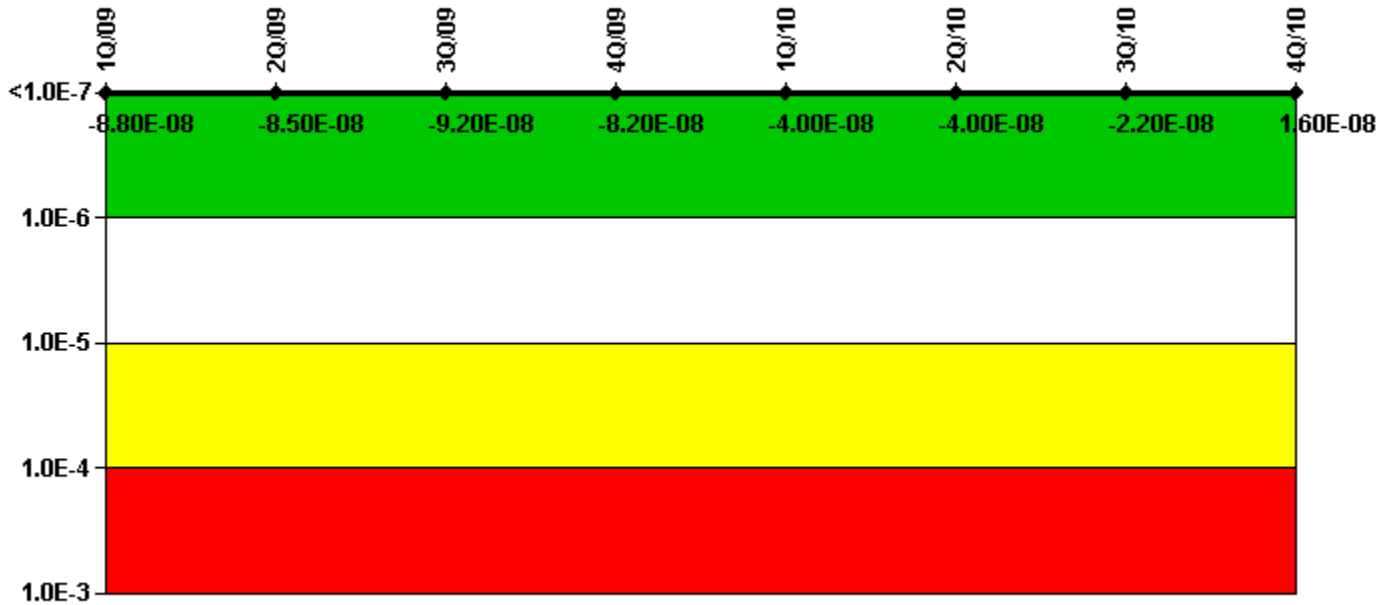
Thresholds: White > 1.00E-6 Yellow > 1.00E-5 Red > 1.00E-4

## Notes

| Mitigating Systems Performance Index, Emergency AC Power System | 1Q/09    | 2Q/09    | 3Q/09    | 4Q/09    | 1Q/10    | 2Q/10    | 3Q/10     | 4Q/10     |
|-----------------------------------------------------------------|----------|----------|----------|----------|----------|----------|-----------|-----------|
| UAI (ΔCDF)                                                      | 2.30E-07 | 1.40E-07 | 1.40E-07 | 1.40E-07 | 1.42E-07 | 1.49E-07 | 5.95E-08  | 7.66E-08  |
| URI (ΔCDF)                                                      | 1.70E-07 | 4.80E-08 | 4.90E-08 | 4.90E-08 | 4.43E-08 | 4.37E-08 | -1.17E-07 | -1.17E-07 |
| PLE                                                             | NO       | NO       | NO       | NO       | NO       | NO       | NO        | NO        |
| Indicator value                                                 | 4.00E-07 | 1.88E-07 | 1.89E-07 | 1.89E-07 | 1.90E-07 | 1.90E-07 | -5.70E-08 | -4.10E-08 |

Licensee Comments: none

# Mitigating Systems Performance Index, High Pressure Injection System



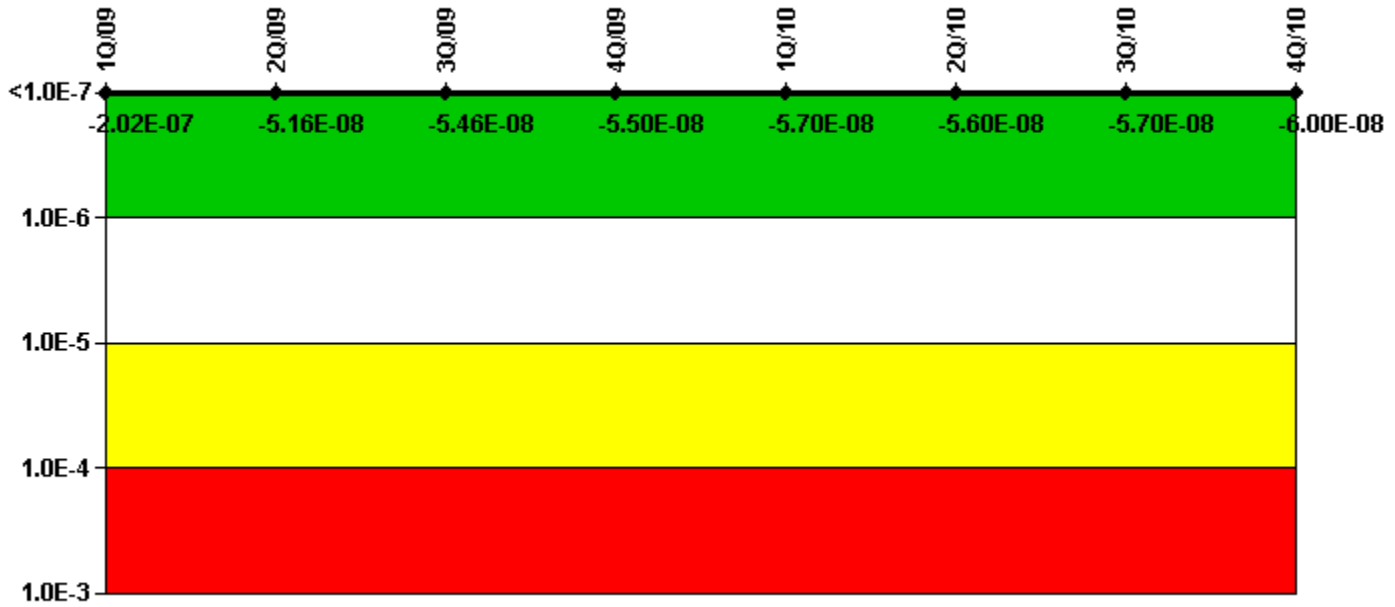
Thresholds: White > 1.00E-6 Yellow > 1.00E-5 Red > 1.00E-4

## Notes

| Mitigating Systems Performance Index, High Pressure Injection System | 1Q/09     | 2Q/09     | 3Q/09     | 4Q/09     | 1Q/10     | 2Q/10     | 3Q/10     | 4Q/10     |
|----------------------------------------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| UAI ( $\Delta$ CDF)                                                  | -1.40E-08 | -2.40E-08 | -2.90E-08 | -2.20E-08 | 2.53E-08  | 2.52E-08  | 4.31E-08  | 7.86E-08  |
| URI ( $\Delta$ CDF)                                                  | -7.40E-08 | -6.10E-08 | -6.30E-08 | -6.00E-08 | -6.57E-08 | -6.52E-08 | -6.55E-08 | -6.27E-08 |
| PLE                                                                  | NO        | NO        | NO        | NO        | NO        | NO        | NO        | NO        |
| Indicator value                                                      | -8.80E-08 | -8.50E-08 | -9.20E-08 | -8.20E-08 | -4.00E-08 | -4.00E-08 | -2.20E-08 | 1.60E-08  |

Licensee Comments: none

# Mitigating Systems Performance Index, Heat Removal System



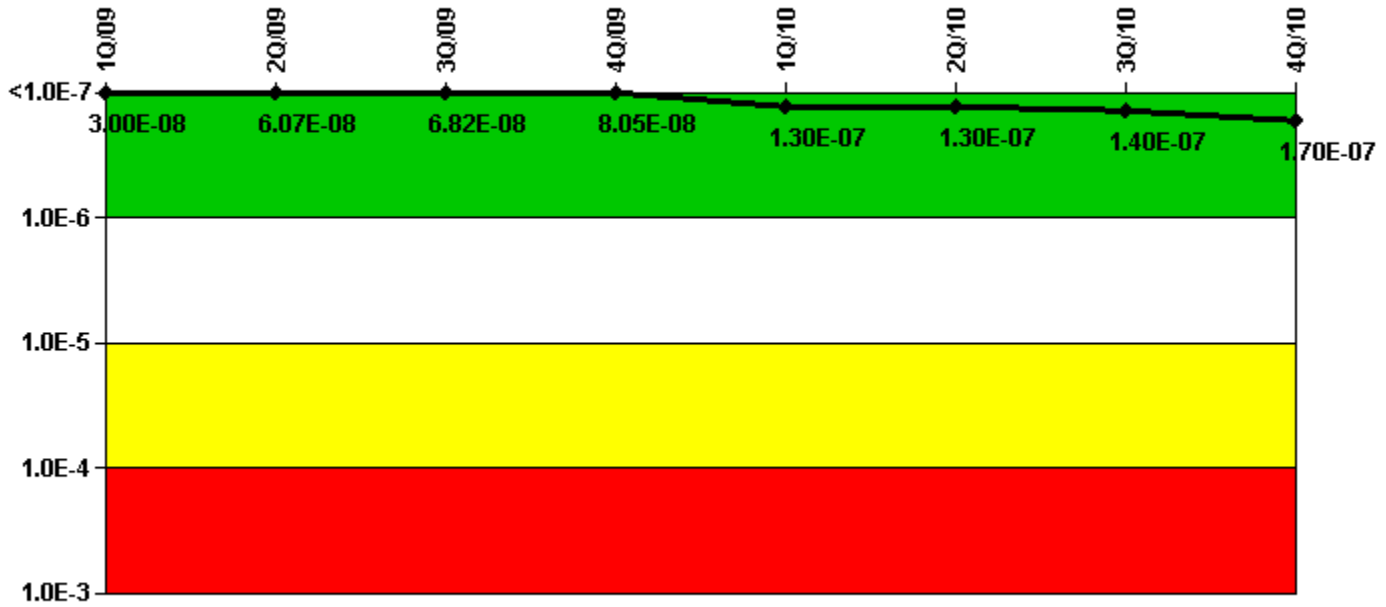
Thresholds: White > 1.00E-6 Yellow > 1.00E-5 Red > 1.00E-4

## Notes

| Mitigating Systems Performance Index, Heat Removal System | 1Q/09     | 2Q/09     | 3Q/09     | 4Q/09     | 1Q/10     | 2Q/10     | 3Q/10     | 4Q/10     |
|-----------------------------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| UAI ( $\Delta$ CDF)                                       | 6.80E-08  | 9.40E-09  | 6.40E-09  | 6.86E-09  | 7.68E-09  | 7.40E-09  | 6.15E-09  | 1.39E-09  |
| URI ( $\Delta$ CDF)                                       | -2.70E-07 | -6.10E-08 | -6.10E-08 | -6.14E-08 | -6.46E-08 | -6.38E-08 | -6.29E-08 | -6.12E-08 |
| PLE                                                       | NO        | NO        | NO        | NO        | NO        | NO        | NO        | NO        |
| Indicator value                                           | -2.02E-07 | -5.16E-08 | -5.46E-08 | -5.50E-08 | -5.70E-08 | -5.60E-08 | -5.70E-08 | -6.00E-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

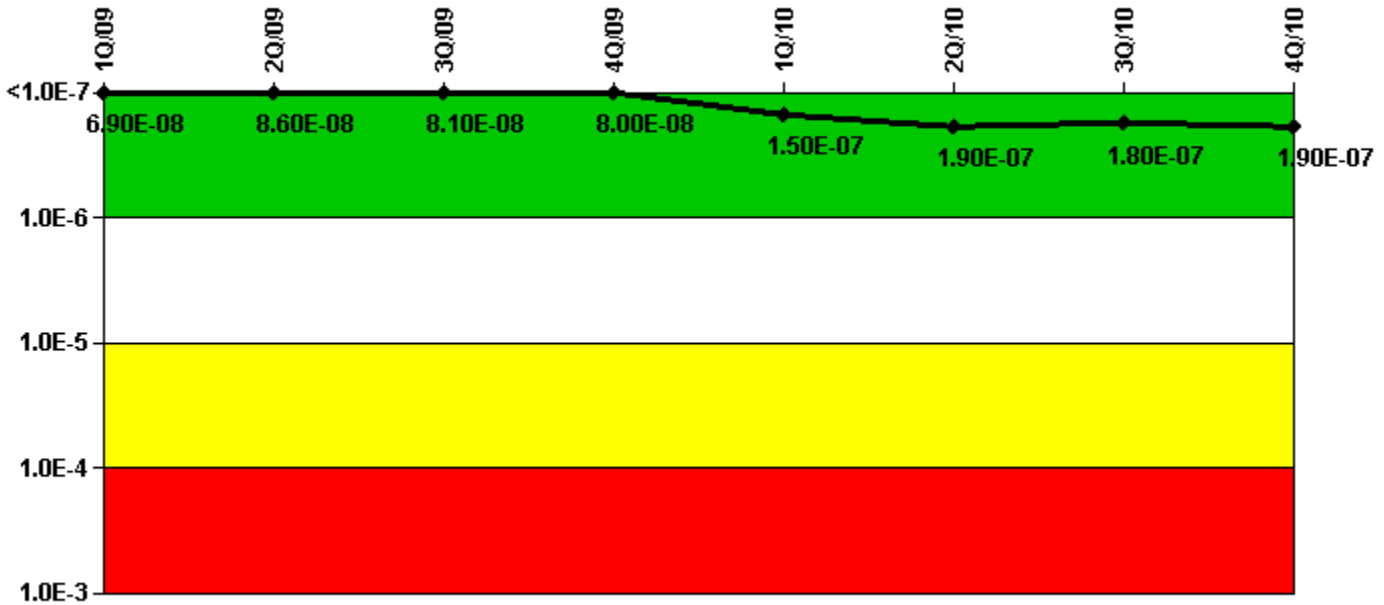
## Notes

| Mitigating Systems Performance Index, Residual Heat Removal System | 1Q/09     | 2Q/09     | 3Q/09     | 4Q/09     | 1Q/10     | 2Q/10     | 3Q/10     | 4Q/10     |
|--------------------------------------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| UAI (ΔCDF)                                                         | 3.40E-08  | 6.70E-08  | 7.40E-08  | 8.60E-08  | 1.34E-07  | 1.40E-07  | 1.45E-07  | 1.76E-07  |
| URI (ΔCDF)                                                         | -4.00E-09 | -6.30E-09 | -5.80E-09 | -5.50E-09 | -6.05E-09 | -5.87E-09 | -5.50E-09 | -5.59E-09 |
| PLE                                                                | NO        | NO        | NO        | NO        | NO        | NO        | NO        | NO        |
| Indicator value                                                    | 3.00E-08  | 6.07E-08  | 6.82E-08  | 8.05E-08  | 1.30E-07  | 1.30E-07  | 1.40E-07  | 1.70E-07  |

Licensee Comments: none



# Mitigating Systems Performance Index, Cooling Water Systems



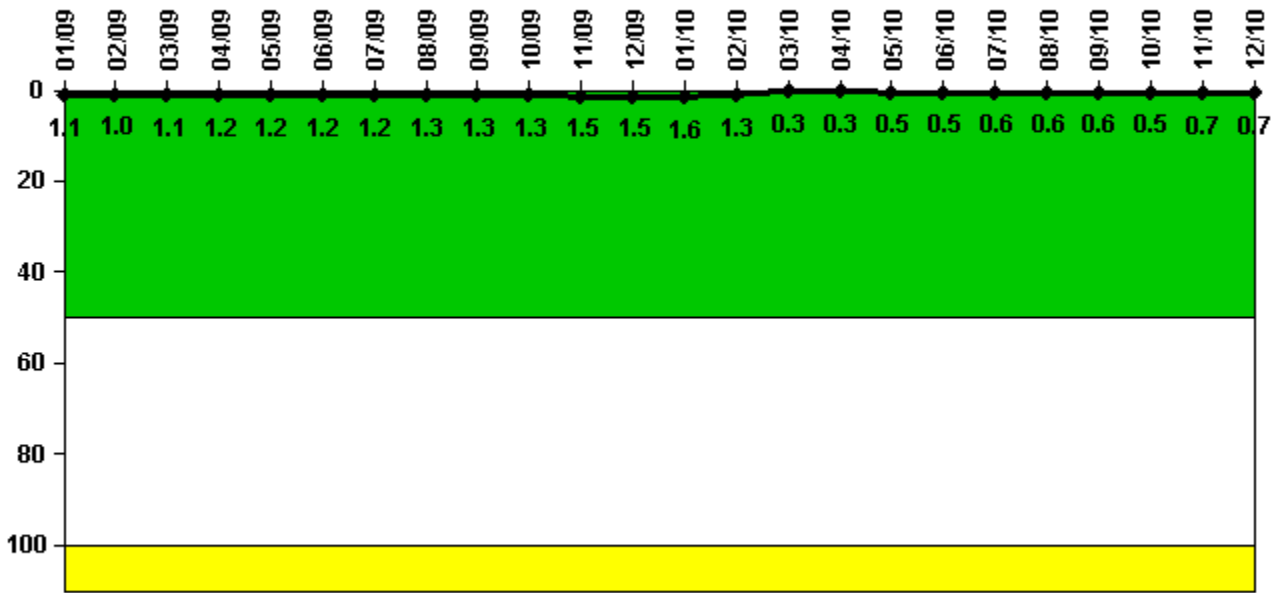
Thresholds: White > 1.00E-6 Yellow > 1.00E-5 Red > 1.00E-4

## Notes

| Mitigating Systems Performance Index, Cooling Water Systems | 1Q/09    | 2Q/09    | 3Q/09    | 4Q/09    | 1Q/10    | 2Q/10    | 3Q/10    | 4Q/10    |
|-------------------------------------------------------------|----------|----------|----------|----------|----------|----------|----------|----------|
| UAI ( $\Delta$ CDF)                                         | 4.60E-08 | 2.50E-08 | 2.00E-08 | 2.00E-08 | 9.00E-08 | 1.25E-07 | 1.24E-07 | 1.25E-07 |
| URI ( $\Delta$ CDF)                                         | 2.30E-08 | 6.10E-08 | 6.10E-08 | 6.00E-08 | 6.07E-08 | 6.07E-08 | 6.06E-08 | 6.05E-08 |
| PLE                                                         | NO       | NO       | NO       | NO       | NO       | NO       | NO       | NO       |
| Indicator value                                             | 6.90E-08 | 8.60E-08 | 8.10E-08 | 8.00E-08 | 1.50E-07 | 1.90E-07 | 1.80E-07 | 1.90E-07 |

Licensee Comments: none

# Reactor Coolant System Activity



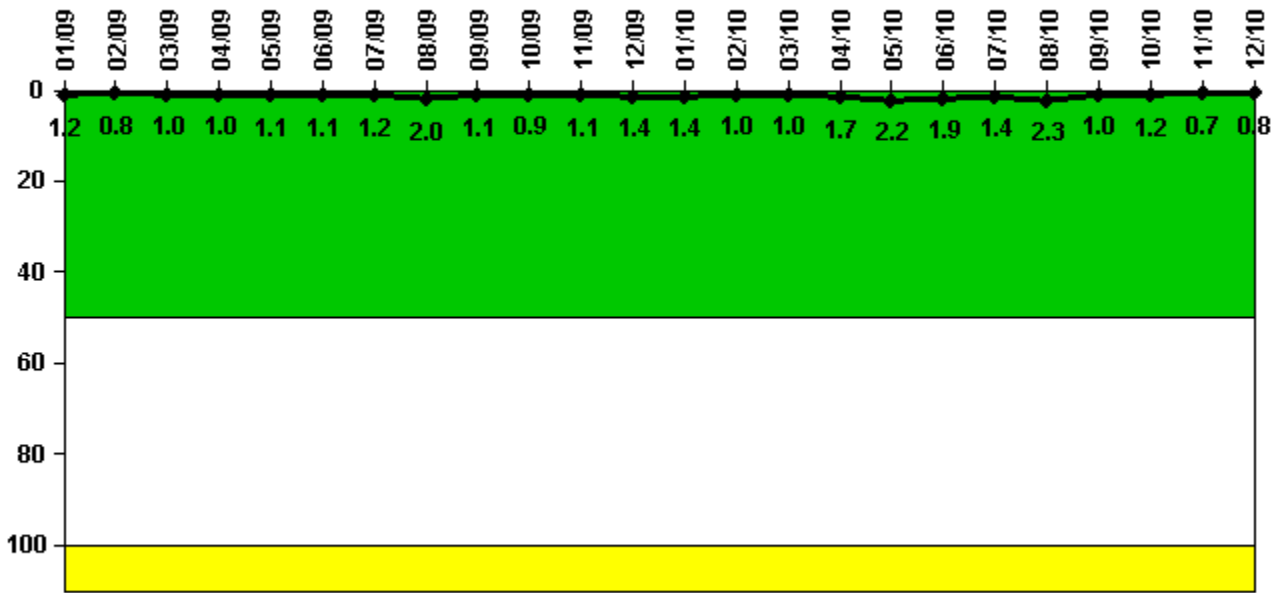
Thresholds: White > 50.0 Yellow > 100.0

## Notes

| Reactor Coolant System Activity | 1/09     | 2/09     | 3/09     | 4/09     | 5/09     | 6/09     | 7/09     | 8/09     | 9/09     | 10/09    | 11/09    | 12/09    |
|---------------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Maximum activity                | 0.010700 | 0.010100 | 0.010800 | 0.011500 | 0.011800 | 0.012200 | 0.012300 | 0.012500 | 0.013100 | 0.013200 | 0.014500 | 0.015400 |
| 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                 | 1.1      | 1.0      | 1.1      | 1.2      | 1.2      | 1.2      | 1.2      | 1.3      | 1.3      | 1.3      | 1.5      | 1.5      |
| Reactor Coolant System Activity | 1/10     | 2/10     | 3/10     | 4/10     | 5/10     | 6/10     | 7/10     | 8/10     | 9/10     | 10/10    | 11/10    | 12/10    |
| Maximum activity                | 0.015700 | 0.013000 | 0.002870 | 0.003390 | 0.004800 | 0.005030 | 0.005990 | 0.005840 | 0.005910 | 0.005480 | 0.006660 | 0.007140 |
| 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                 | 1.6      | 1.3      | 0.3      | 0.3      | 0.5      | 0.5      | 0.6      | 0.6      | 0.6      | 0.5      | 0.7      | 0.7      |

Licensee Comments: none

## Reactor Coolant System Leakage



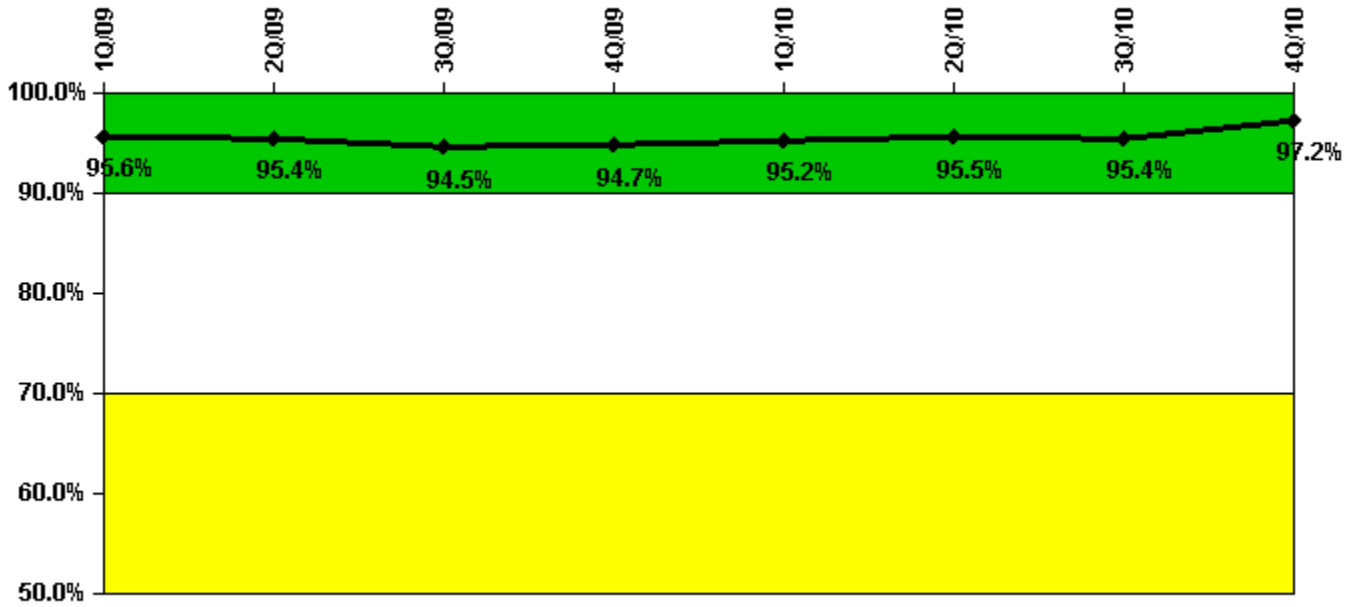
Thresholds: White > 50.0 Yellow > 100.0

### Notes

| Reactor Coolant System Leakage | 1/09  | 2/09  | 3/09  | 4/09  | 5/09  | 6/09  | 7/09  | 8/09  | 9/09  | 10/09 | 11/09 | 12/09 |
|--------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Maximum leakage                | 0.120 | 0.080 | 0.100 | 0.100 | 0.110 | 0.110 | 0.120 | 0.200 | 0.110 | 0.090 | 0.110 | 0.140 |
| 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                | 1.2   | 0.8   | 1.0   | 1.0   | 1.1   | 1.1   | 1.2   | 2.0   | 1.1   | 0.9   | 1.1   | 1.4   |
| Reactor Coolant System Leakage | 1/10  | 2/10  | 3/10  | 4/10  | 5/10  | 6/10  | 7/10  | 8/10  | 9/10  | 10/10 | 11/10 | 12/10 |
| Maximum leakage                | 0.140 | 0.100 | 0.100 | 0.168 | 0.224 | 0.194 | 0.140 | 0.230 | 0.100 | 0.120 | 0.070 | 0.080 |
| 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                | 1.4   | 1.0   | 1.0   | 1.7   | 2.2   | 1.9   | 1.4   | 2.3   | 1.0   | 1.2   | 0.7   | 0.8   |

Licensee Comments: none

## Drill/Exercise Performance



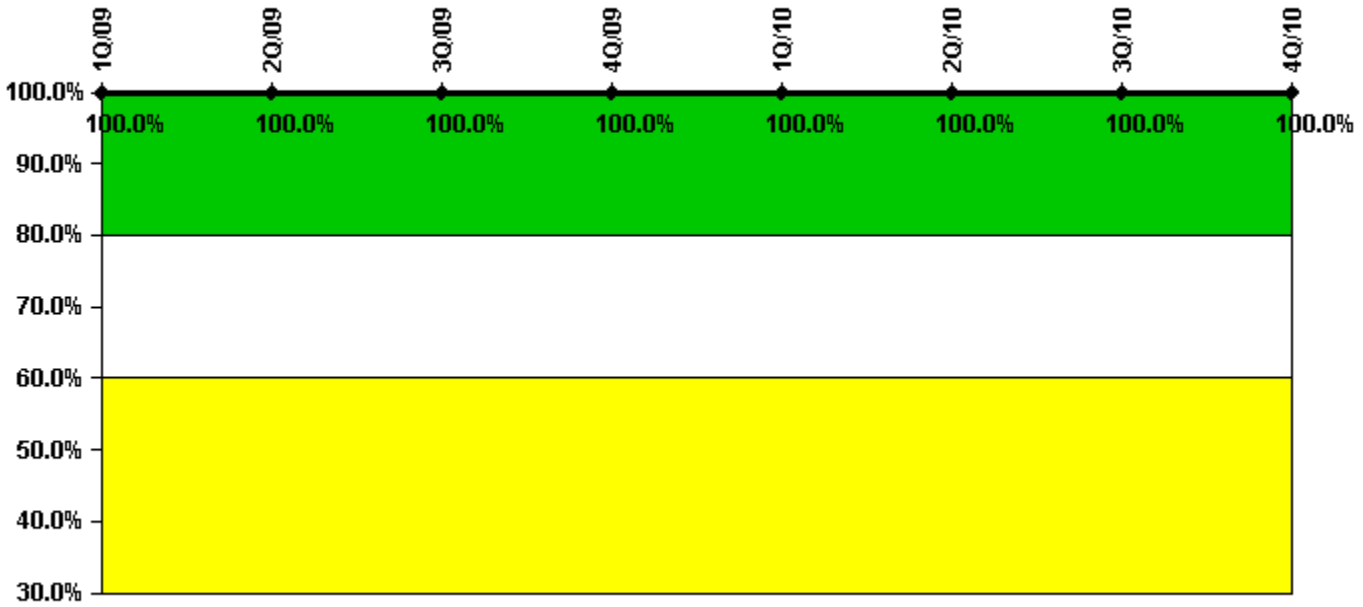
Thresholds: White < 90.0% Yellow < 70.0%

### Notes

| Drill/Exercise Performance | 1Q/09 | 2Q/09 | 3Q/09 | 4Q/09 | 1Q/10 | 2Q/10 | 3Q/10 | 4Q/10 |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Successful opportunities   | 10.0  | 30.0  | 43.0  | 63.0  | 13.0  | 23.0  | 76.0  | 53.0  |
| Total opportunities        | 10.0  | 32.0  | 46.0  | 64.0  | 13.0  | 23.0  | 78.0  | 54.0  |
|                            |       |       |       |       |       |       |       |       |
| Indicator value            | 95.6% | 95.4% | 94.5% | 94.7% | 95.2% | 95.5% | 95.4% | 97.2% |

Licensee Comments: none

# ERO Drill Participation



Thresholds: White < 80.0% Yellow < 60.0%

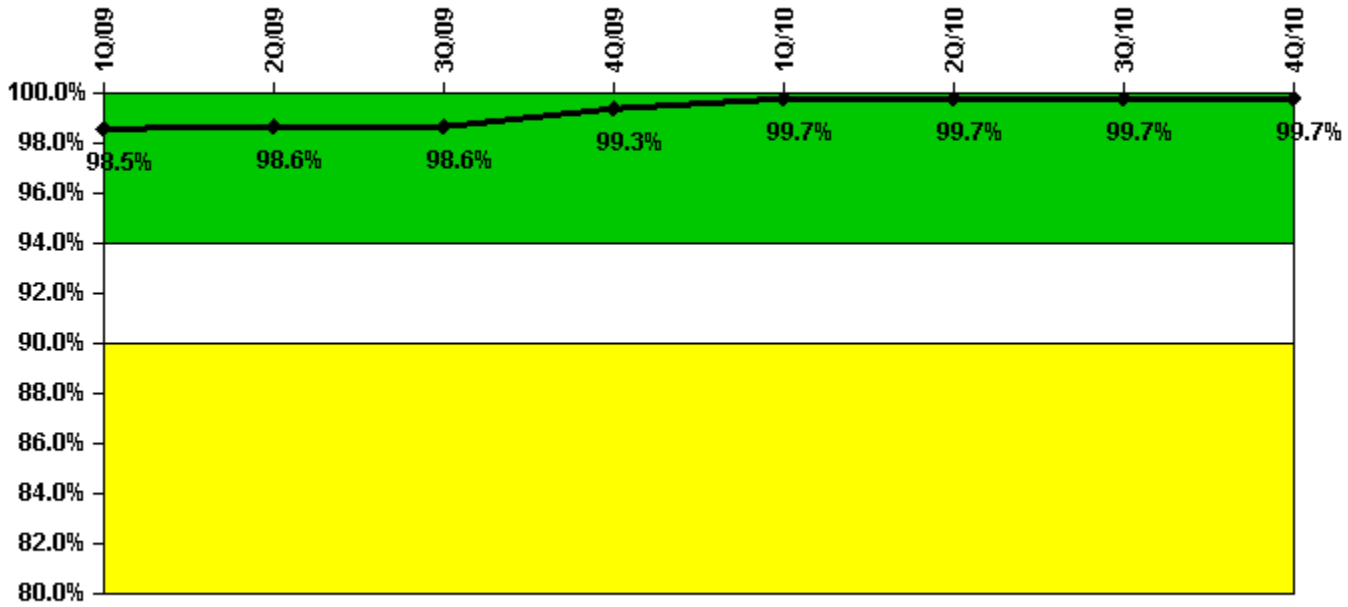
## Notes

| ERO Drill Participation     | 1Q/09  | 2Q/09  | 3Q/09  | 4Q/09  | 1Q/10  | 2Q/10  | 3Q/10  | 4Q/10  |
|-----------------------------|--------|--------|--------|--------|--------|--------|--------|--------|
| Participating Key personnel | 88.0   | 98.0   | 101.0  | 95.0   | 98.0   | 87.0   | 86.0   | 88.0   |
| Total Key personnel         | 88.0   | 98.0   | 101.0  | 95.0   | 98.0   | 87.0   | 86.0   | 88.0   |
|                             |        |        |        |        |        |        |        |        |
| 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



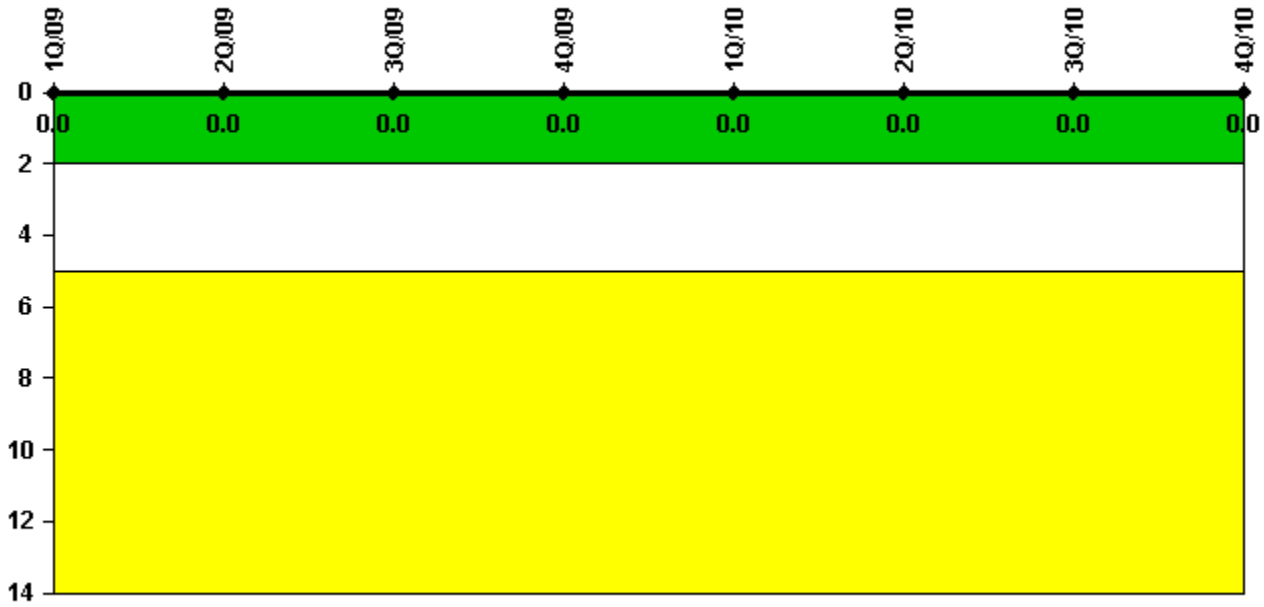
Thresholds: White < 94.0% Yellow < 90.0%

## Notes

| Alert & Notification System | 1Q/09 | 2Q/09 | 3Q/09 | 4Q/09 | 1Q/10 | 2Q/10 | 3Q/10 | 4Q/10 |
|-----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Successful siren-tests      | 932   | 948   | 947   | 942   | 948   | 948   | 948   | 940   |
| Total sirens-tests          | 949   | 949   | 949   | 949   | 949   | 949   | 949   | 949   |
| Indicator value             | 98.5% | 98.6% | 98.6% | 99.3% | 99.7% | 99.7% | 99.7% | 99.7% |

Licensee Comments: none

# Occupational Exposure Control Effectiveness



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

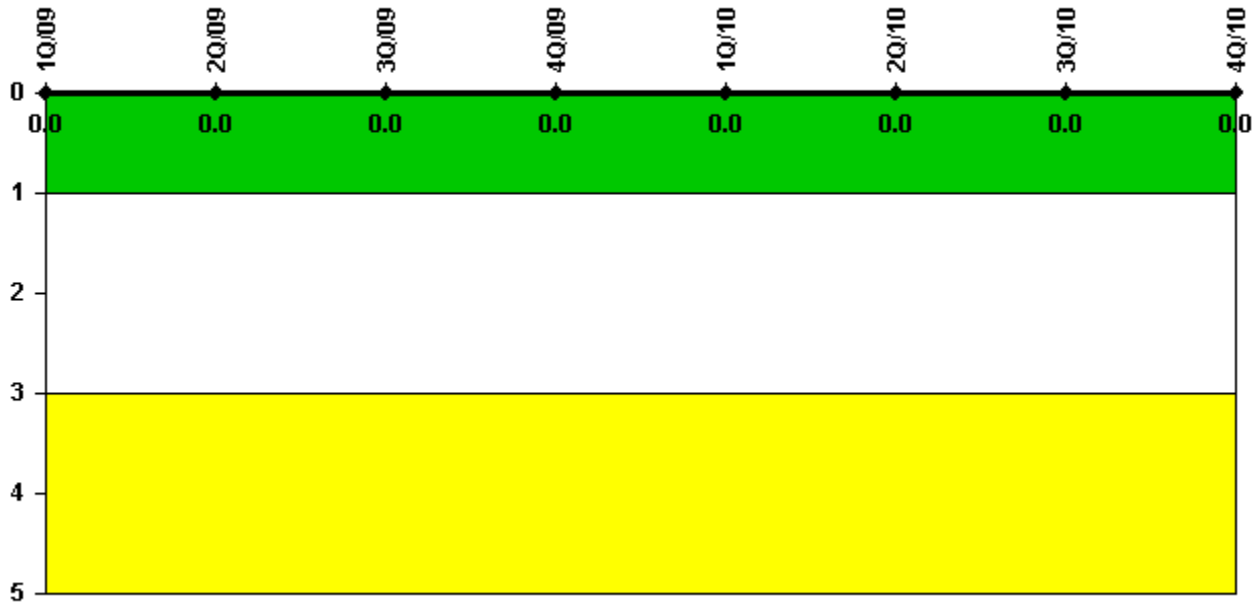
## Notes

| Occupational Exposure Control Effectiveness | 1Q/09    | 2Q/09    | 3Q/09    | 4Q/09    | 1Q/10    | 2Q/10    | 3Q/10    | 4Q/10    |
|---------------------------------------------|----------|----------|----------|----------|----------|----------|----------|----------|
| 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 | 1Q/09 | 2Q/09 | 3Q/09 | 4Q/09 | 1Q/10 | 2Q/10 | 3Q/10 | 4Q/10 |
|---------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| 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.