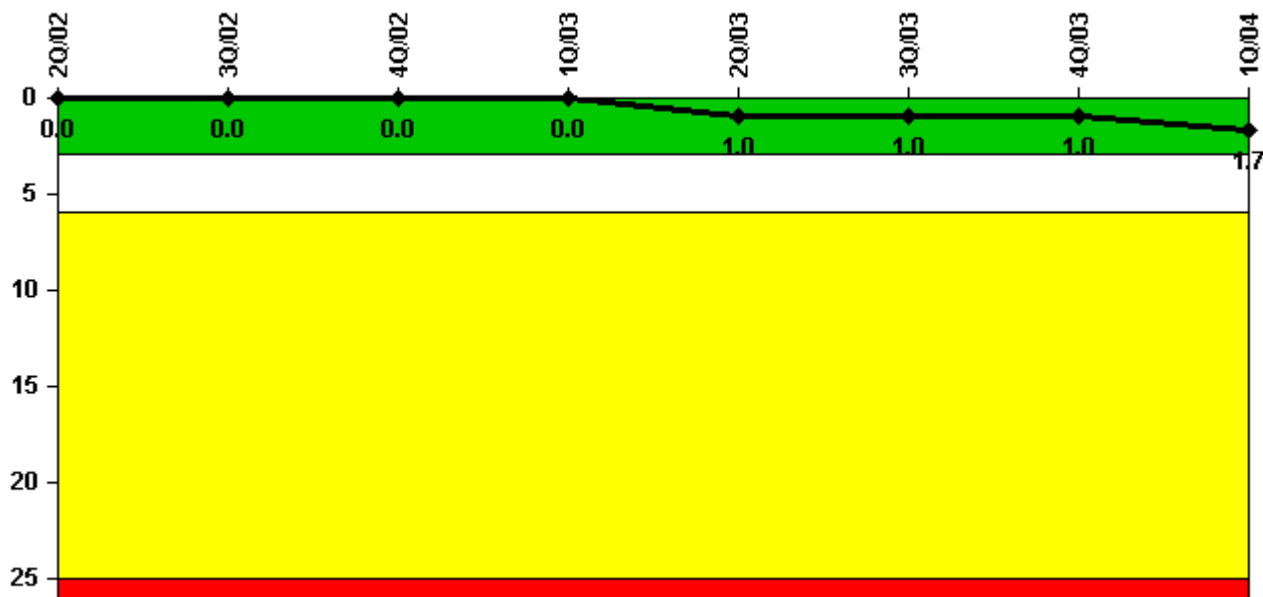


Calvert Cliffs 2

1Q/2004 Performance Indicators

Licensee's General Comments: none

Unplanned Scrams per 7000 Critical Hrs



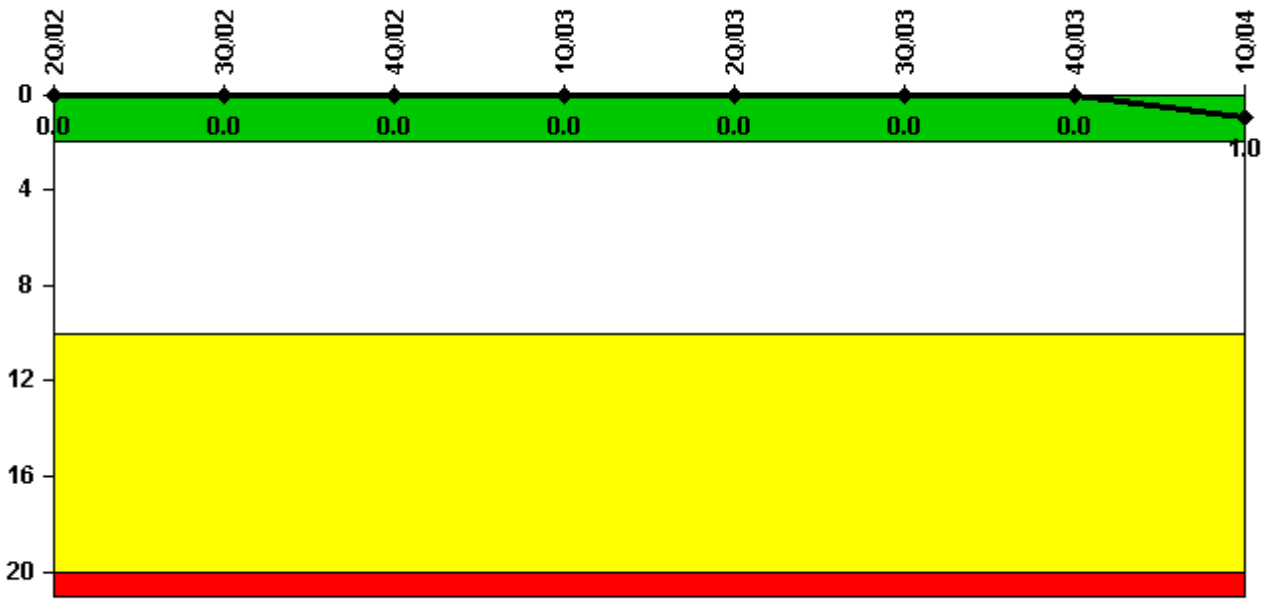
Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

Notes

| Unplanned Scrams per 7000 Critical Hrs | 2Q/02 | 3Q/02 | 4Q/02 | 1Q/03 | 2Q/03 | 3Q/03 | 4Q/03 | 1Q/04 |
|--|----------|----------|----------|----------|------------|------------|------------|------------|
| Unplanned scrams | 0 | 0 | 0 | 0 | 1.0 | 0 | 0 | 1.0 |
| Critical hours | 2183.0 | 2208.0 | 2209.0 | 1079.4 | 1670.6 | 2208.0 | 2209.0 | 2134.4 |
| | | | | | | | | |
| Indicator value | 0 | 0 | 0 | 0 | 1.0 | 1.0 | 1.0 | 1.7 |

Licensee Comments: none

Scrams with Loss of Normal Heat Removal



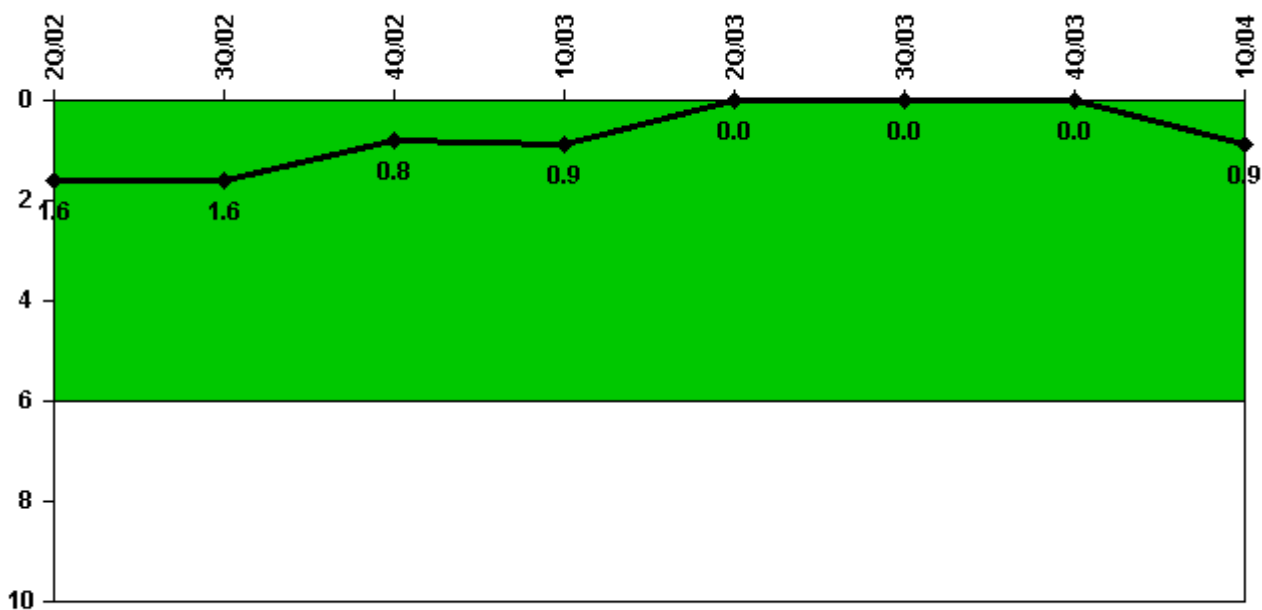
Thresholds: White > 2.0 Yellow > 10.0 Red > 20.0

Notes

| Scrams with Loss of Normal Heat Removal | 2Q/02 | 3Q/02 | 4Q/02 | 1Q/03 | 2Q/03 | 3Q/03 | 4Q/03 | 1Q/04 |
|---|-------|-------|-------|-------|-------|-------|-------|-------|
| Scrams | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1.0 |
| Indicator value | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1.0 |

Licensee Comments: none

Unplanned Power Changes per 7000 Critical Hrs



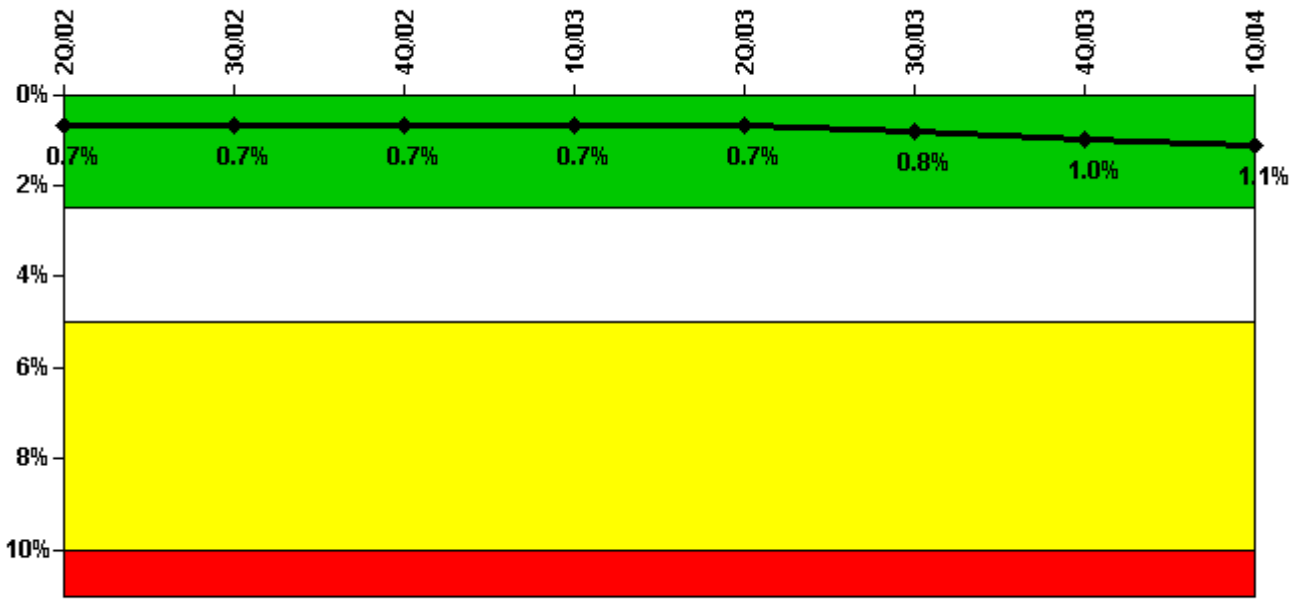
Thresholds: White > 6.0

Notes

| Unplanned Power Changes per 7000 Critical Hrs | 2Q/02 | 3Q/02 | 4Q/02 | 1Q/03 | 2Q/03 | 3Q/03 | 4Q/03 | 1Q/04 |
|---|--------|--------|--------|--------|--------|--------|--------|--------|
| Unplanned power changes | 1.0 | 0 | 0 | 0 | 0 | 0 | 0 | 1.0 |
| Critical hours | 2183.0 | 2208.0 | 2209.0 | 1079.4 | 1670.6 | 2208.0 | 2209.0 | 2134.4 |
| Indicator value | 1.6 | 1.6 | 0.8 | 0.9 | 0 | 0 | 0 | 0.9 |

Licensee Comments: none

Safety System Unavailability, Emergency AC Power



Thresholds: White > 2.5% Yellow > 5.0% Red > 10.0%

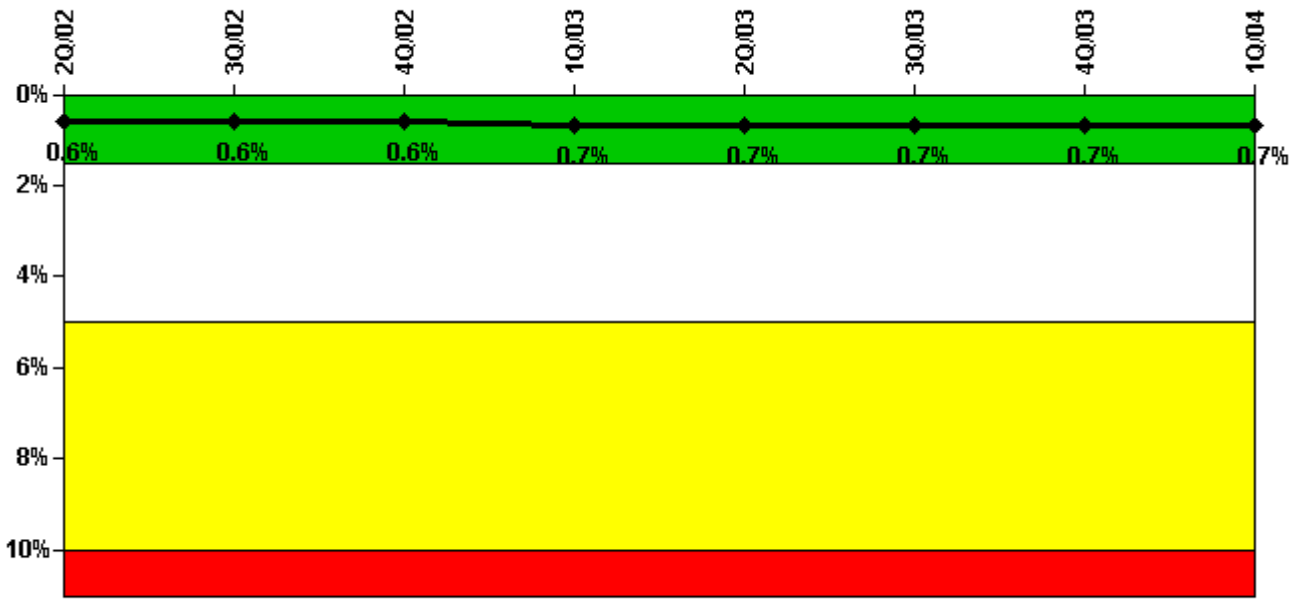
Notes

| Safety System Unavailability, Emergency AC Power | 2Q/02 | 3Q/02 | 4Q/02 | 1Q/03 | 2Q/03 | 3Q/03 | 4Q/03 | 1Q/04 |
|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Train 1 | | | | | | | | |
| Planned unavailable hours | 13.50 | 0 | 0 | 20.18 | 0 | 0 | 27.13 | 22.65 |
| Unplanned unavailable hours | 0 | 0 | 0 | 0 | 0 | 0 | 117.97 | 0 |
| Fault exposure hours | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Effective Reset hours | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Required hours | 2183.00 | 2208.00 | 2209.00 | 2160.00 | 2183.00 | 2208.00 | 2209.00 | 2184.00 |
| Train 2 | | | | | | | | |
| Planned unavailable hours | 2.70 | 13.27 | 6.30 | 34.39 | 1.05 | 32.42 | 8.68 | 27.27 |
| Unplanned unavailable hours | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20.00 |
| Fault exposure hours | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Effective Reset hours | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Required hours | 2183.00 | 2208.00 | 2209.00 | 2160.00 | 2183.00 | 2208.00 | 2209.00 | 2184.00 |
| Indicator value | 0.7% | 0.7% | 0.7% | 0.7% | 0.7% | 0.8% | 1.0% | 1.1% |

Licensee Comments:

1Q/04: 03/08/2004: The train-2 Diesel Generator failed to load after starting. The load failure was due to an output breaker relay failing resulting in 337.06 T/2 fault exposure hours.

Safety System Unavailability, High Pressure Injection System (HPSI)



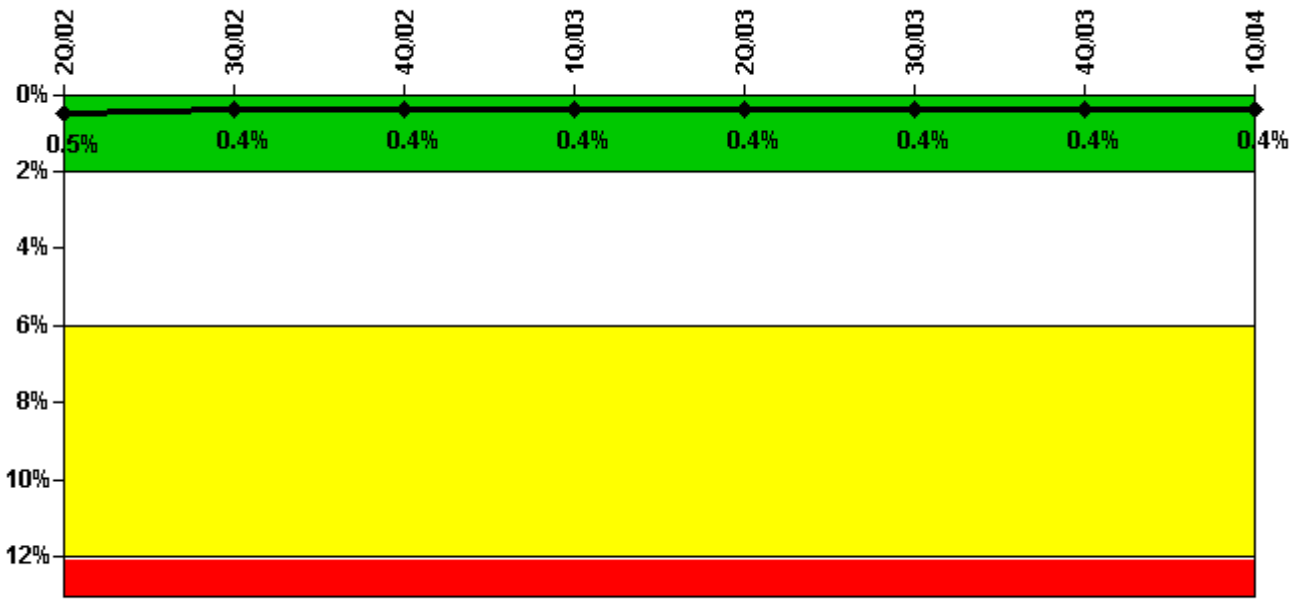
Thresholds: White > 1.5% Yellow > 5.0% Red > 10.0%

Notes

| Safety System Unavailability, High Pressure Injection System (HPSI) | 2Q/02 | 3Q/02 | 4Q/02 | 1Q/03 | 2Q/03 | 3Q/03 | 4Q/03 | 1Q/04 |
|---|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Train 1 | | | | | | | | |
| Planned unavailable hours | 0.30 | 2.42 | 25.99 | 18.68 | 2.11 | 2.58 | 29.17 | 25.15 |
| Unplanned unavailable hours | 11.70 | 0 | 0.77 | 0 | 0 | 0 | 0 | 0 |
| Fault exposure hours | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Effective Reset hours | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Required hours | 2183.00 | 2208.00 | 2209.00 | 1079.40 | 1670.60 | 2208.00 | 2209.00 | 2134.40 |
| Train 2 | | | | | | | | |
| Planned unavailable hours | 0.30 | 34.49 | 1.23 | 33.78 | 3.98 | 35.00 | 2.04 | 31.72 |
| Unplanned unavailable hours | 0 | 0 | 0 | 3.40 | 0 | 0 | 0 | 0 |
| Fault exposure hours | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Effective Reset hours | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Required hours | 2183.00 | 2208.00 | 2209.00 | 1079.40 | 1670.60 | 2208.00 | 2209.00 | 2134.40 |
| Indicator value | 0.6% | 0.6% | 0.6% | 0.7% | 0.7% | 0.7% | 0.7% | 0.7% |

Licensee Comments: none

Safety System Unavailability, Heat Removal System (AFW)



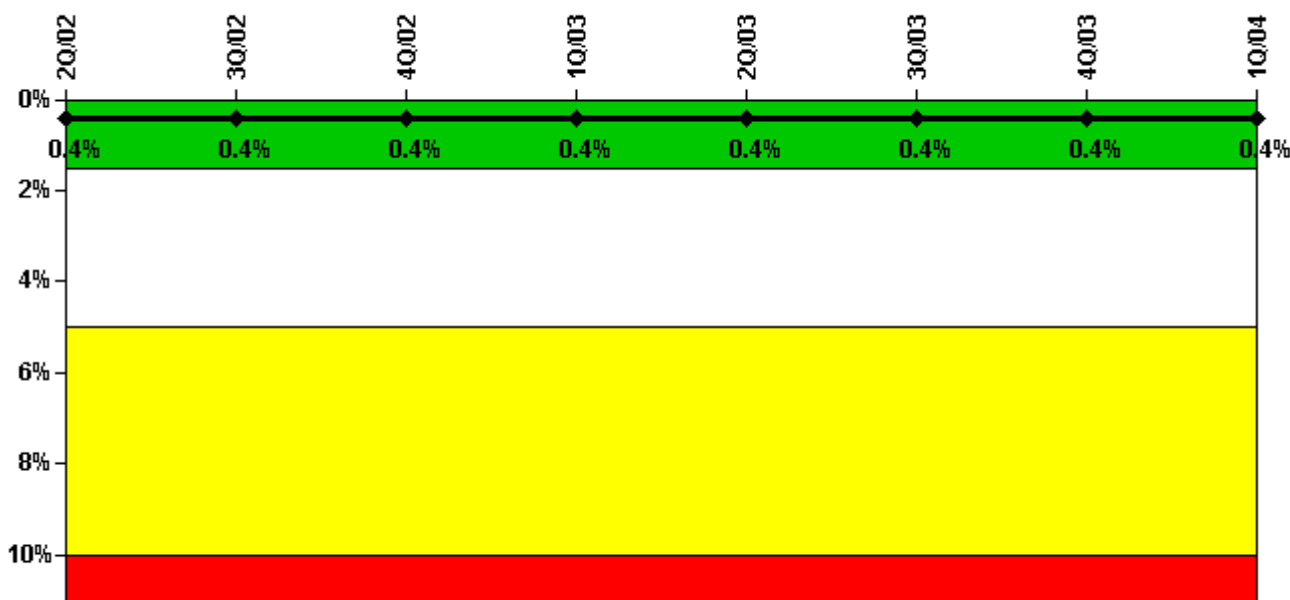
Thresholds: White > 2.0% Yellow > 6.0% Red > 12.0%

Notes

| Safety System Unavailability, Heat Removal System (AFW) | 2Q/02 | 3Q/02 | 4Q/02 | 1Q/03 | 2Q/03 | 3Q/03 | 4Q/03 | 1Q/04 |
|---|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Train 1 | | | | | | | | |
| Planned unavailable hours | 2.20 | 0 | 0.40 | 0 | 0.92 | 0 | 14.50 | 0.67 |
| Unplanned unavailable hours | 0 | 0 | 0.37 | 0 | 0 | 0 | 0 | 0 |
| Fault exposure hours | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Effective Reset hours | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Required hours | 2183.00 | 2208.00 | 2209.00 | 1079.40 | 1670.60 | 2208.00 | 2209.00 | 2134.40 |
| Train 2 | | | | | | | | |
| Planned unavailable hours | 2.70 | 0.47 | 1.07 | 0 | 0.42 | 0.97 | 14.82 | 0.45 |
| Unplanned unavailable hours | 0 | 0 | 0.90 | 0 | 0 | 0 | 0 | 0 |
| Fault exposure hours | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Effective Reset hours | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Required hours | 2183.00 | 2208.00 | 2209.00 | 1079.40 | 1670.60 | 2208.00 | 2209.00 | 2134.40 |
| Train 3 | | | | | | | | |
| Planned unavailable hours | 4.60 | 0 | 0 | 0.52 | 0 | 0 | 0 | 4.57 |
| Unplanned unavailable hours | 0 | 23.38 | 0 | 0 | 0 | 0 | 0 | 0 |
| Fault exposure hours | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Effective Reset hours | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Required hours | 2183.00 | 2208.00 | 2209.00 | 1079.40 | 1670.60 | 2208.00 | 2209.00 | 2134.40 |
| Indicator value | 0.5% | 0.4% | 0.4% | 0.4% | 0.4% | 0.4% | 0.4% | 0.4% |

Licensee Comments: none

Safety System Unavailability, Residual Heat Removal System



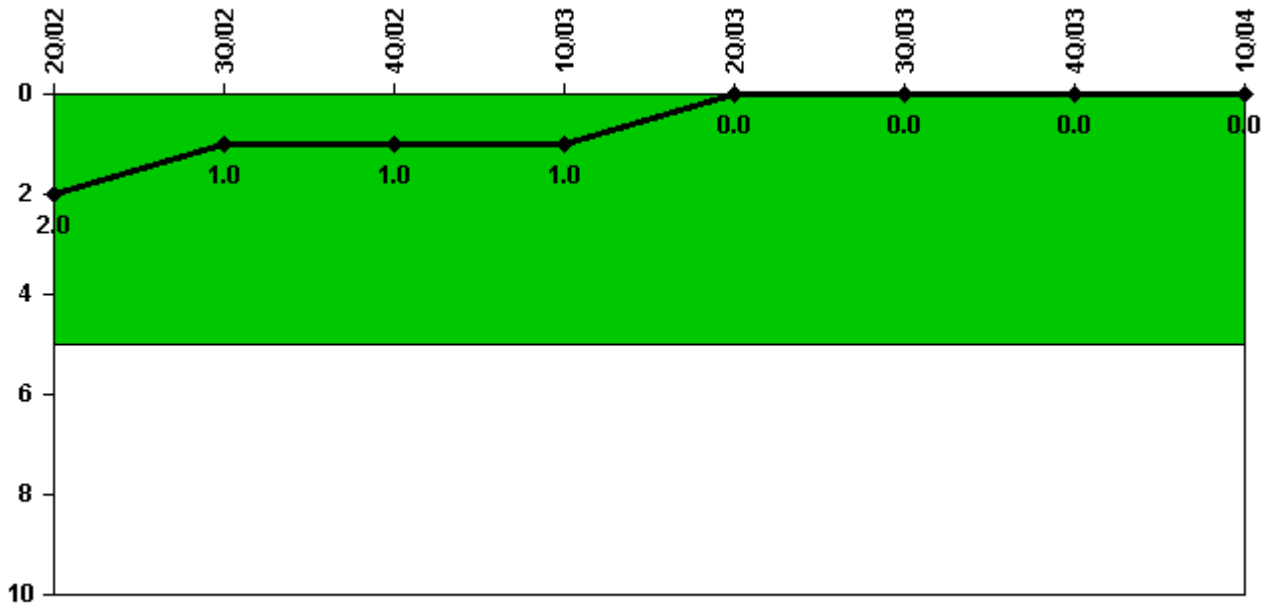
Thresholds: White > 1.5% Yellow > 5.0% Red > 10.0%

Notes

| Safety System Unavailability, Residual Heat Removal System | 2Q/02 | 3Q/02 | 4Q/02 | 1Q/03 | 2Q/03 | 3Q/03 | 4Q/03 | 1Q/04 |
|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Train 1 | | | | | | | | |
| Planned unavailable hours | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Unplanned unavailable hours | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Fault exposure hours | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Effective Reset hours | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Required hours | 0 | 0 | 0 | 304.50 | 300.00 | 0 | 0 | 0 |
| Train 2 | | | | | | | | |
| Planned unavailable hours | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Unplanned unavailable hours | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Fault exposure hours | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Effective Reset hours | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Required hours | 0 | 0 | 0 | 304.50 | 300.00 | 0 | 0 | 0 |
| Train 3 | | | | | | | | |
| Planned unavailable hours | 18.10 | 2.49 | 3.66 | 18.24 | 6.55 | 3.43 | 28.88 | 28.26 |
| Unplanned unavailable hours | 11.70 | 1.92 | 0 | 0 | 0 | 0 | 0 | 0 |
| Fault exposure hours | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Effective Reset hours | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Required hours | 2183.00 | 2208.00 | 2209.00 | 1090.30 | 1741.90 | 2208.00 | 2209.00 | 2184.00 |
| Train 4 | | | | | | | | |
| Planned unavailable hours | 6.40 | 42.50 | 3.06 | 33.74 | 19.05 | 34.77 | 1.25 | 28.35 |
| Unplanned unavailable hours | 0 | 3.15 | 0 | 3.40 | 0 | 0 | 0 | 0 |
| Fault exposure hours | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Effective Reset hours | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Required hours | 2183.00 | 2208.00 | 2209.00 | 1090.30 | 1741.90 | 2208.00 | 2209.00 | 2184.00 |
| Indicator value | 0.4% | 0.4% | 0.4% | 0.4% | 0.4% | 0.4% | 0.4% | 0.4% |

Licensee Comments: none

Safety System Functional Failures (PWR)



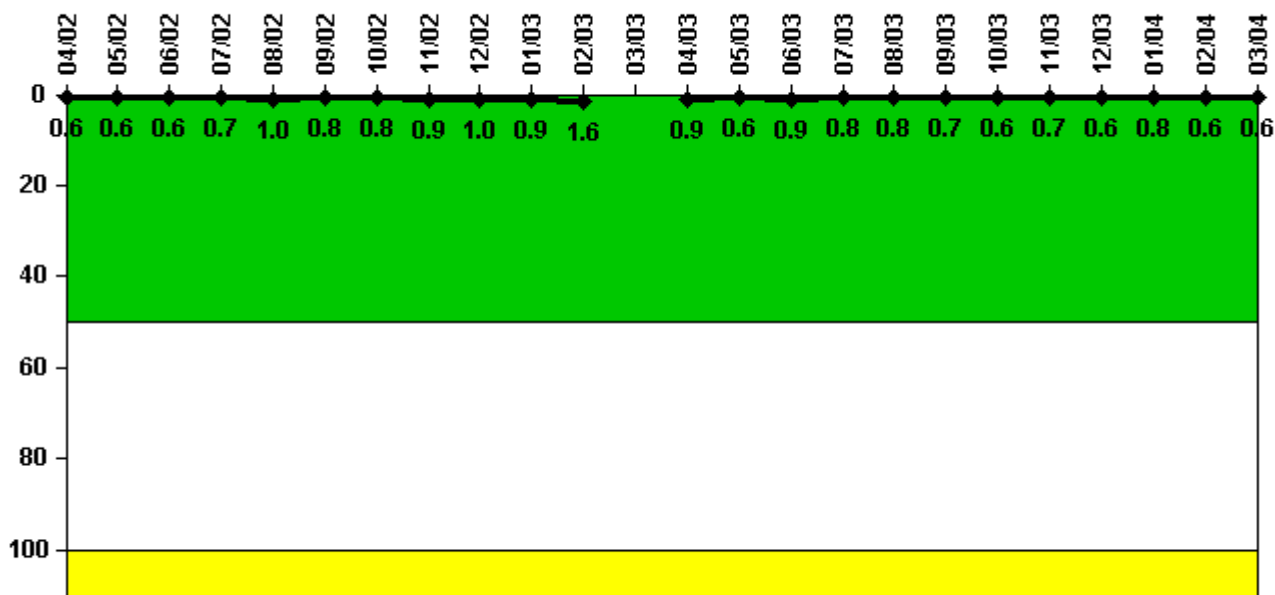
Thresholds: White > 5.0

Notes

| Safety System Functional Failures (PWR) | 2Q/02 | 3Q/02 | 4Q/02 | 1Q/03 | 2Q/03 | 3Q/03 | 4Q/03 | 1Q/04 |
|---|-------|-------|-------|-------|-------|-------|-------|-------|
| Safety System Functional Failures | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Indicator value | 2 | 1 | 1 | 1 | 0 | 0 | 0 | 0 |

Licensee Comments: none

Reactor Coolant System Activity



Thresholds: White > 50.0 Yellow > 100.0

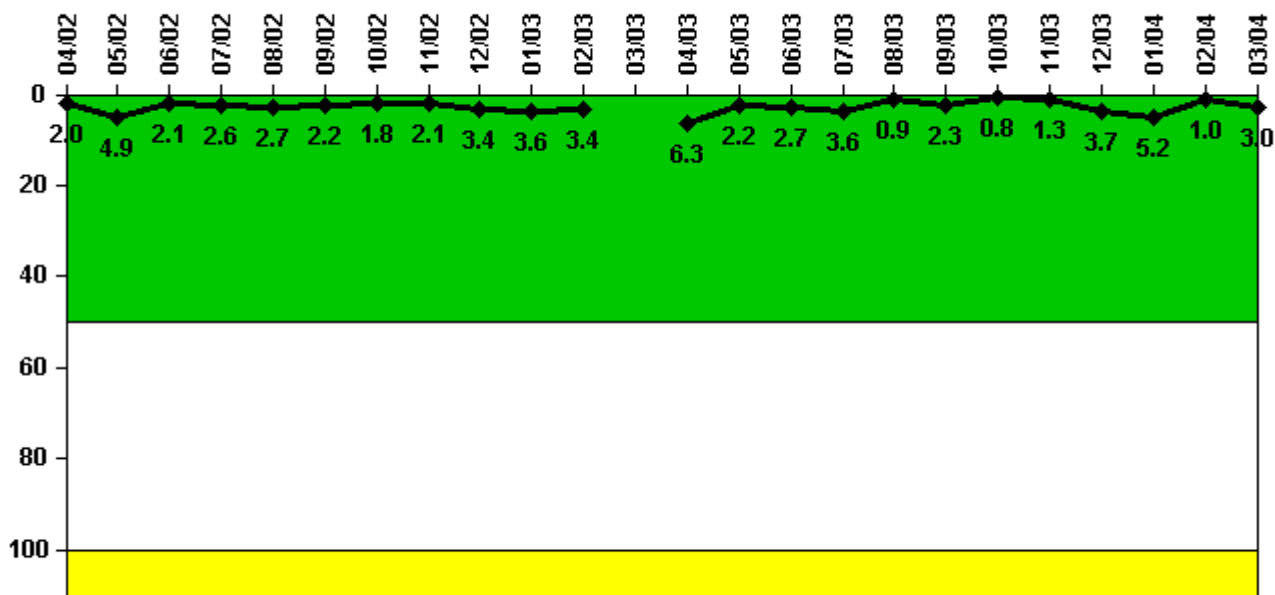
Notes

| Reactor Coolant System Activity | 4/02 | 5/02 | 6/02 | 7/02 | 8/02 | 9/02 | 10/02 | 11/02 | 12/02 | 1/03 | 2/03 | 3/03 |
|---------------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|------|
| Maximum activity | 0.005600 | 0.006010 | 0.006200 | 0.006550 | 0.009630 | 0.007900 | 0.007980 | 0.008700 | 0.009630 | 0.008560 | 0.015900 | N/A |
| 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 | 0.6 | 0.6 | 0.6 | 0.7 | 1.0 | 0.8 | 0.8 | 0.9 | 1.0 | 0.9 | 1.6 | N/A |

| Reactor Coolant System Activity | 4/03 | 5/03 | 6/03 | 7/03 | 8/03 | 9/03 | 10/03 | 11/03 | 12/03 | 1/04 | 2/04 | 3/04 |
|---------------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Maximum activity | 0.009480 | 0.005990 | 0.008670 | 0.007940 | 0.007550 | 0.006680 | 0.006480 | 0.006510 | 0.006060 | 0.008230 | 0.006480 | 0.006130 |
| 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 | 0.9 | 0.6 | 0.9 | 0.8 | 0.8 | 0.7 | 0.6 | 0.7 | 0.6 | 0.8 | 0.6 | 0.6 |

Licensee Comments: none

Reactor Coolant System Leakage



Thresholds: White > 50.0 Yellow > 100.0

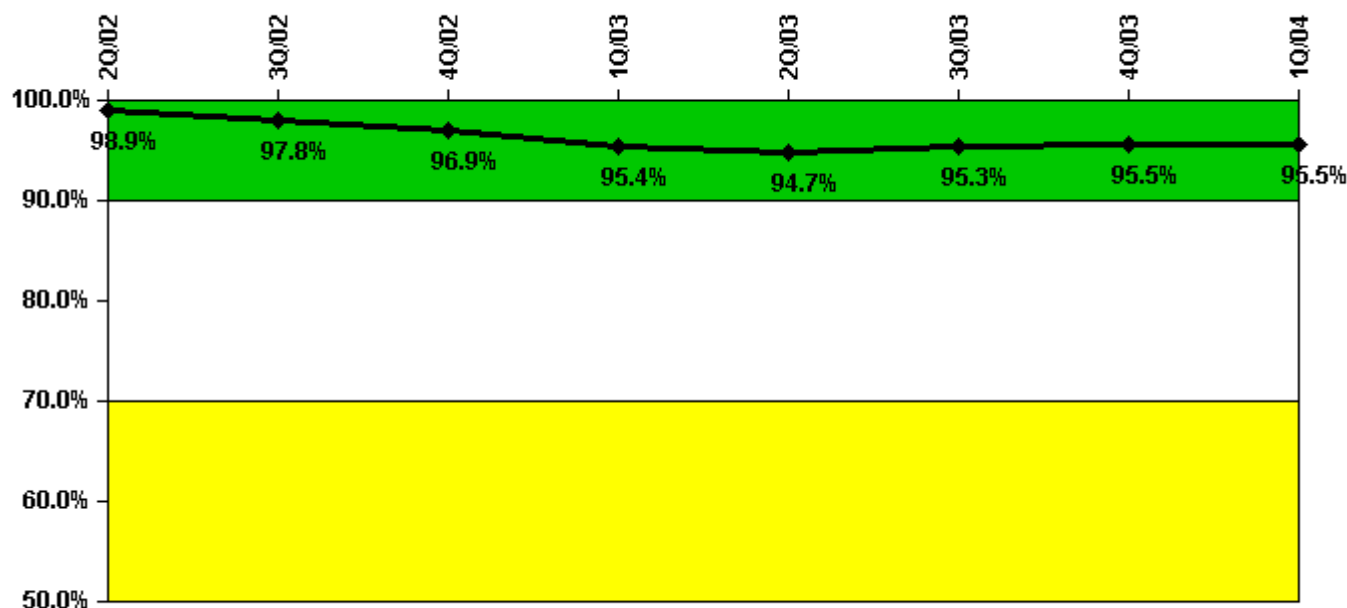
Notes

| Reactor Coolant System Leakage | 4/02 | 5/02 | 6/02 | 7/02 | 8/02 | 9/02 | 10/02 | 11/02 | 12/02 | 1/03 | 2/03 | 3/03 |
|--------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| Maximum leakage | 0.200 | 0.486 | 0.211 | 0.262 | 0.273 | 0.220 | 0.177 | 0.210 | 0.338 | 0.360 | 0.340 | N/A |
| 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 | 2.0 | 4.9 | 2.1 | 2.6 | 2.7 | 2.2 | 1.8 | 2.1 | 3.4 | 3.6 | 3.4 | N/A |

| Reactor Coolant System Leakage | 4/03 | 5/03 | 6/03 | 7/03 | 8/03 | 9/03 | 10/03 | 11/03 | 12/03 | 1/04 | 2/04 | 3/04 |
|--------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Maximum leakage | 0.630 | 0.220 | 0.270 | 0.357 | 0.094 | 0.228 | 0.077 | 0.129 | 0.367 | 0.520 | 0.100 | 0.300 |
| 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 | 6.3 | 2.2 | 2.7 | 3.6 | 0.9 | 2.3 | 0.8 | 1.3 | 3.7 | 5.2 | 1.0 | 3.0 |

Licensee Comments: none

Drill/Exercise Performance



Thresholds: White < 90.0% Yellow < 70.0%

Notes

| Drill/Exercise Performance | 2Q/02 | 3Q/02 | 4Q/02 | 1Q/03 | 2Q/03 | 3Q/03 | 4Q/03 | 1Q/04 |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Successful opportunities | 8.0 | 35.0 | 45.0 | 9.0 | 14.0 | 29.0 | 56.0 | 18.0 |
| Total opportunities | 8.0 | 38.0 | 47.0 | 12.0 | 15.0 | 29.0 | 57.0 | 18.0 |
| | | | | | | | | |
| Indicator value | 98.9% | 97.8% | 96.9% | 95.4% | 94.7% | 95.3% | 95.5% | 95.5% |

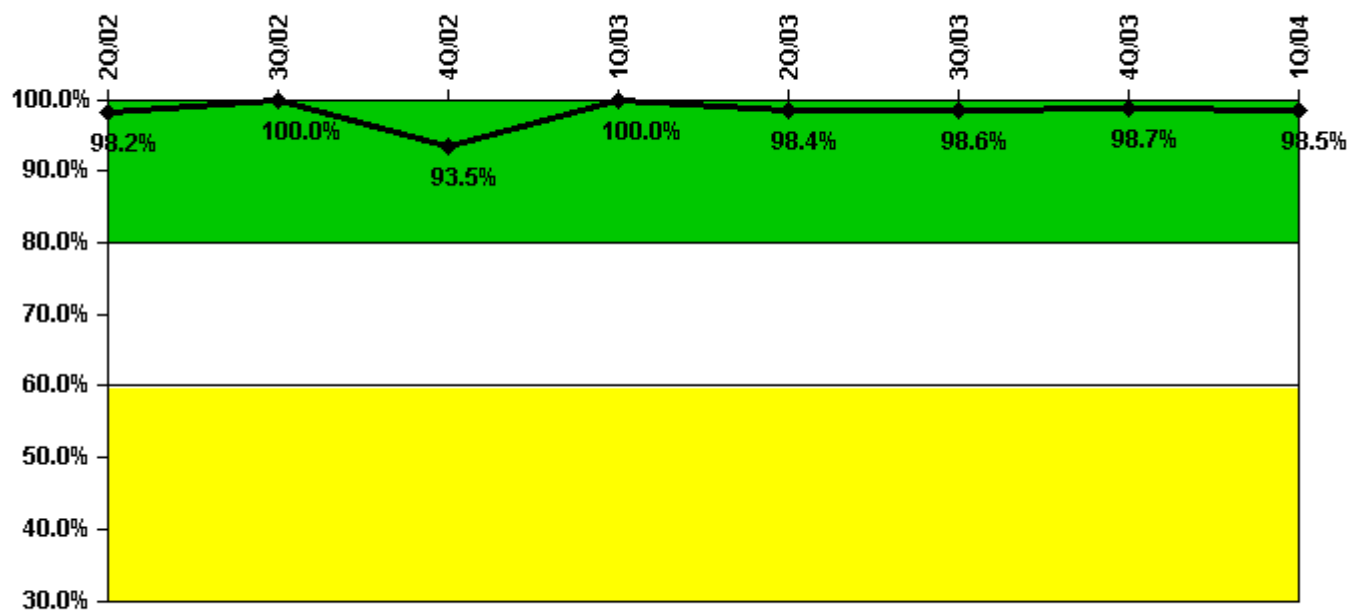
Licensee Comments:

4Q/02: Change Reports are being submitted for the Drill/Exercise Performance for the first, third and fourth quarters 2002 to correct data inputs. Changes in data reflect a change completed in August 2003 for the third quarter submittal, but the change was not correctly incorporated into other affected quarters. Fourth quarter data was also corrected to reflect two additional successful drill exercise opportunities. Drill/Exercise Performance remained within the green band.

3Q/02: Change Reports are being submitted for the Drill/Exercise Performance for the first, third and fourth quarters 2002 to correct data inputs. Changes in data reflect a change completed in August 2003 for the third quarter submittal, but the change was not correctly incorporated into other affected quarters. Drill/Exercise Performance remained within the green band.

1Q/02: Change Reports are being submitted for the Drill/Exercise Performance for the first, third and fourth quarters 2002 to correct data inputs. Changes in data reflect a change completed in August 2003 for the third quarter submittal, but the change was not correctly incorporated into other affected quarters. Drill/Exercise Performance remained within the green band.

ERO Drill Participation



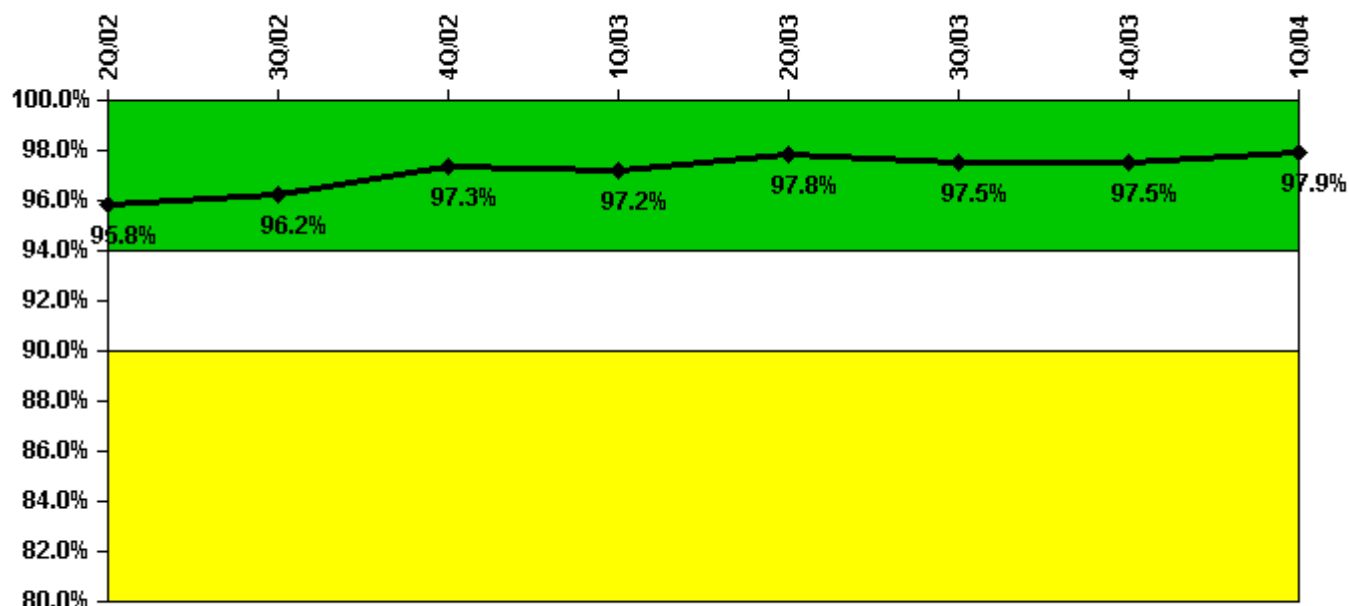
Thresholds: White < 80.0% Yellow < 60.0%

Notes

| ERO Drill Participation | 2Q/02 | 3Q/02 | 4Q/02 | 1Q/03 | 2Q/03 | 3Q/03 | 4Q/03 | 1Q/04 |
|-----------------------------|-------|--------|-------|--------|-------|-------|-------|-------|
| Participating Key personnel | 54.0 | 58.0 | 58.0 | 57.0 | 63.0 | 68.0 | 77.0 | 65.0 |
| Total Key personnel | 55.0 | 58.0 | 62.0 | 57.0 | 64.0 | 69.0 | 78.0 | 66.0 |
| | | | | | | | | |
| Indicator value | 98.2% | 100.0% | 93.5% | 100.0% | 98.4% | 98.6% | 98.7% | 98.5% |

Licensee Comments: none

Alert & Notification System



Thresholds: White < 94.0% Yellow < 90.0%

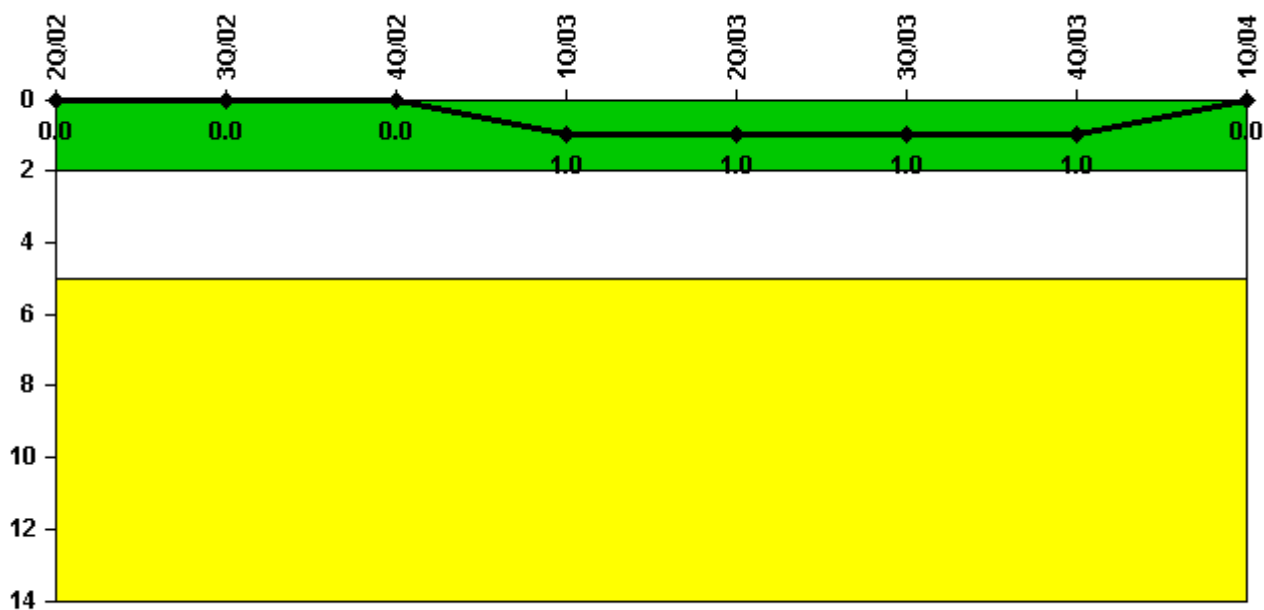
Notes

| Alert & Notification System | 2Q/02 | 3Q/02 | 4Q/02 | 1Q/03 | 2Q/03 | 3Q/03 | 4Q/03 | 1Q/04 |
|-----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Successful siren-tests | 956 | 1035 | 1007 | 914 | 1036 | 963 | 1007 | 935 |
| Total sirens-tests | 1019 | 1057 | 1019 | 930 | 1074 | 996 | 1019 | 936 |
| | | | | | | | | |
| Indicator value | 95.8% | 96.2% | 97.3% | 97.2% | 97.8% | 97.5% | 97.5% | 97.9% |

Licensee Comments:

1Q/04: Calvert Cliffs Units 1 & 2 implemented a change in test/activation methodology affecting 2 of 3 Counties in the EPZ during 2Q/2001. This change increased the number of pushbutton actuations during testing and actual activations from one to three times to improve the reliability of the existing system. This change mimics the operation of newer, automated systems. Calvert Cliffs replaced the original PANS in 4Q/2003 with a new alert and notification system incorporating automatic polling to further enhance the reliability of this safety function.

Occupational Exposure Control Effectiveness



Thresholds: White > 2.0 Yellow > 5.0

Notes

| Occupational Exposure Control Effectiveness | 2Q/02 | 3Q/02 | 4Q/02 | 1Q/03 | 2Q/03 | 3Q/03 | 4Q/03 | 1Q/04 |
|---|----------|----------|----------|----------|----------|----------|----------|----------|
| High radiation area occurrences | 0 | 0 | 0 | 1 | 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 |
| Indicator value | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 |

Licensee Comments: none

RETS/ODCM Radiological Effluent



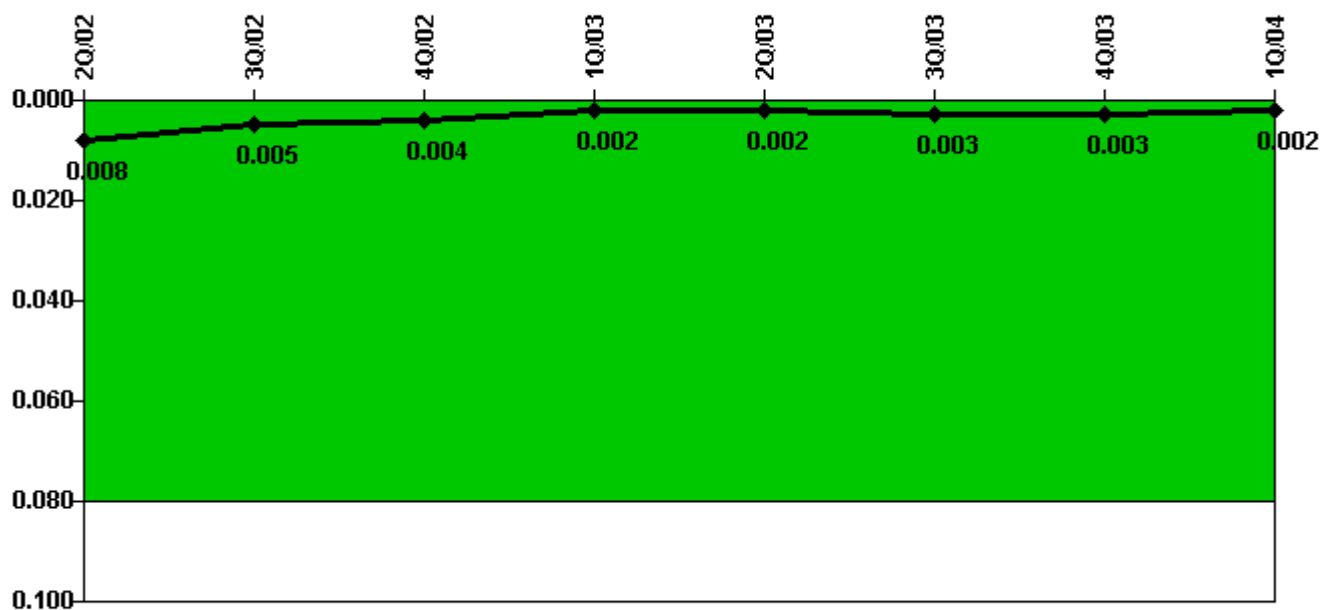
Thresholds: White > 1.0 Yellow > 3.0

Notes

| RETS/ODCM Radiological Effluent | 2Q/02 | 3Q/02 | 4Q/02 | 1Q/03 | 2Q/03 | 3Q/03 | 4Q/03 | 1Q/04 |
|---------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| RETS/ODCM occurrences | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | |
| Indicator value | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Licensee Comments: none

Protected Area Security Performance Index



Thresholds: White > 0.080

Notes

| Protected Area Security Performance Index | 2Q/02 | 3Q/02 | 4Q/02 | 1Q/03 | 2Q/03 | 3Q/03 | 4Q/03 | 1Q/04 |
|---|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| IDS compensatory hours | 1.80 | 7.80 | 14.20 | 24.90 | 11.70 | 25.40 | 20.00 | 0 |
| CCTV compensatory hours | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| IDS normalization factor | 1.40 | 1.40 | 1.40 | 1.40 | 1.40 | 1.40 | 1.40 | 1.40 |
| CCTV normalization factor | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 |
| | | | | | | | | |
| Index Value | 0.008 | 0.005 | 0.004 | 0.002 | 0.002 | 0.003 | 0.003 | 0.002 |

Licensee Comments: none

Personnel Screening Program



Thresholds: White > 2.0 Yellow > 5.0

Notes

| Personnel Screening Program | 2Q/02 | 3Q/02 | 4Q/02 | 1Q/03 | 2Q/03 | 3Q/03 | 4Q/03 | 1Q/04 |
|-----------------------------|----------|----------|----------|----------|----------|----------|----------|----------|
| Program failures | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | |
| Indicator value | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Licensee Comments: none

FFD/Personnel Reliability



Thresholds: White > 2.0 Yellow > 5.0

Notes

| FFD/Personnel Reliability | 2Q/02 | 3Q/02 | 4Q/02 | 1Q/03 | 2Q/03 | 3Q/03 | 4Q/03 | 1Q/04 |
|---------------------------|----------|----------|----------|----------|----------|----------|----------|----------|
| Program Failures | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | |
| Indicator value | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Licensee Comments: none

▲ [PI Summary](#) | [Inspection Findings Summary](#) | [Reactor Oversight Process](#)

Last Modified: April 22, 2004