

San Onofre 2

4Q/2001 Performance Indicators

Licensee's General Comments: Correct unavailability hours in HPSI and RHR

Unplanned Scrams per 7000 Critical Hrs



Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

Notes

| Unplanned Scrams per 7000 Critical Hrs | 1Q/00 | 2Q/00 | 3Q/00 | 4Q/00 | 1Q/01 | 2Q/01 | 3Q/01 | 4Q/01 |
|--|--------|--------|--------|--------|--------|--------|--------|--------|
| Unplanned scrams | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Critical hours | 2184.0 | 2183.0 | 2208.0 | 1270.8 | 2160.0 | 2183.0 | 2208.0 | 2004.9 |
| | | | | | | | | |
| Indicator value | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Licensee Comments: none

Scrams with Loss of Normal Heat Removal



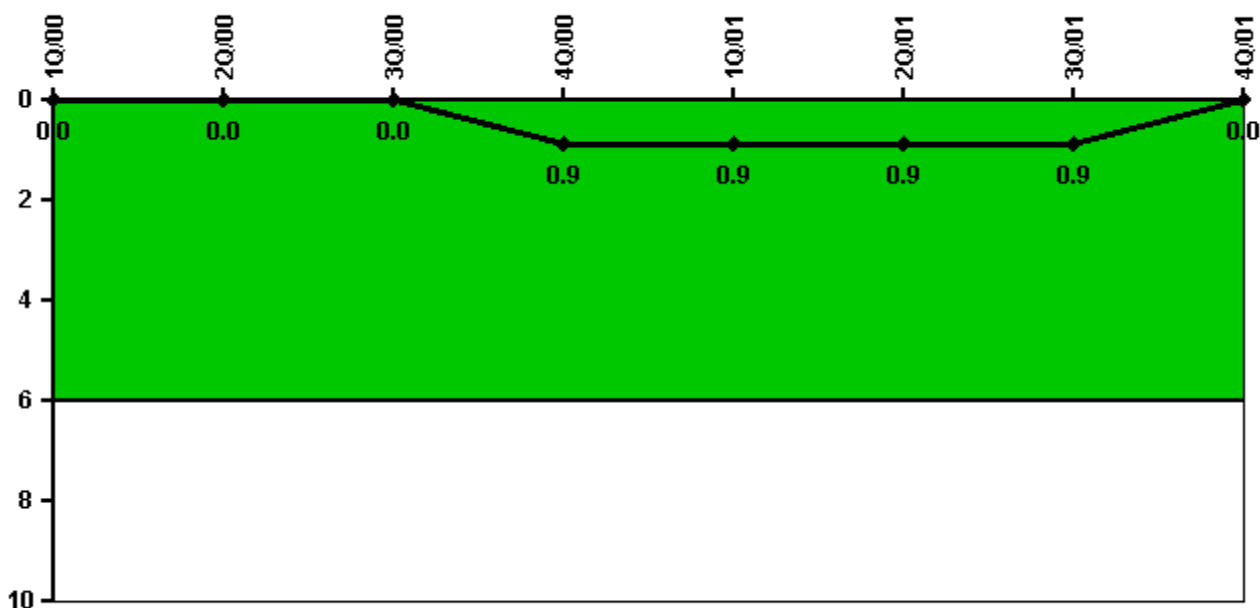
Thresholds: White > 2.0 Yellow > 10.0 Red > 20.0

Notes

| Scrams with Loss of Normal Heat Removal | 1Q/00 | 2Q/00 | 3Q/00 | 4Q/00 | 1Q/01 | 2Q/01 | 3Q/01 | 4Q/01 |
|---|-------|-------|-------|-------|-------|-------|-------|-------|
| Scrams | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Indicator value | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Licensee Comments: none

Unplanned Power Changes per 7000 Critical Hrs



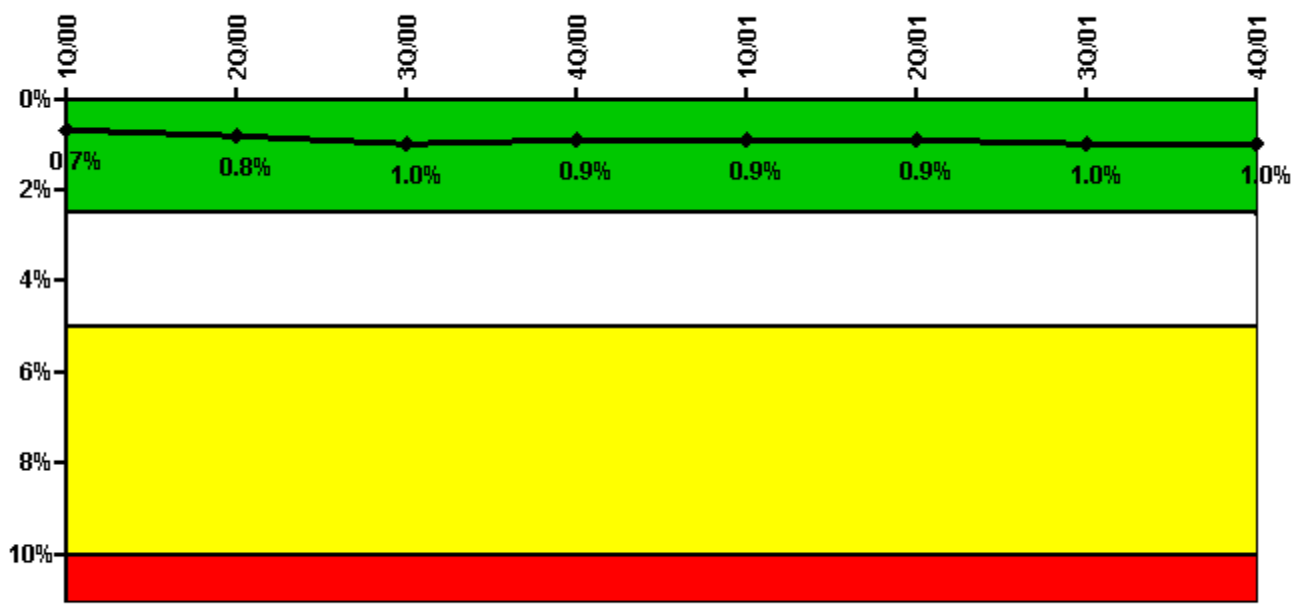
Thresholds: White > 6.0

Notes

| Unplanned Power Changes per 7000 Critical Hrs | 1Q/00 | 2Q/00 | 3Q/00 | 4Q/00 | 1Q/01 | 2Q/01 | 3Q/01 | 4Q/01 |
|---|--------|--------|--------|--------|--------|--------|--------|--------|
| Unplanned power changes | 0 | 0 | 0 | 1.0 | 0 | 0 | 0 | 0 |
| Critical hours | 2184.0 | 2183.0 | 2208.0 | 1270.8 | 2160.0 | 2183.0 | 2208.0 | 2004.9 |
| Indicator value | 0 | 0 | 0 | 0.9 | 0.9 | 0.9 | 0.9 | 0 |

Licensee Comments: none

Safety System Unavailability, Emergency AC Power



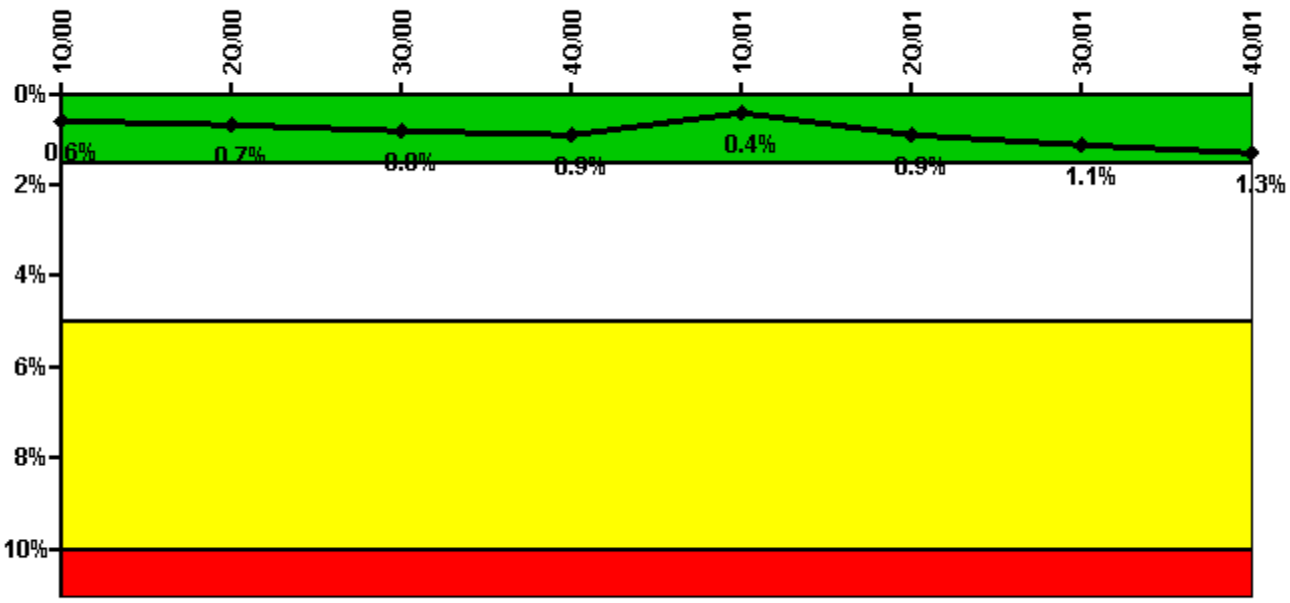
Thresholds: White > 2.5% Yellow > 5.0% Red > 10.0%

Notes

| Safety System Unavailability, Emergency AC Power | 1Q/00 | 2Q/00 | 3Q/00 | 4Q/00 | 1Q/01 | 2Q/01 | 3Q/01 | 4Q/01 |
|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Train 1 | | | | | | | | |
| Planned unavailable hours | 1.40 | 87.70 | 23.40 | 54.60 | 2.30 | 4.60 | 22.00 | 5.03 |
| 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 | 2184.00 | 2183.00 | 2208.00 | 2209.00 | 2160.00 | 2183.00 | 2208.00 | 2209.00 |
| Train 2 | | | | | | | | |
| Planned unavailable hours | 40.60 | 1.60 | 62.40 | 45.90 | 4.80 | 9.20 | 1.50 | 2.37 |
| Unplanned unavailable hours | 0 | 0 | 0 | 0 | 0 | 2.30 | 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 | 2184.00 | 2183.00 | 2208.00 | 2209.00 | 2160.00 | 2183.00 | 2208.00 | 2209.00 |
| Indicator value | 0.7% | 0.8% | 1.0% | 0.9% | 0.9% | 0.9% | 1.0% | 1.0% |

Licensee Comments: none

Safety System Unavailability, High Pressure Injection System (HPSI)



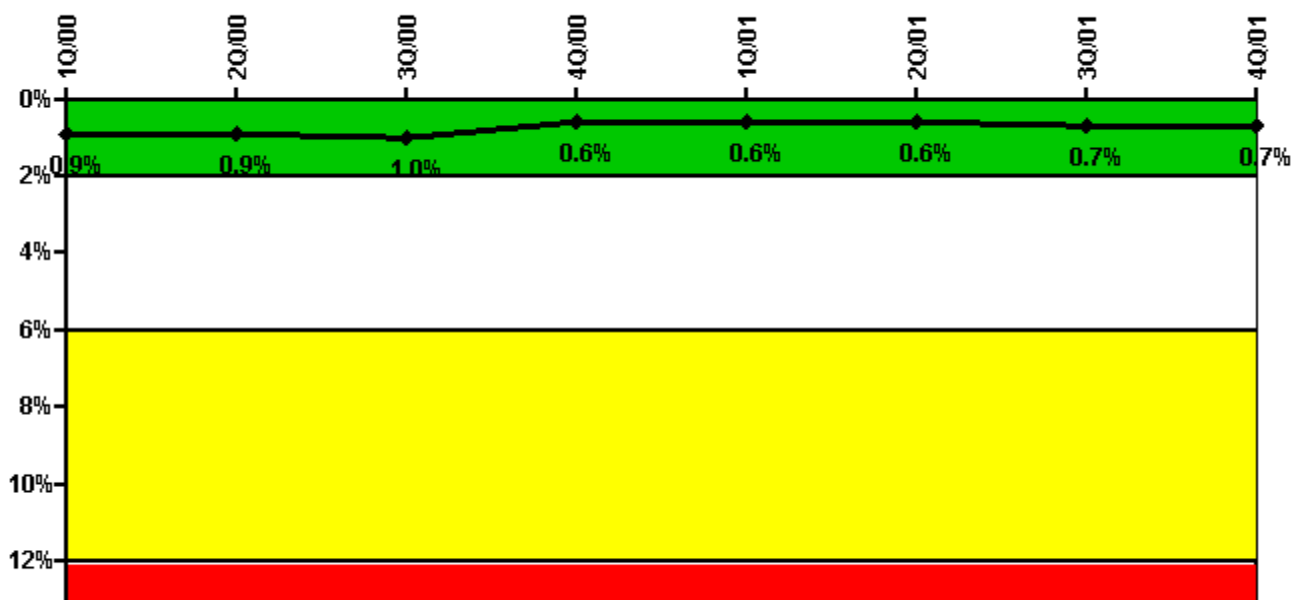
Thresholds: White > 1.5% Yellow > 5.0% Red > 10.0%

Notes

| Safety System Unavailability, High Pressure Injection System (HPSI) | 1Q/00 | 2Q/00 | 3Q/00 | 4Q/00 | 1Q/01 | 2Q/01 | 3Q/01 | 4Q/01 |
|---|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Train 1 | | | | | | | | |
| Planned unavailable hours | 6.70 | 54.50 | 47.40 | 7.30 | 11.80 | 51.80 | 70.67 | 15.60 |
| Unplanned unavailable hours | 12.80 | 0 | 4.80 | 0 | 0 | 111.20 | 6.60 | 0.80 |
| Fault exposure hours | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Effective Reset hours | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Required hours | 2184.00 | 2183.00 | 2208.00 | 1271.00 | 2160.00 | 2183.00 | 2208.00 | 2000.00 |
| Train 2 | | | | | | | | |
| Planned unavailable hours | 8.70 | 12.42 | 4.00 | 0.30 | 6.40 | 49.00 | 4.22 | 62.17 |
| Unplanned unavailable hours | 0 | 0 | 1.50 | 0 | 2.90 | 15.00 | 2.67 | 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 | 2184.00 | 2183.00 | 2208.00 | 1271.00 | 2160.00 | 2183.00 | 2208.00 | 2000.00 |
| Indicator value | 0.6% | 0.7% | 0.8% | 0.9% | 0.4% | 0.9% | 1.1% | 1.3% |

Licensee Comments: none

Safety System Unavailability, Heat Removal System (AFW)



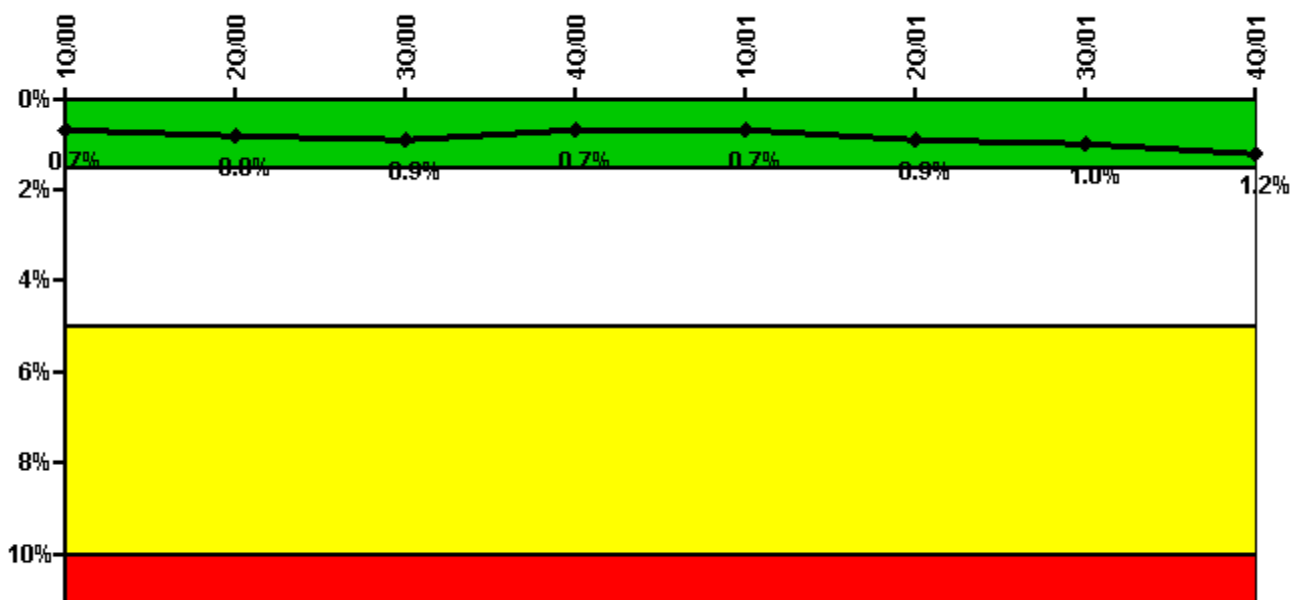
Thresholds: White > 2.0% Yellow > 6.0% Red > 12.0%

Notes

| Safety System Unavailability, Heat Removal System (AFW) | 1Q/00 | 2Q/00 | 3Q/00 | 4Q/00 | 1Q/01 | 2Q/01 | 3Q/01 | 4Q/01 |
|---|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Train 1 | | | | | | | | |
| Planned unavailable hours | 0 | 10.10 | 36.40 | 0 | 0 | 0 | 19.80 | 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 | 2184.00 | 2183.00 | 2208.00 | 1271.00 | 2160.00 | 2183.00 | 2208.00 | 2000.00 |
| Train 2 | | | | | | | | |
| Planned unavailable hours | 0 | 25.00 | 11.90 | 0 | 37.10 | 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 | 2184.00 | 2183.00 | 2208.00 | 1271.00 | 2160.00 | 2183.00 | 2208.00 | 2000.00 |
| Train 3 | | | | | | | | |
| Planned unavailable hours | 0.80 | 0 | 19.90 | 22.60 | 0 | 0 | 52.60 | 13.50 |
| Unplanned unavailable hours | 0 | 0 | 0 | 0 | 0 | 0 | 23.30 | 17.20 |
| Fault exposure hours | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Effective Reset hours | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Required hours | 2184.00 | 2183.00 | 2208.00 | 1271.00 | 2160.00 | 2183.00 | 2208.00 | 2000.00 |
| Indicator value | 0.9% | 0.9% | 1.0% | 0.6% | 0.6% | 0.6% | 0.7% | 0.7% |

Licensee Comments: none

Safety System Unavailability, Residual Heat Removal System



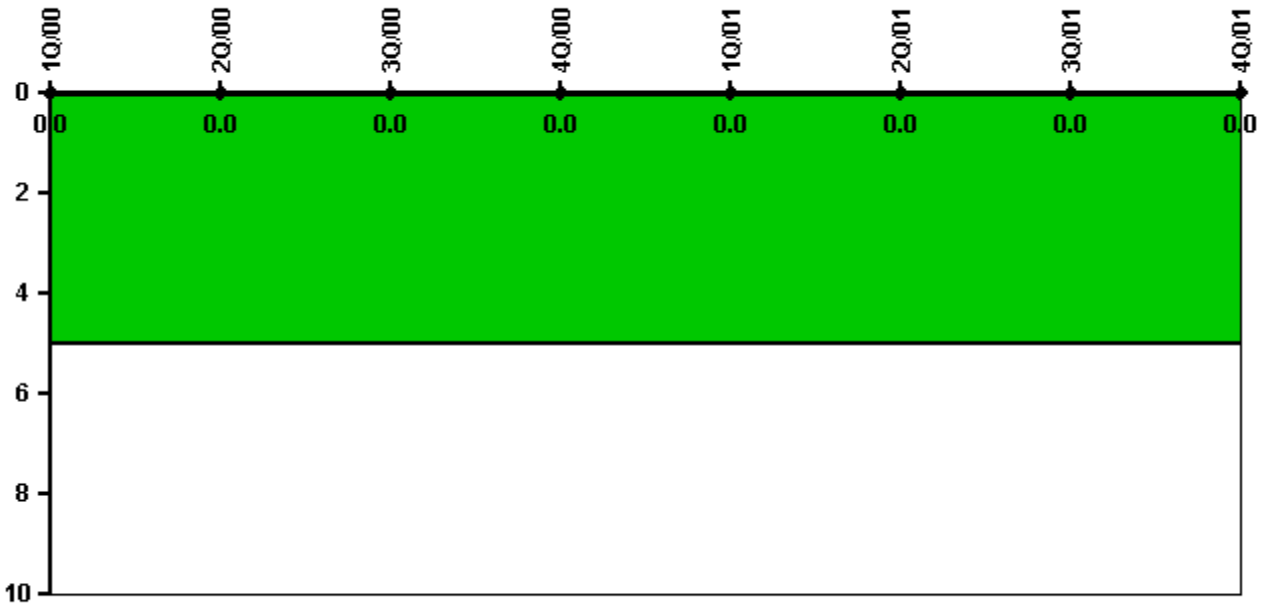
Thresholds: White > 1.5% Yellow > 5.0% Red > 10.0%

Notes

| Safety System Unavailability, Residual Heat Removal System | 1Q/00 | 2Q/00 | 3Q/00 | 4Q/00 | 1Q/01 | 2Q/01 | 3Q/01 | 4Q/01 |
|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Train 1 | | | | | | | | |
| Planned unavailable hours | 2.40 | 51.30 | 23.20 | 22.70 | 0.60 | 51.10 | 71.52 | 61.40 |
| Unplanned unavailable hours | 12.80 | 0 | 4.70 | 0 | 0 | 111.20 | 6.60 | 0.80 |
| Fault exposure hours | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Effective Reset hours | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Required hours | 2184.00 | 2183.00 | 2208.00 | 1291.00 | 2160.00 | 2183.00 | 2208.00 | 2035.00 |
| Train 2 | | | | | | | | |
| Planned unavailable hours | 8.20 | 8.85 | 20.30 | 0 | 4.90 | 50.70 | 1.12 | 84.60 |
| Unplanned unavailable hours | 0 | 0 | 0 | 0 | 2.90 | 15.00 | 2.67 | 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 | 2184.00 | 2183.00 | 2208.00 | 1291.00 | 2160.00 | 2183.00 | 2208.00 | 2035.00 |
| Train 3 | | | | | | | | |
| Planned unavailable hours | 2.40 | 0 | 0 | 0 | 0 | 0 | 0 | 0.60 |
| Unplanned unavailable hours | 12.80 | 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 | 2184.00 | 0 | 0 | 918.00 | 0 | 0 | 0 | 174.00 |
| Train 4 | | | | | | | | |
| Planned unavailable hours | 8.20 | 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 | 2184.00 | 0 | 0 | 918.00 | 0 | 0 | 0 | 174.00 |
| Indicator value | 0.7% | 0.8% | 0.9% | 0.7% | 0.7% | 0.9% | 1.0% | 1.2% |

Licensee Comments: none

Safety System Functional Failures (PWR)



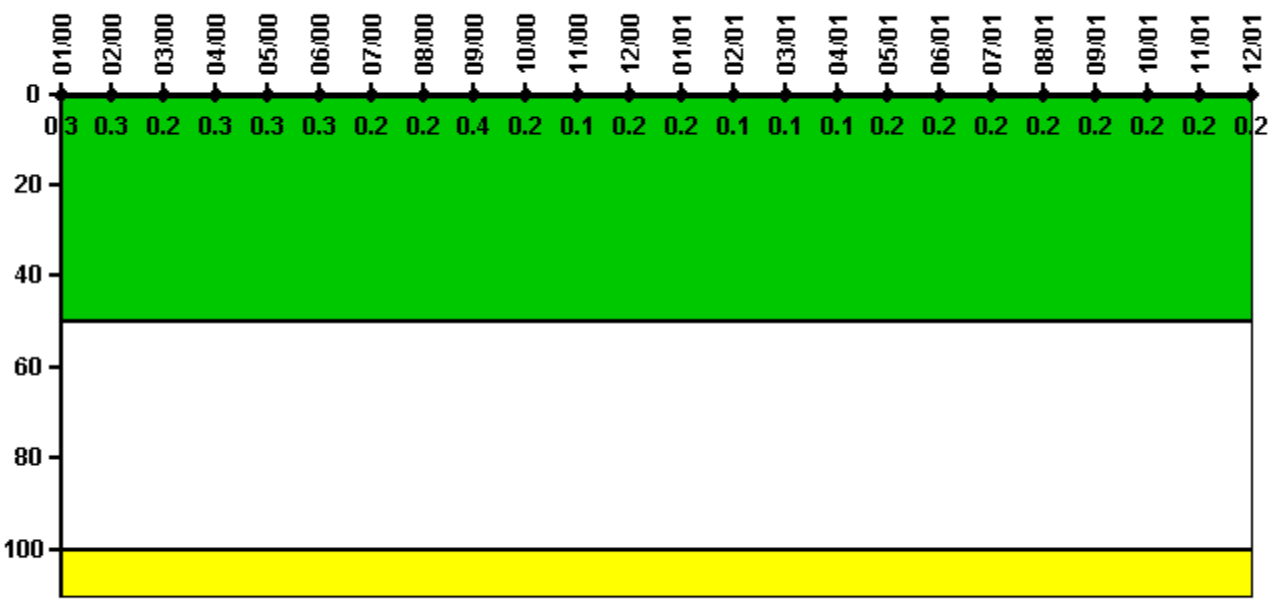
Thresholds: White > 5.0

Notes

| Safety System Functional Failures (PWR) | 1Q/00 | 2Q/00 | 3Q/00 | 4Q/00 | 1Q/01 | 2Q/01 | 3Q/01 | 4Q/01 |
|---|-------|-------|-------|-------|-------|-------|-------|-------|
| 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

Reactor Coolant System Activity



Thresholds: White > 50.0 Yellow > 100.0

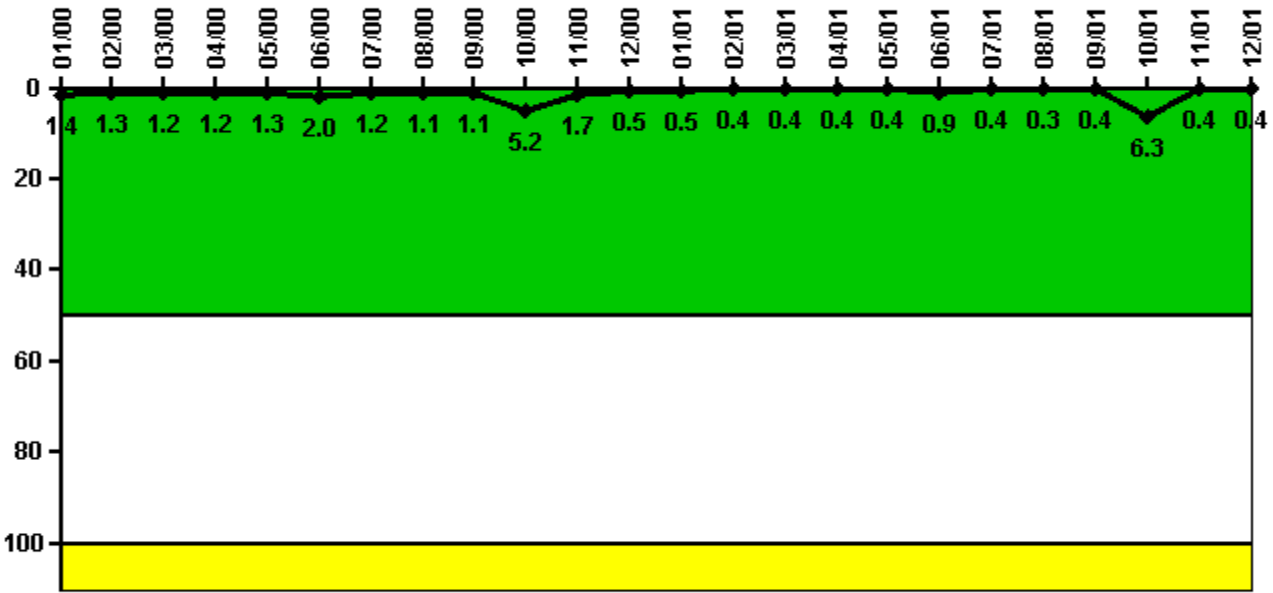
Notes

| Reactor Coolant System Activity | 1/00 | 2/00 | 3/00 | 4/00 | 5/00 | 6/00 | 7/00 | 8/00 | 9/00 | 10/00 | 11/00 | 12/00 |
|---------------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Maximum activity | 0.002700 | 0.002550 | 0.002480 | 0.002540 | 0.002500 | 0.002620 | 0.002440 | 0.002390 | 0.003940 | 0.002000 | 0.001000 | 0.002000 |
| 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 | 0.3 | 0.3 | 0.2 | 0.3 | 0.3 | 0.3 | 0.2 | 0.2 | 0.4 | 0.2 | 0.1 | 0.2 |

| Reactor Coolant System Activity | 1/01 | 2/01 | 3/01 | 4/01 | 5/01 | 6/01 | 7/01 | 8/01 | 9/01 | 10/01 | 11/01 | 12/01 |
|---------------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Maximum activity | 0.002000 | 0.001000 | 0.001000 | 0.001000 | 0.002000 | 0.002000 | 0.002000 | 0.002000 | 0.002000 | 0.002000 | 0.002000 | 0.002000 |
| 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 | 0.2 | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |

Licensee Comments: none

Reactor Coolant System Leakage



Thresholds: White > 50.0 Yellow > 100.0

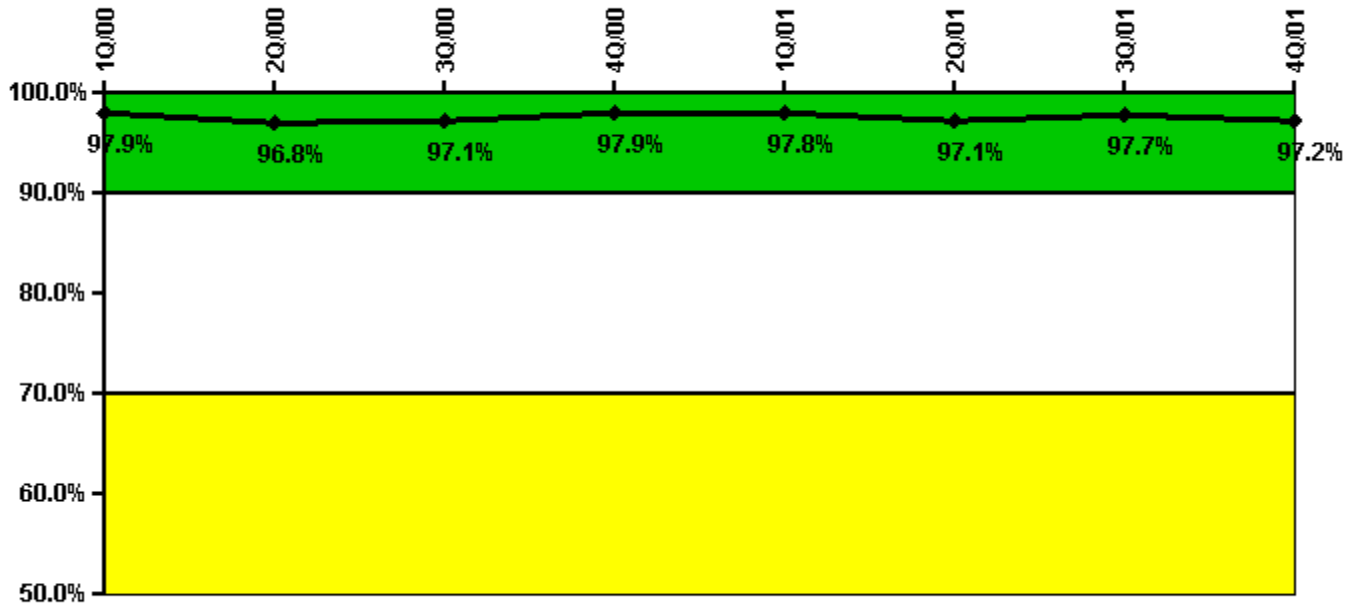
Notes

| Reactor Coolant System Leakage | 1/00 | 2/00 | 3/00 | 4/00 | 5/00 | 6/00 | 7/00 | 8/00 | 9/00 | 10/00 | 11/00 | 12/00 |
|--------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Maximum leakage | 0.140 | 0.130 | 0.120 | 0.120 | 0.130 | 0.200 | 0.120 | 0.110 | 0.110 | 0.520 | 0.170 | 0.050 |
| 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 | 1.3 | 1.2 | 1.2 | 1.3 | 2.0 | 1.2 | 1.1 | 1.1 | 5.2 | 1.7 | 0.5 |

| Reactor Coolant System Leakage | 1/01 | 2/01 | 3/01 | 4/01 | 5/01 | 6/01 | 7/01 | 8/01 | 9/01 | 10/01 | 11/01 | 12/01 |
|--------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Maximum leakage | 0.050 | 0.040 | 0.040 | 0.040 | 0.040 | 0.090 | 0.040 | 0.030 | 0.040 | 0.630 | 0.040 | 0.040 |
| 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 | 0.5 | 0.4 | 0.4 | 0.4 | 0.4 | 0.9 | 0.4 | 0.3 | 0.4 | 6.3 | 0.4 | 0.4 |

Licensee Comments: none

Drill/Exercise Performance



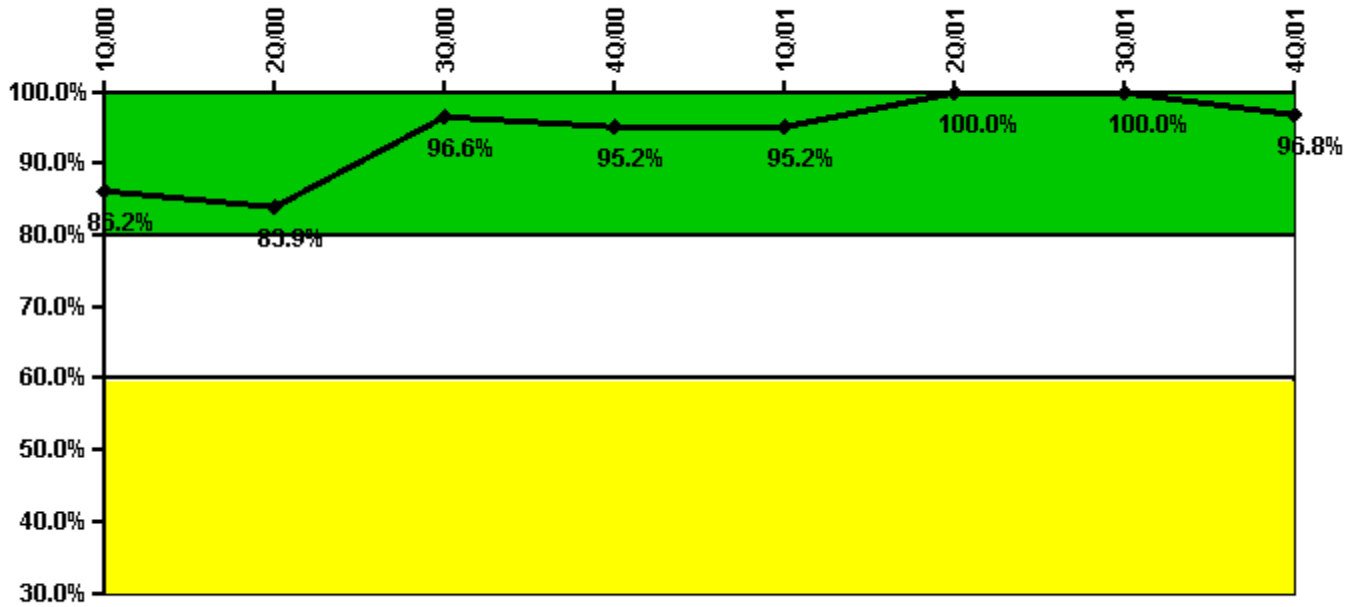
Thresholds: White < 90.0% Yellow < 70.0%

Notes

| Drill/Exercise Performance | 1Q/00 | 2Q/00 | 3Q/00 | 4Q/00 | 1Q/01 | 2Q/01 | 3Q/01 | 4Q/01 |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Successful opportunities | 11.0 | 6.0 | 32.0 | 0 | 2.0 | 46.0 | 8.0 | 0 |
| Total opportunities | 11.0 | 7.0 | 32.0 | 0 | 2.0 | 48.0 | 8.0 | 0 |
| | | | | | | | | |
| Indicator value | 97.9% | 96.8% | 97.1% | 97.9% | 97.8% | 97.1% | 97.7% | 97.2% |

Licensee Comments: none

ERO Drill Participation



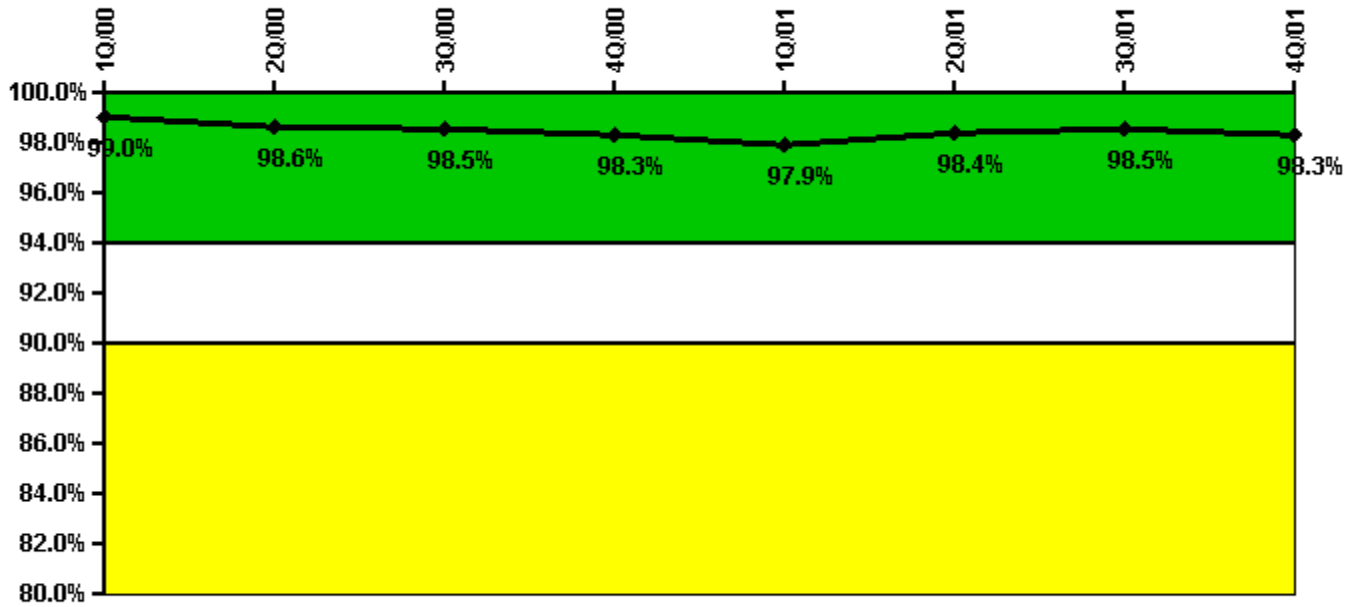
Thresholds: White < 80.0% Yellow < 60.0%

Notes

| ERO Drill Participation | 1Q/00 | 2Q/00 | 3Q/00 | 4Q/00 | 1Q/01 | 2Q/01 | 3Q/01 | 4Q/01 |
|-----------------------------|-------|-------|-------|-------|-------|--------|--------|-------|
| Participating Key personnel | 50.0 | 47.0 | 57.0 | 59.0 | 59.0 | 62.0 | 63.0 | 61.0 |
| Total Key personnel | 58.0 | 56.0 | 59.0 | 62.0 | 62.0 | 62.0 | 63.0 | 63.0 |
| | | | | | | | | |
| Indicator value | 86.2% | 83.9% | 96.6% | 95.2% | 95.2% | 100.0% | 100.0% | 96.8% |

Licensee Comments: none

Alert & Notification System



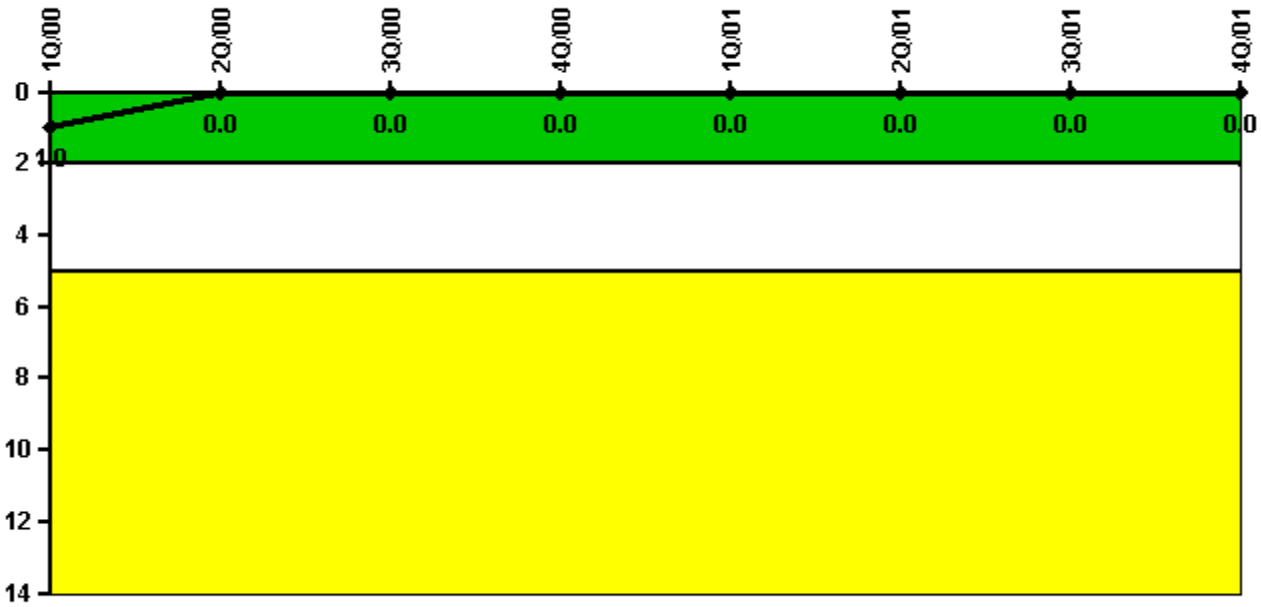
Thresholds: White < 94.0% Yellow < 90.0%

Notes

| Alert & Notification System | 1Q/00 | 2Q/00 | 3Q/00 | 4Q/00 | 1Q/01 | 2Q/01 | 3Q/01 | 4Q/01 |
|-----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Successful siren-tests | 385 | 333 | 485 | 338 | 379 | 341 | 390 | 431 |
| Total sirens-tests | 392 | 343 | 490 | 343 | 392 | 343 | 392 | 441 |
| Indicator value | 99.0% | 98.6% | 98.5% | 98.3% | 97.9% | 98.4% | 98.5% | 98.3% |

Licensee Comments: none

Occupational Exposure Control Effectiveness



Thresholds: White > 2.0 Yellow > 5.0

Notes

| Occupational Exposure Control Effectiveness | 1Q/00 | 2Q/00 | 3Q/00 | 4Q/00 | 1Q/01 | 2Q/01 | 3Q/01 | 4Q/01 |
|---|----------|----------|----------|----------|----------|----------|----------|----------|
| 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 |
| Indicator value | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Licensee Comments: none

RETS/ODCM Radiological Effluent



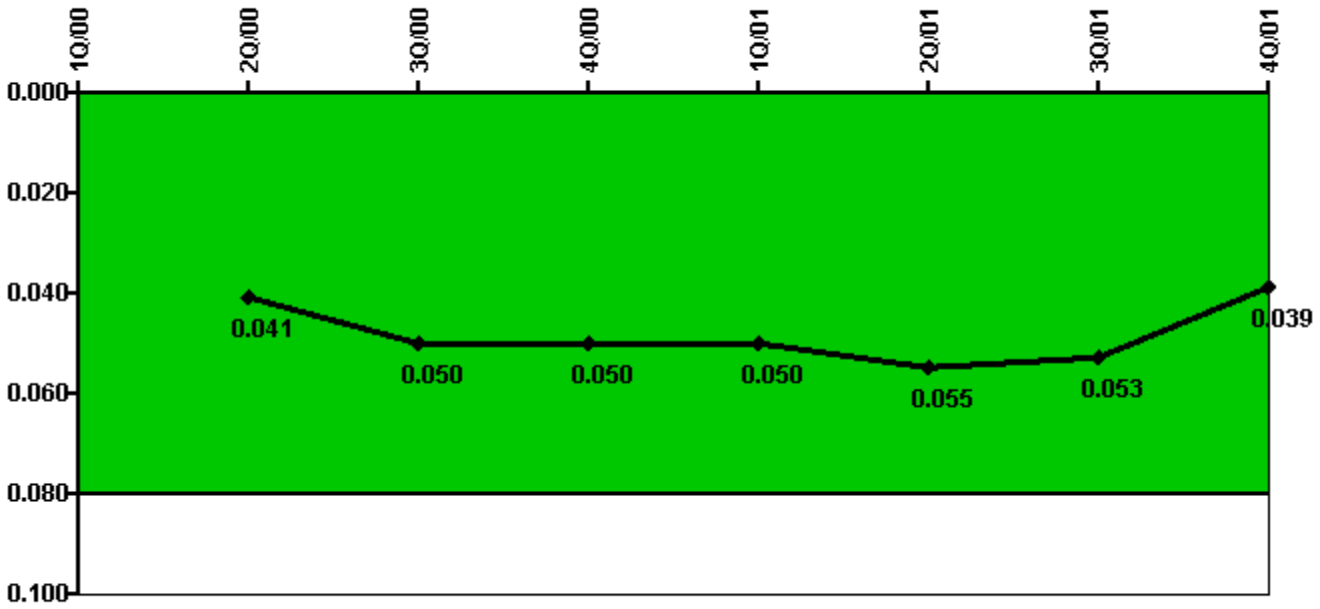
Thresholds: White > 1.0 Yellow > 3.0

Notes

| RETS/ODCM Radiological Effluent | 1Q/00 | 2Q/00 | 3Q/00 | 4Q/00 | 1Q/01 | 2Q/01 | 3Q/01 | 4Q/01 |
|---------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| 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 | 1Q/00 | 2Q/00 | 3Q/00 | 4Q/00 | 1Q/01 | 2Q/01 | 3Q/01 | 4Q/01 |
|---|--------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| IDS compensatory hours | 247.10 | 105.40 | 339.10 | 325.80 | 504.80 | 96.00 | 65.60 | 82.30 |
| CCTV compensatory hours | 184.3 | 32.9 | 8.4 | 0 | 13.1 | 16.2 | 73.4 | 0 |
| IDS normalization factor | 1.80 | 1.80 | 1.55 | 1.55 | 1.55 | 1.38 | 1.20 | 1.20 |
| CCTV normalization factor | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.8 |
| | | | | | | | | |
| Index Value | | 0.041 | 0.050 | 0.050 | 0.050 | 0.055 | 0.053 | 0.039 |

Licensee Comments:

4Q/01: SONGS installed a new CCTV system on 10/1/01. SONGS has 54 CCTV cameras that are counted toward the NEI/NRC PI.

Personnel Screening Program



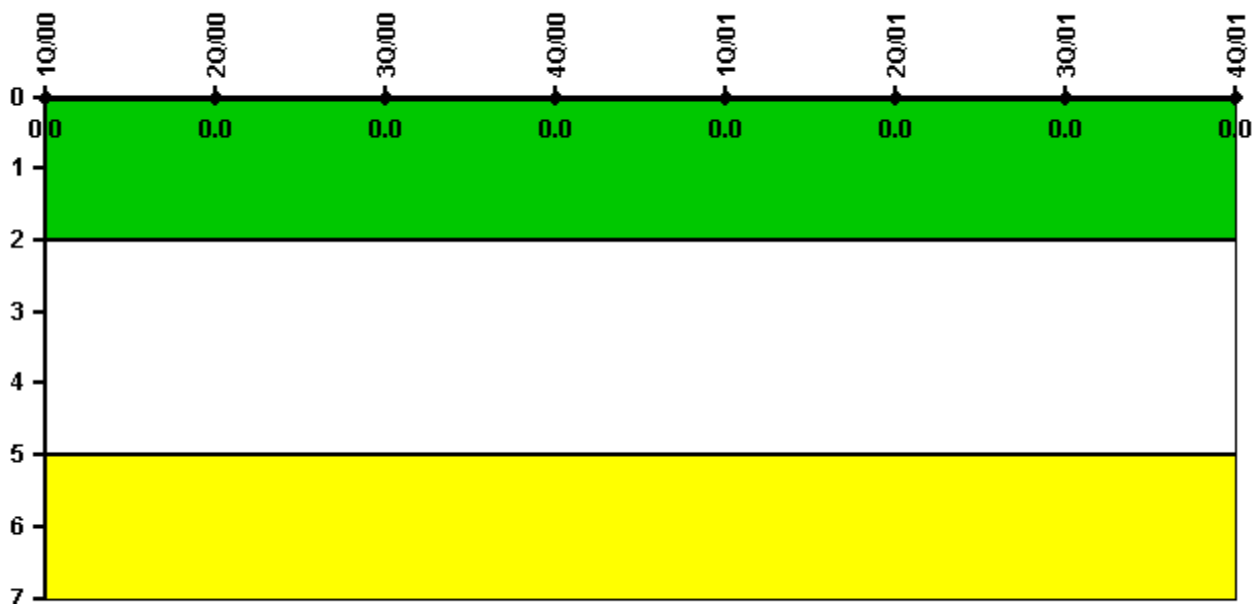
Thresholds: White > 2.0 Yellow > 5.0

Notes

| Personnel Screening Program | 1Q/00 | 2Q/00 | 3Q/00 | 4Q/00 | 1Q/01 | 2Q/01 | 3Q/01 | 4Q/01 |
|-----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| 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 | 1Q/00 | 2Q/00 | 3Q/00 | 4Q/00 | 1Q/01 | 2Q/01 | 3Q/01 | 4Q/01 |
|---------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| 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](#) | [Action Matrix Summary](#) | [Reactor Oversight Process](#)

Last Modified: March 15, 2002