

# Byron 2

## 3Q/2009 Performance Indicators

Licensee's General Comments: none

### Unplanned Scrams per 7000 Critical Hrs



Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

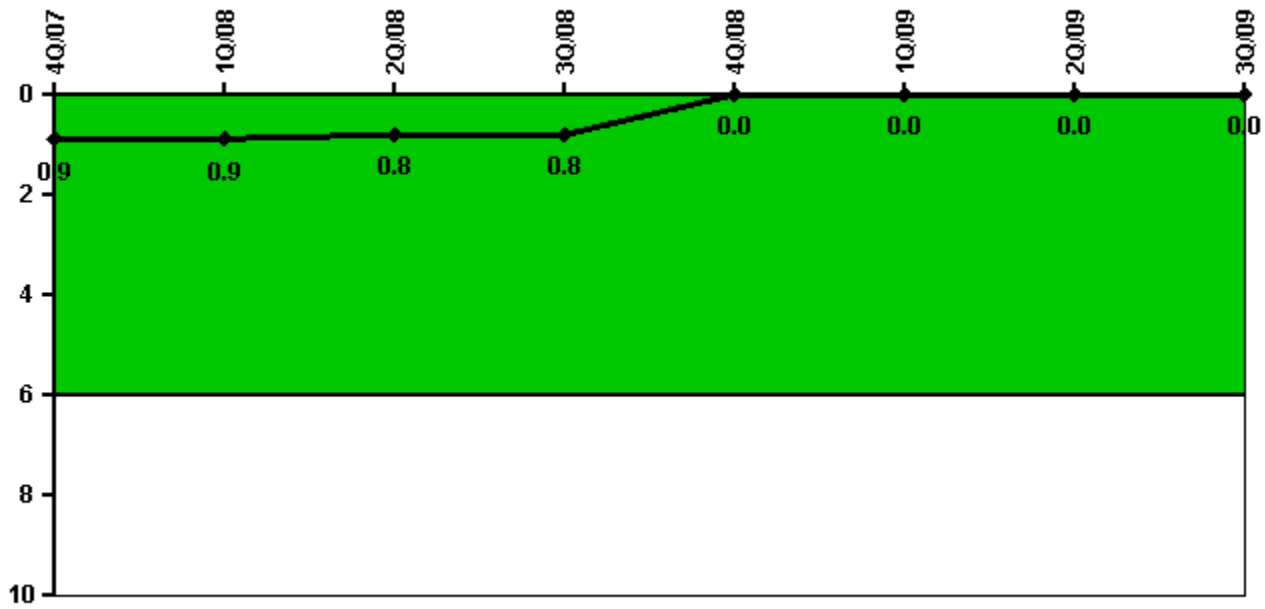
### Notes

| Unplanned Scrams per 7000 Critical Hrs | 4Q/07  | 1Q/08  | 2Q/08  | 3Q/08  | 4Q/08  | 1Q/09  | 2Q/09  | 3Q/09  |
|----------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|
| Unplanned scrams                       | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      |
| Critical hours                         | 1949.4 | 2183.0 | 2184.0 | 2208.0 | 1774.2 | 2159.0 | 2184.0 | 2208.0 |
|                                        |        |        |        |        |        |        |        |        |
| Indicator value                        | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      |

Licensee Comments: none

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## Unplanned Power Changes per 7000 Critical Hrs



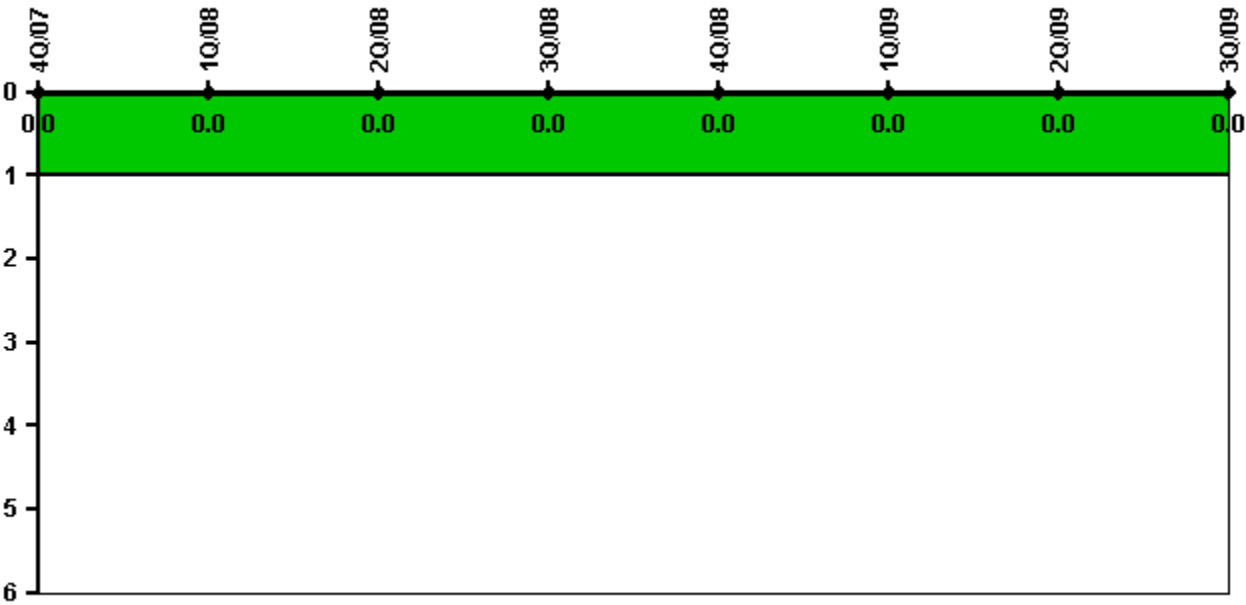
Thresholds: White > 6.0

### Notes

| Unplanned Power Changes per 7000 Critical Hrs | 4Q / 07 | 1Q / 08 | 2Q / 08 | 3Q / 08 | 4Q / 08 | 1Q / 09 | 2Q / 09 | 3Q / 09 |
|-----------------------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|
| Unplanned power changes                       | 1.0     | 0       | 0       | 0       | 0       | 0       | 0       | 0       |
| Critical hours                                | 1949.4  | 2183.0  | 2184.0  | 2208.0  | 1774.2  | 2159.0  | 2184.0  | 2208.0  |
|                                               |         |         |         |         |         |         |         |         |
| Indicator value                               | 0.9     | 0.9     | 0.8     | 0.8     | 0       | 0       | 0       | 0       |

Licensee Comments: none

Unplanned Scrams with Complications



Thresholds: White > 1.0

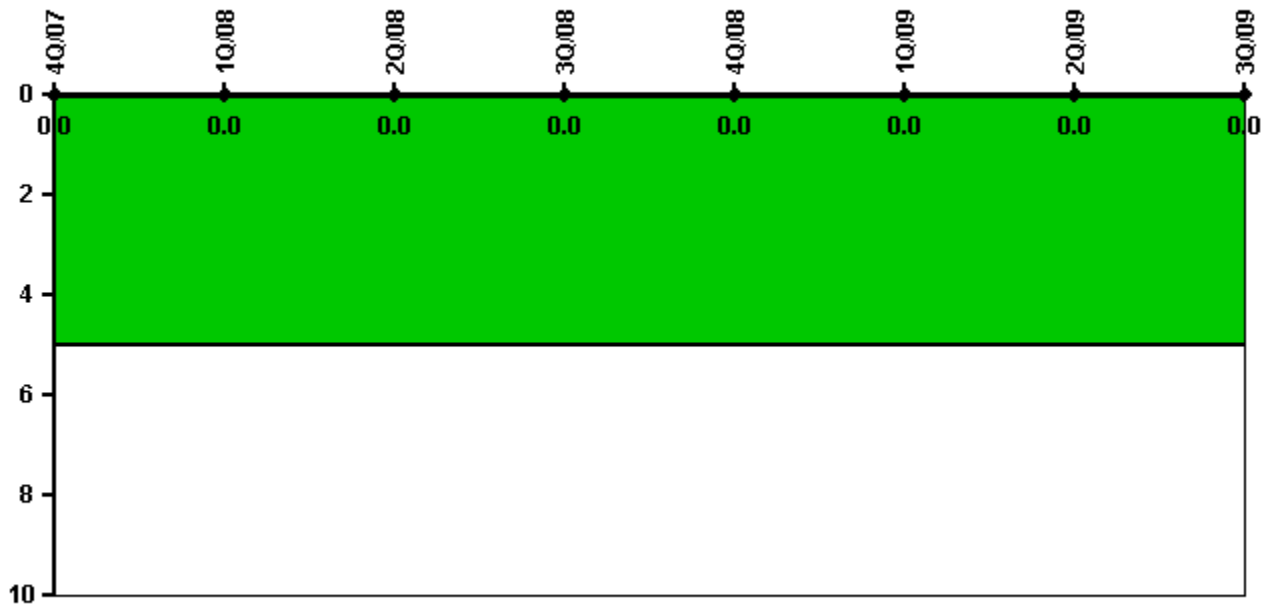
Notes

| Unplanned Scrams with Complications | 4Q / 07 | 1Q / 08 | 2Q / 08 | 3Q / 08 | 4Q / 08 | 1Q / 09 | 2Q / 09 | 3Q / 09 |
|-------------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|
| 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

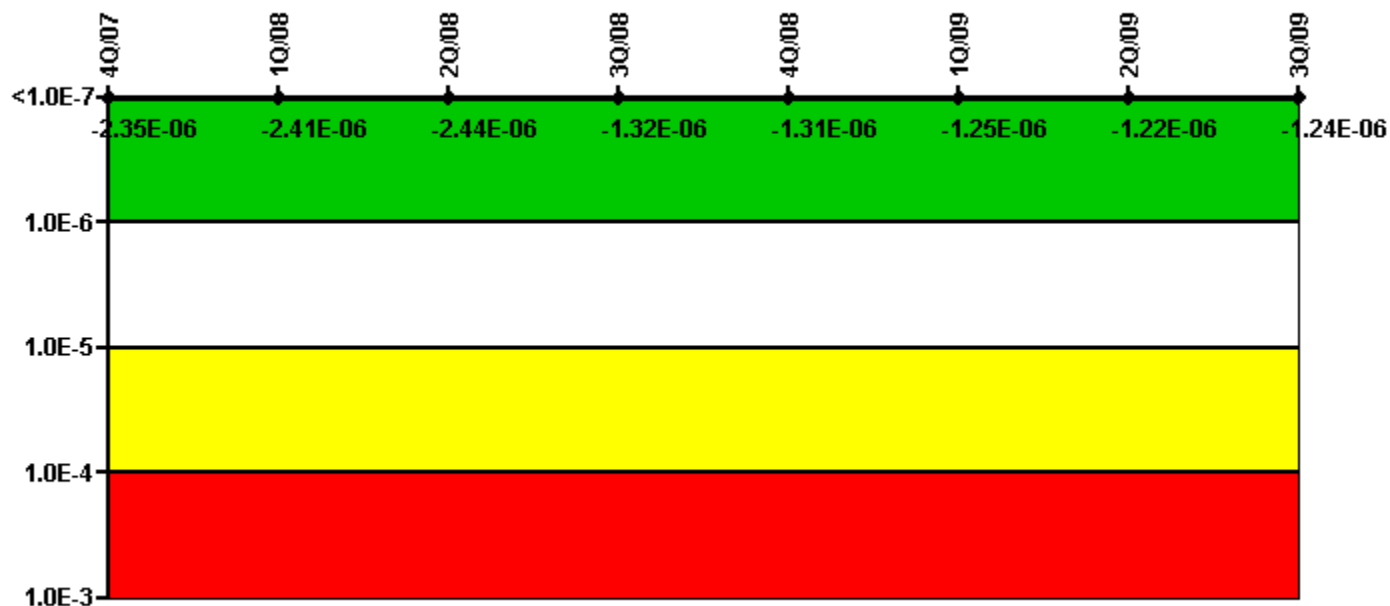
### Notes

| Safety System Functional Failures (PWR) | 4Q / 07 | 1Q / 08 | 2Q / 08 | 3Q / 08 | 4Q / 08 | 1Q / 09 | 2Q / 09 | 3Q / 09 |
|-----------------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|
| 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



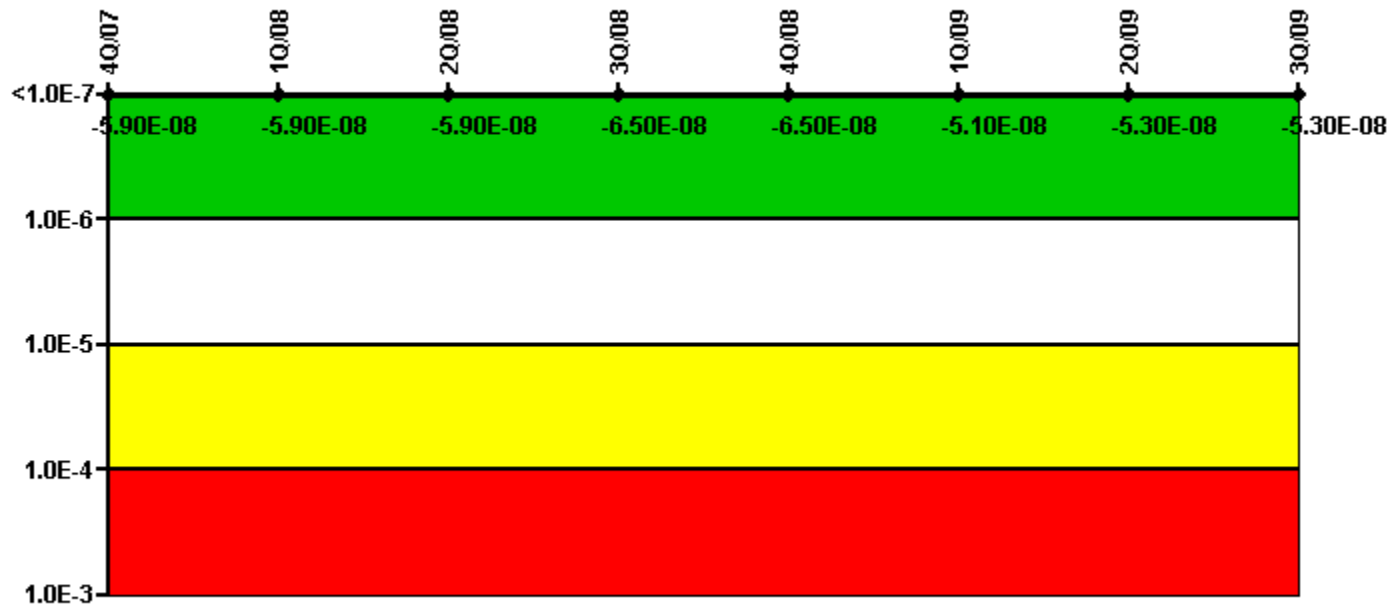
Thresholds: White > 1.00E-6 Yellow > 1.00E-5 Red > 1.00E-4

## Notes

| Mitigating Systems Performance Index, Emergency AC Power System | 4Q/07     | 1Q/08     | 2Q/08     | 3Q/08     | 4Q/08     | 1Q/09     | 2Q/09     | 3Q/09     |
|-----------------------------------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| UAI ( $\Delta$ CDF)                                             | 4.80E-08  | -9.00E-09 | -4.10E-08 | -2.10E-08 | -7.10E-09 | 5.30E-08  | 7.70E-08  | 6.50E-08  |
| URI ( $\Delta$ CDF)                                             | -2.40E-06 | -2.40E-06 | -2.40E-06 | -1.30E-06 | -1.30E-06 | -1.30E-06 | -1.30E-06 | -1.30E-06 |
| PLE                                                             | NO        | NO        | NO        | NO        | NO        | NO        | NO        | NO        |
|                                                                 |           |           |           |           |           |           |           |           |
| Indicator value                                                 | -2.35E-06 | -2.41E-06 | -2.44E-06 | -1.32E-06 | -1.31E-06 | -1.25E-06 | -1.22E-06 | -1.24E-06 |

Licensee Comments: none

# Mitigating Systems Performance Index, High Pressure Injection System



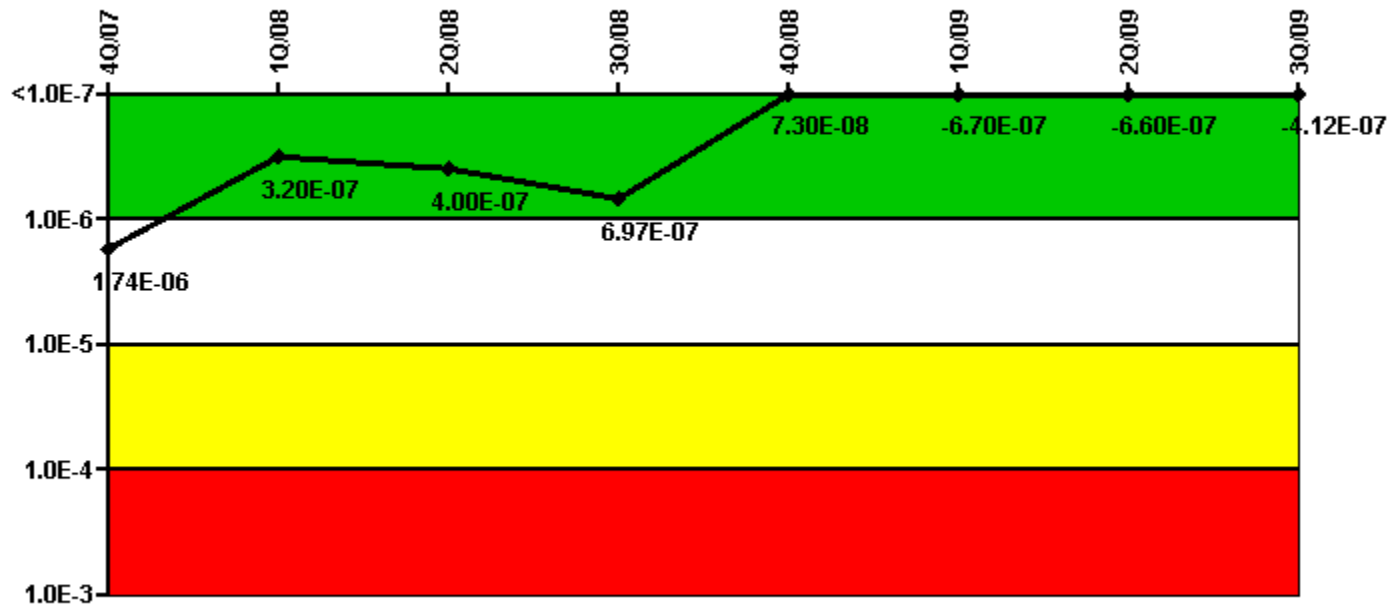
Thresholds: White > 1.00E-6 Yellow > 1.00E-5 Red > 1.00E-4

## Notes

| Mitigating Systems Performance Index, High Pressure Injection System | 4Q / 07   | 1Q / 08   | 2Q / 08   | 3Q / 08   | 4Q / 08   | 1Q / 09   | 2Q / 09   | 3Q / 09   |
|----------------------------------------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| UAI ( $\Delta$ CDF)                                                  | -4.20E-08 | -4.20E-08 | -4.20E-08 | -5.40E-08 | -5.40E-08 | -4.10E-08 | -4.30E-08 | -4.30E-08 |
| URI ( $\Delta$ CDF)                                                  | -1.70E-08 | -1.70E-08 | -1.70E-08 | -1.10E-08 | -1.10E-08 | -1.00E-08 | -1.00E-08 | -1.00E-08 |
| PLE                                                                  | NO        | NO        | NO        | NO        | NO        | NO        | NO        | NO        |
|                                                                      |           |           |           |           |           |           |           |           |
| Indicator value                                                      | -5.90E-08 | -5.90E-08 | -5.90E-08 | -6.50E-08 | -6.50E-08 | -5.10E-08 | -5.30E-08 | -5.30E-08 |

Licensee Comments: none

## Mitigating Systems Performance Index, Heat Removal System



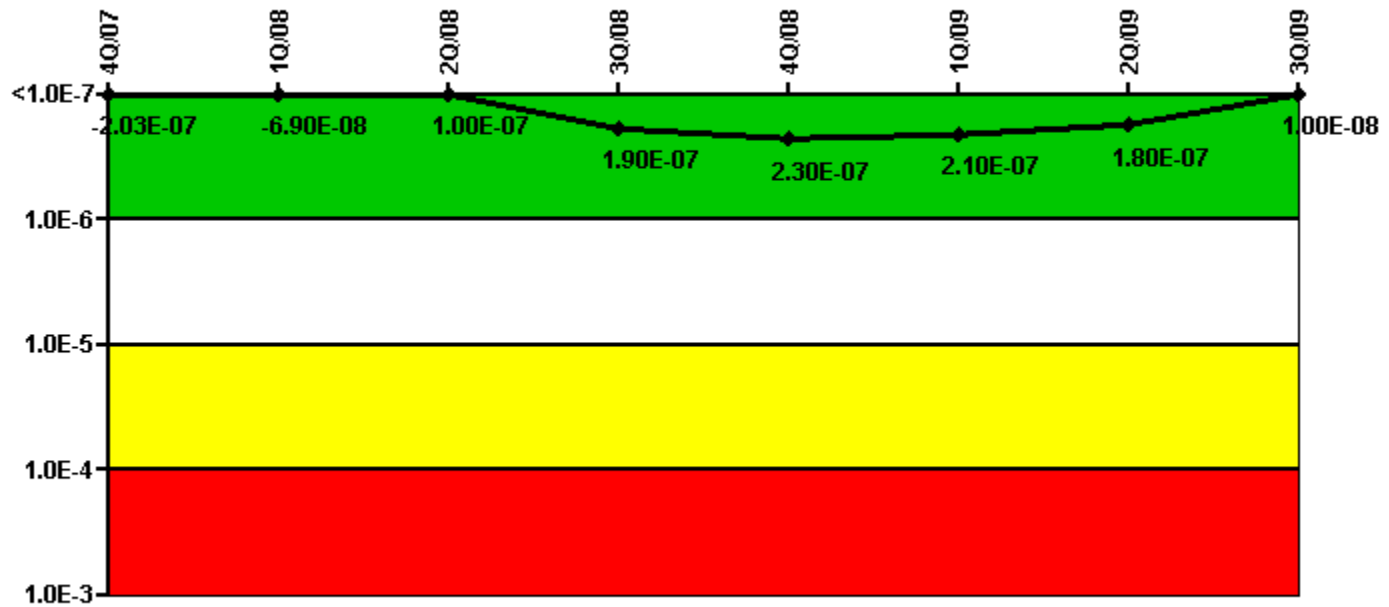
Thresholds: White > 1.00E-6 Yellow > 1.00E-5 Red > 1.00E-4

### Notes

| Mitigating Systems Performance Index, Heat Removal System | 4Q/07     | 1Q/08     | 2Q/08     | 3Q/08     | 4Q/08     | 1Q/09     | 2Q/09     | 3Q/09     |
|-----------------------------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| UAI ( $\Delta$ CDF)                                       | -1.60E-07 | -3.10E-07 | -3.10E-07 | -6.30E-08 | -6.70E-08 | -1.60E-07 | -1.60E-07 | 9.80E-08  |
| URI ( $\Delta$ CDF)                                       | 1.90E-06  | 6.30E-07  | 7.10E-07  | 7.60E-07  | 1.40E-07  | -5.10E-07 | -5.00E-07 | -5.10E-07 |
| PLE                                                       | NO        | NO        | NO        | NO        | NO        | NO        | NO        | NO        |
|                                                           |           |           |           |           |           |           |           |           |
| Indicator value                                           | 1.74E-06  | 3.20E-07  | 4.00E-07  | 6.97E-07  | 7.30E-08  | -6.70E-07 | -6.60E-07 | -4.12E-07 |

Licensee Comments: none

## Mitigating Systems Performance Index, Residual Heat Removal System



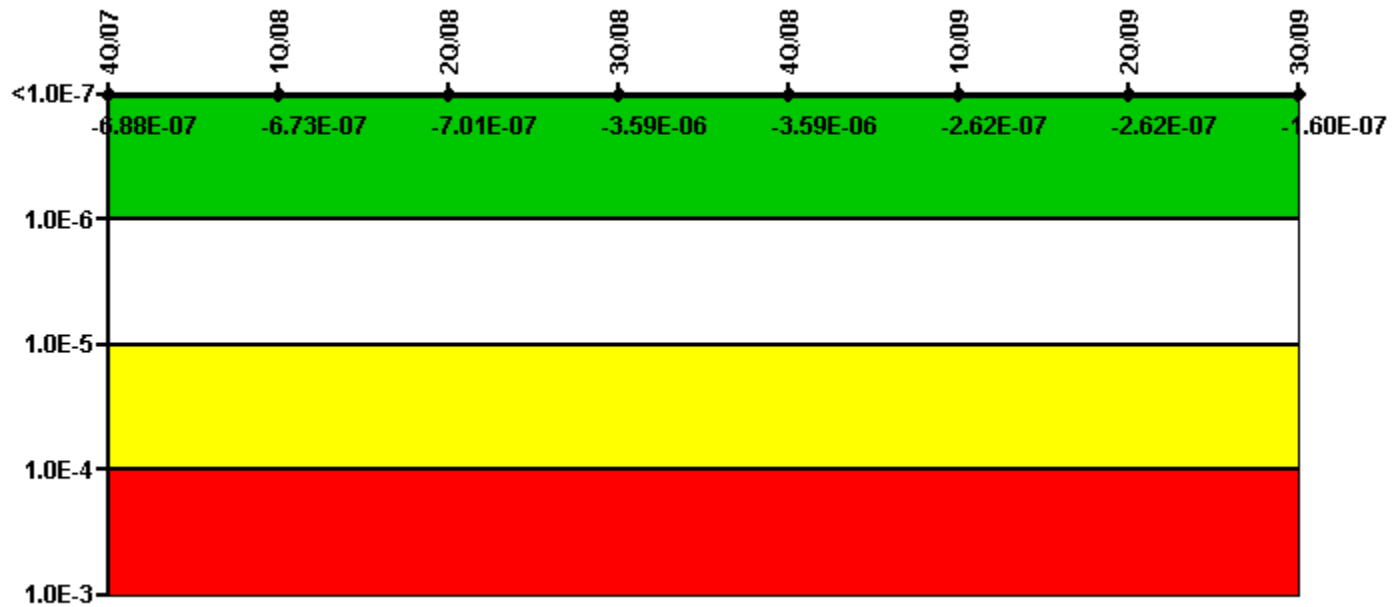
Thresholds: White > 1.00E-6 Yellow > 1.00E-5 Red > 1.00E-4

### Notes

| Mitigating Systems Performance Index, Residual Heat Removal System | 4Q/07     | 1Q/08     | 2Q/08     | 3Q/08     | 4Q/08     | 1Q/09     | 2Q/09     | 3Q/09     |
|--------------------------------------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| UAI ( $\Delta$ CDF)                                                | -4.30E-08 | 9.10E-08  | 2.60E-07  | 3.10E-07  | 3.70E-07  | 3.50E-07  | 3.20E-07  | 1.50E-07  |
| URI ( $\Delta$ CDF)                                                | -1.60E-07 | -1.60E-07 | -1.60E-07 | -1.20E-07 | -1.40E-07 | -1.40E-07 | -1.40E-07 | -1.40E-07 |
| PLE                                                                | NO        | NO        | NO        | NO        | NO        | NO        | NO        | NO        |
| Indicator value                                                    | -2.03E-07 | -6.90E-08 | 1.00E-07  | 1.90E-07  | 2.30E-07  | 2.10E-07  | 1.80E-07  | 1.00E-08  |

Licensee Comments: none

# Mitigating Systems Performance Index, Cooling Water Systems



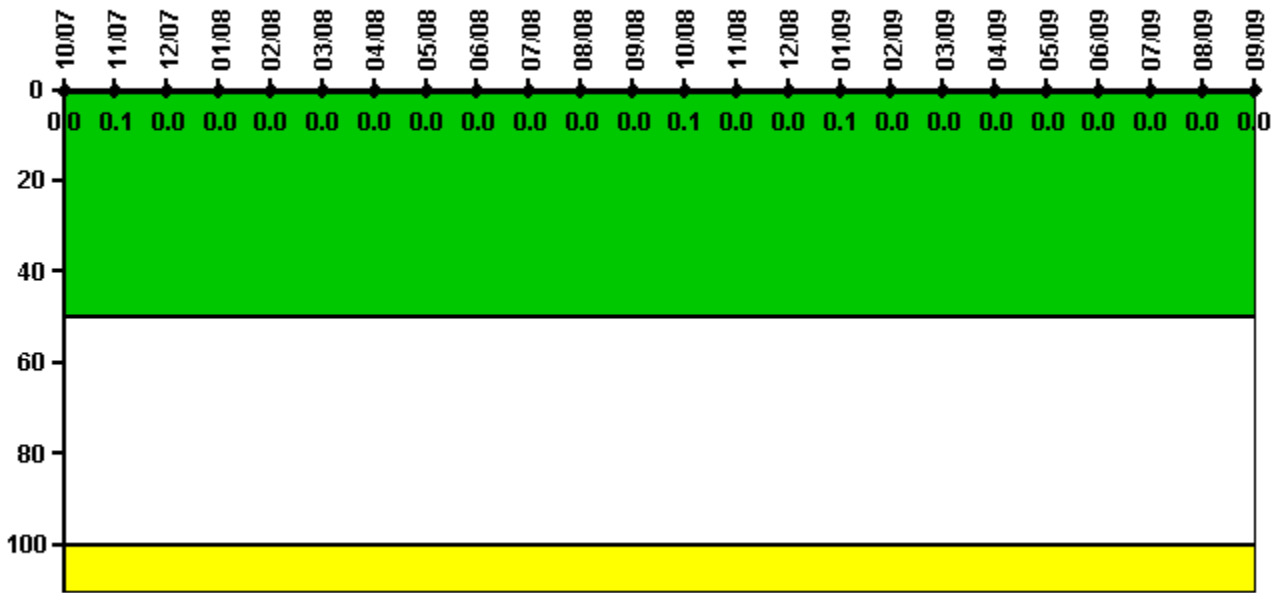
Thresholds: White > 1.00E-6 Yellow > 1.00E-5 Red > 1.00E-4

## Notes

| Mitigating Systems Performance Index, Cooling Water Systems | 4Q / 07   | 1Q / 08   | 2Q / 08   | 3Q / 08   | 4Q / 08   | 1Q / 09   | 2Q / 09   | 3Q / 09   |
|-------------------------------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| UAI (ΔCDF)                                                  | 2.20E-08  | 3.70E-08  | 9.10E-09  | 7.90E-09  | 8.00E-09  | 7.80E-09  | 7.80E-09  | 1.10E-07  |
| URI (ΔCDF)                                                  | -7.10E-07 | -7.10E-07 | -7.10E-07 | -3.60E-06 | -3.60E-06 | -2.70E-07 | -2.70E-07 | -2.70E-07 |
| PLE                                                         | NO        | NO        | NO        | NO        | NO        | NO        | NO        | NO        |
|                                                             |           |           |           |           |           |           |           |           |
| Indicator value                                             | -6.88E-07 | -6.73E-07 | -7.01E-07 | -3.59E-06 | -3.59E-06 | -2.62E-07 | -2.62E-07 | -1.60E-07 |

Licensee Comments: none

## Reactor Coolant System Activity



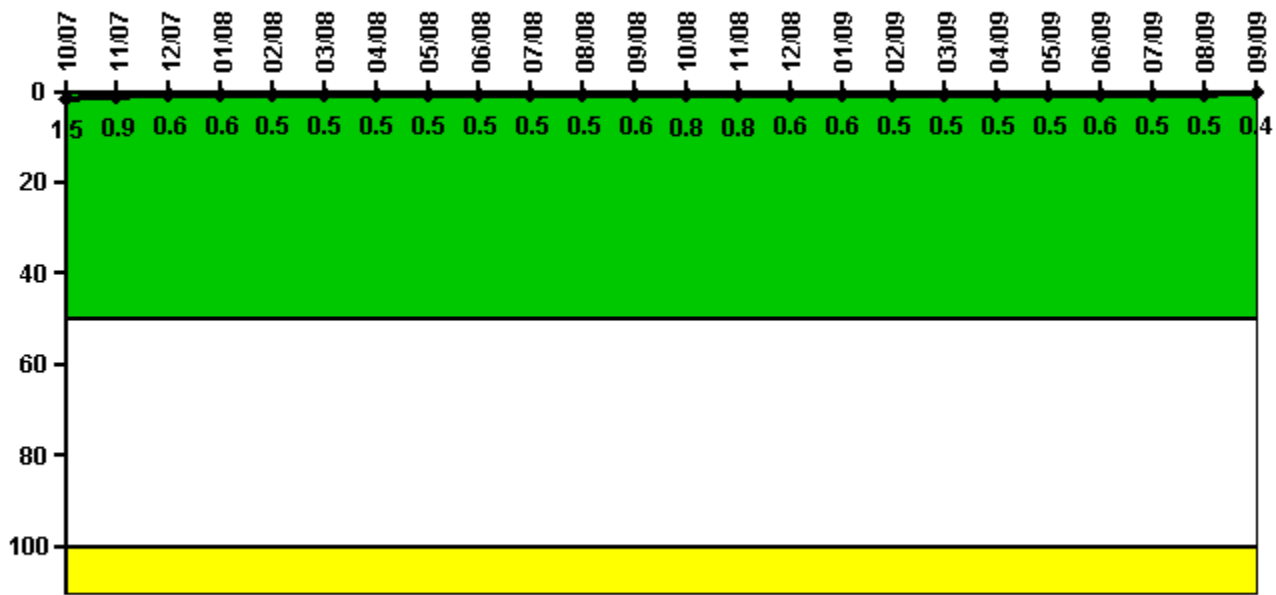
Thresholds: White > 50.0 Yellow > 100.0

### Notes

| Reactor Coolant System Activity | 10 / 07  | 11 / 07  | 12 / 07  | 1 / 08   | 2 / 08   | 3 / 08   | 4 / 08   | 5 / 08   | 6 / 08   | 7 / 08   | 8 / 08   | 9 / 08   |
|---------------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Maximum activity                | 0.000315 | 0.000618 | 0.000339 | 0.000352 | 0.000370 | 0.000381 | 0.000383 | 0.000383 | 0.000399 | 0.000405 | 0.000405 | 0.000419 |
| 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        | 0.1      | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| Reactor Coolant System Activity | 10 / 08  | 11 / 08  | 12 / 08  | 1 / 09   | 2 / 09   | 3 / 09   | 4 / 09   | 5 / 09   | 6 / 09   | 7 / 09   | 8 / 09   | 9 / 09   |
| Maximum activity                | 0.000635 | 0.000373 | 0.000315 | 0.000558 | 0.000334 | 0.000343 | 0.000347 | 0.000369 | 0.000385 | 0.000406 | 0.000420 | 0.000443 |
| 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        | 0        | 0.1      | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |

Licensee Comments: none

## Reactor Coolant System Leakage



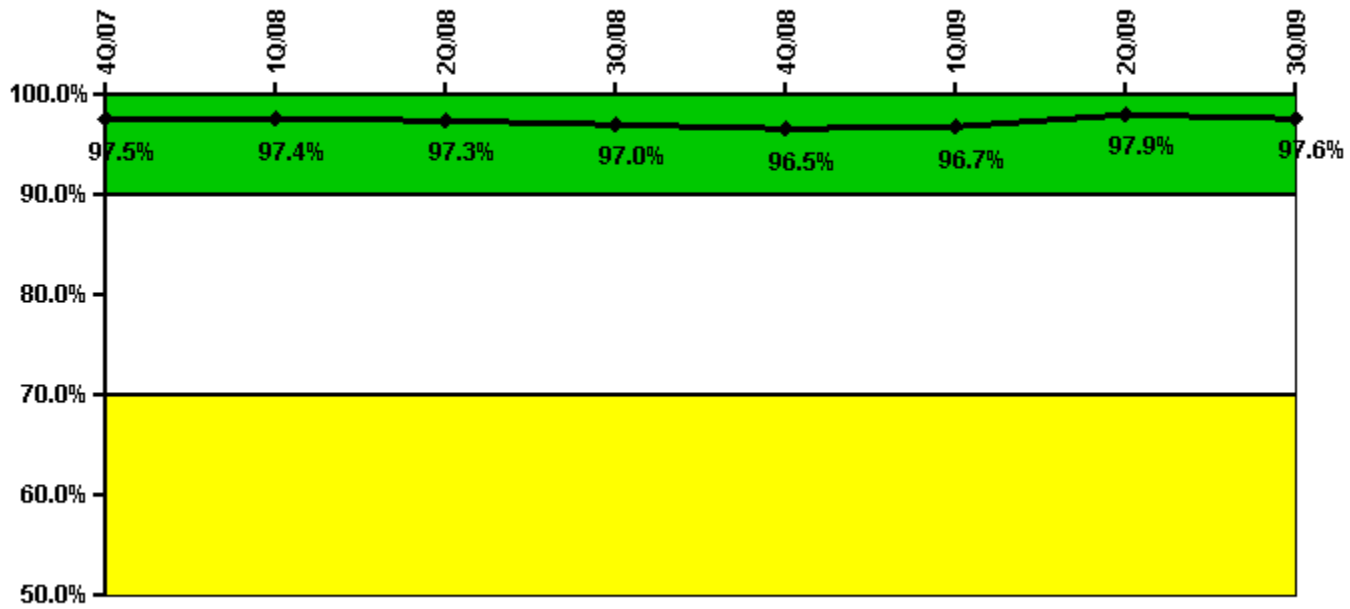
Thresholds: White > 50.0 Yellow > 100.0

### Notes

| Reactor Coolant System Leakage | 10 / 07 | 11 / 07 | 12 / 07 | 1 / 08 | 2 / 08 | 3 / 08 | 4 / 08 | 5 / 08 | 6 / 08 | 7 / 08 | 8 / 08 | 9 / 08 |
|--------------------------------|---------|---------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Maximum leakage                | 0.153   | 0.088   | 0.060   | 0.061  | 0.054  | 0.050  | 0.049  | 0.046  | 0.047  | 0.047  | 0.054  | 0.058  |
| 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                | 1.5     | 0.9     | 0.6     | 0.6    | 0.5    | 0.5    | 0.5    | 0.5    | 0.5    | 0.5    | 0.5    | 0.6    |
| Reactor Coolant System Leakage | 10 / 08 | 11 / 08 | 12 / 08 | 1 / 09 | 2 / 09 | 3 / 09 | 4 / 09 | 5 / 09 | 6 / 09 | 7 / 09 | 8 / 09 | 9 / 09 |
| Maximum leakage                | 0.078   | 0.076   | 0.059   | 0.062  | 0.052  | 0.046  | 0.051  | 0.048  | 0.055  | 0.048  | 0.047  | 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                | 0.8     | 0.8     | 0.6     | 0.6    | 0.5    | 0.5    | 0.5    | 0.5    | 0.6    | 0.5    | 0.5    | 0.4    |

Licensee Comments: none

## Drill/Exercise Performance



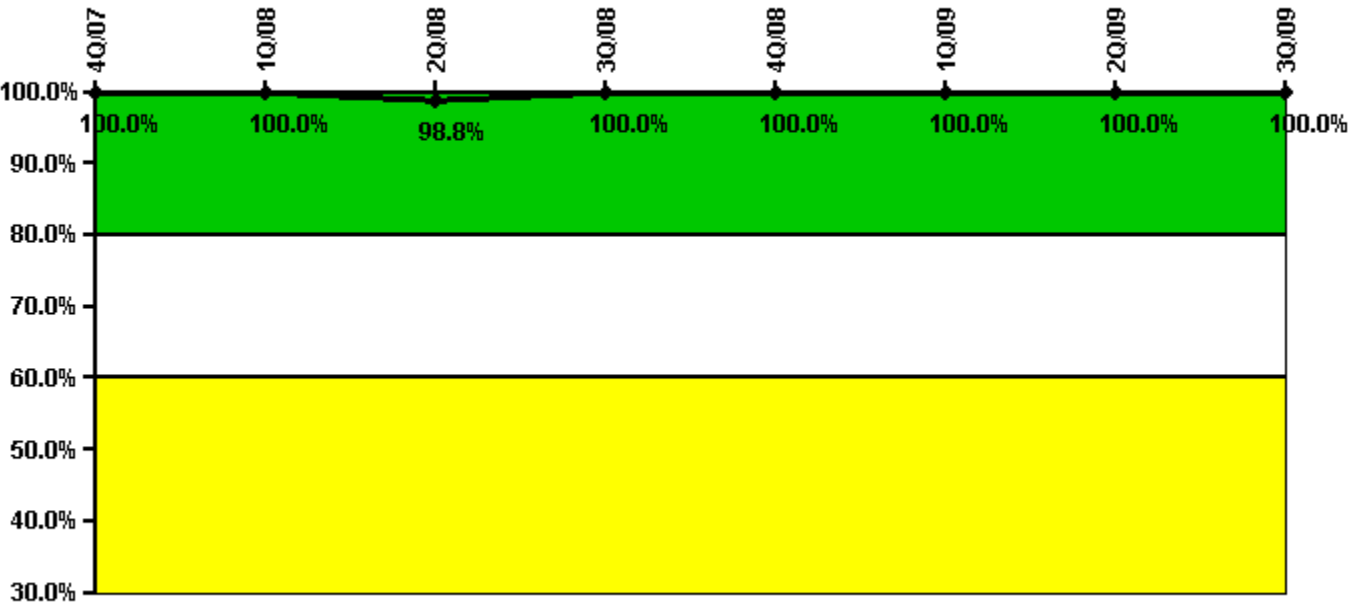
Thresholds: White < 90.0% Yellow < 70.0%

### Notes

| Drill/Exercise Performance | 4Q / 07 | 1Q / 08 | 2Q / 08 | 3Q / 08 | 4Q / 08 | 1Q / 09 | 2Q / 09 | 3Q / 09 |
|----------------------------|---------|---------|---------|---------|---------|---------|---------|---------|
| Successful opportunities   | 88.0    | 4.0     | 27.0    | 62.0    | 53.0    | 30.0    | 62.0    | 40.0    |
| Total opportunities        | 90.0    | 4.0     | 28.0    | 64.0    | 55.0    | 30.0    | 62.0    | 42.0    |
|                            |         |         |         |         |         |         |         |         |
| Indicator value            | 97.5 %  | 97.4 %  | 97.3 %  | 97.0 %  | 96.5 %  | 96.7 %  | 97.9 %  | 97.6 %  |

Licensee Comments: none

ERO Drill Participation



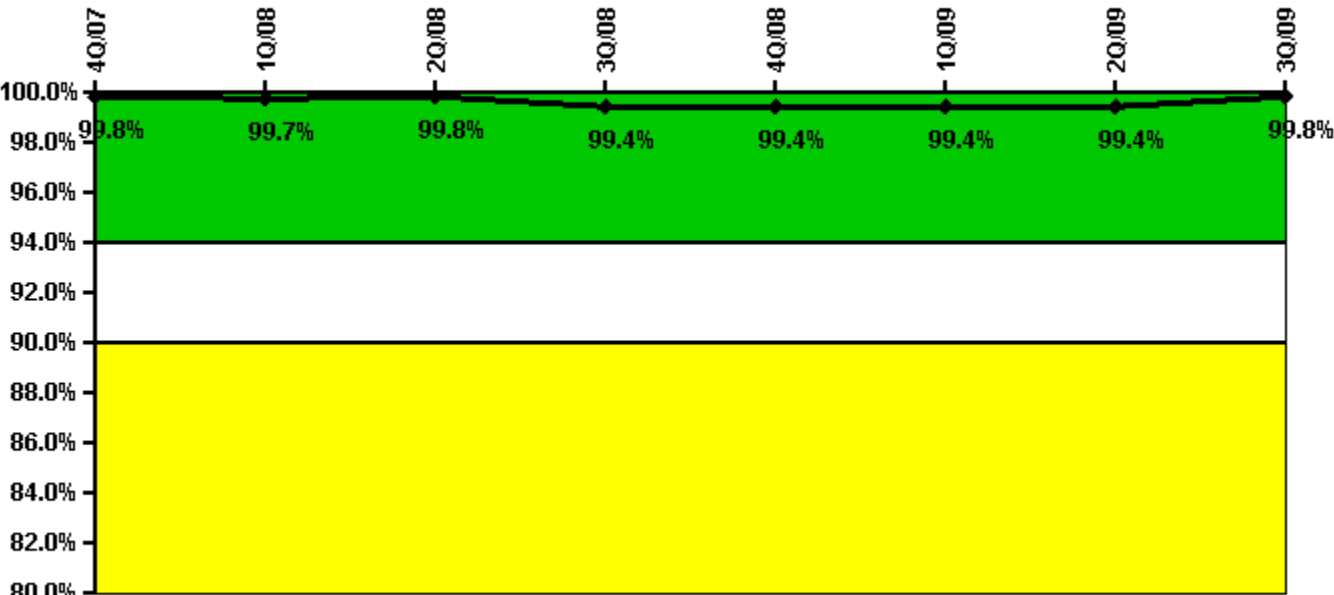
Thresholds: White < 80.0% Yellow < 60.0%

Notes

|                             |         |         |        |         |         |         |         |         |
|-----------------------------|---------|---------|--------|---------|---------|---------|---------|---------|
| ERO Drill Participation     | 4Q/07   | 1Q/08   | 2Q/08  | 3Q/08   | 4Q/08   | 1Q/09   | 2Q/09   | 3Q/09   |
| Participating Key personnel | 75.0    | 74.0    | 80.0   | 83.0    | 82.0    | 78.0    | 77.0    | 76.0    |
| Total Key personnel         | 75.0    | 74.0    | 81.0   | 83.0    | 82.0    | 78.0    | 77.0    | 76.0    |
|                             |         |         |        |         |         |         |         |         |
| Indicator value             | 100.0 % | 100.0 % | 98.8 % | 100.0 % | 100.0 % | 100.0 % | 100.0 % | 100.0 % |

Licensee Comments: none

Alert & Notification System



Thresholds: White < 94.0% Yellow < 90.0%

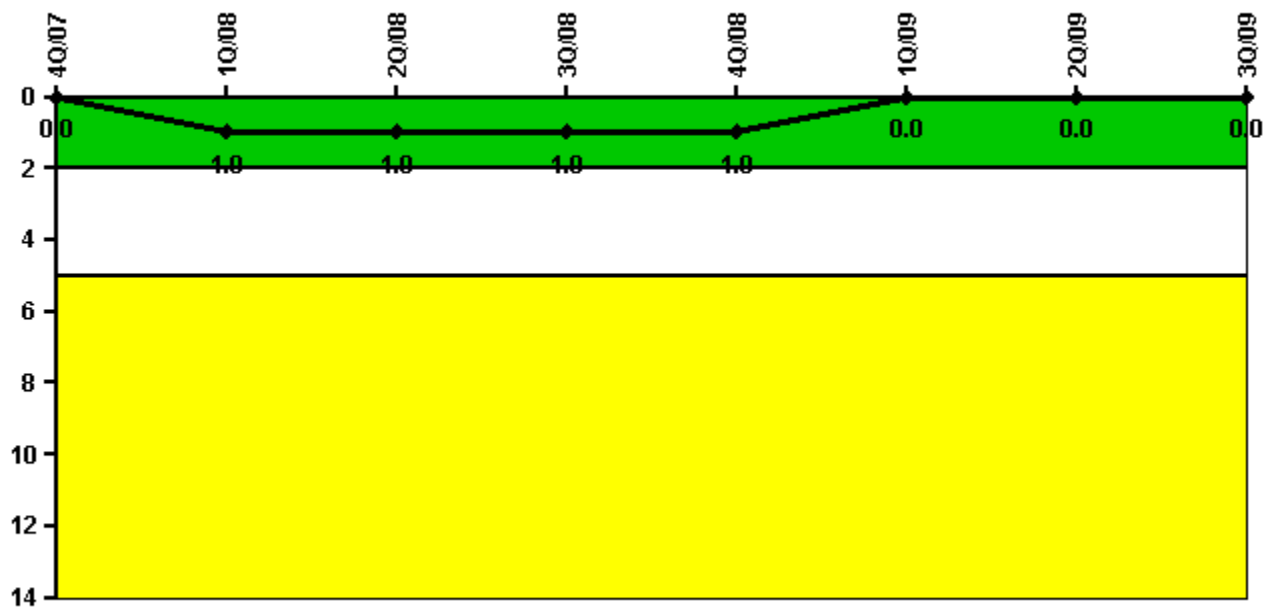
Notes

| Alert & Notification System | 4Q / 07 | 1Q / 08 | 2Q / 08 | 3Q / 08 | 4Q / 08 | 1Q / 09 | 2Q / 09 | 3Q / 09 |
|-----------------------------|---------|---------|---------|---------|---------|---------|---------|---------|
| Successful siren-tests      | 5997    | 5996    | 6003    | 6006    | 5995    | 5915    | 6006    | 6106    |
| Total sirens-tests          | 6007    | 6011    | 6016    | 6108    | 6016    | 5922    | 6016    | 6110    |
|                             |         |         |         |         |         |         |         |         |
| Indicator value             | 99.8 %  | 99.7 %  | 99.8 %  | 99.4 %  | 99.4 %  | 99.4 %  | 99.4 %  | 99.8 %  |

Licensee Comments: none

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## Occupational Exposure Control Effectiveness



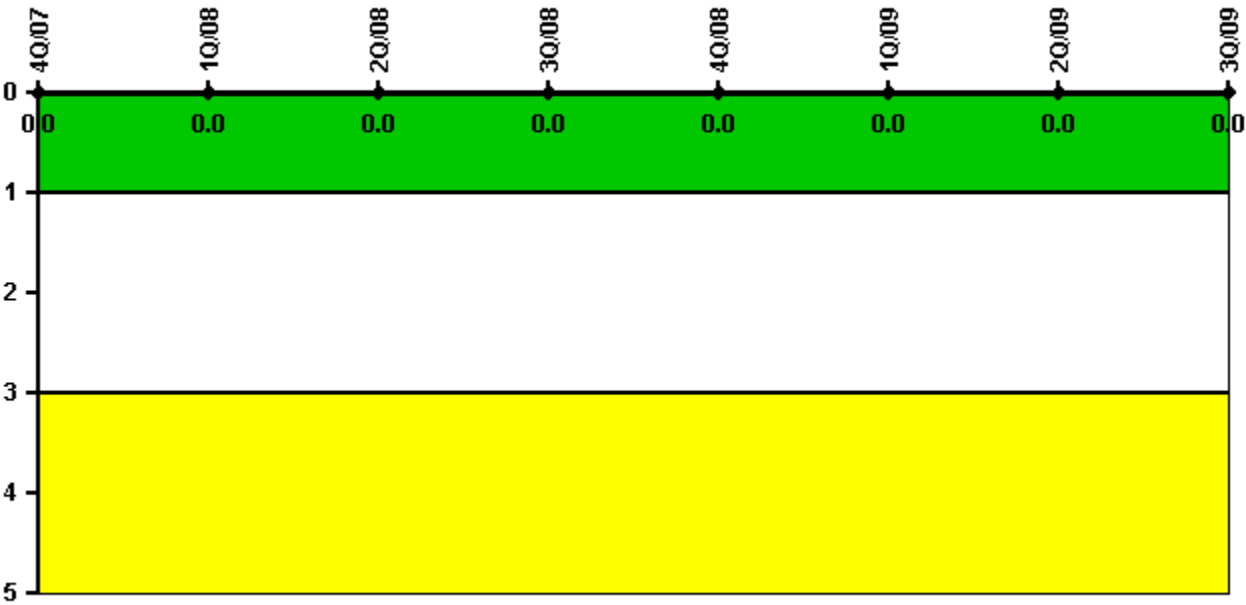
Thresholds: White > 2.0 Yellow > 5.0

### Notes

| Occupational Exposure Control Effectiveness | 4Q / 07 | 1Q / 08 | 2Q / 08 | 3Q / 08 | 4Q / 08 | 1Q / 09 | 2Q / 09 | 3Q / 09 |
|---------------------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|
| High radiation area occurrences             | 0       | 1       | 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                             | 0       | 1       | 1       | 1       | 1       | 0       | 0       | 0       |

Licensee Comments: none

RETS/ODCM Radiological Effluent



Thresholds: White > 1.0 Yellow > 3.0

Notes

| RETS/ODCM Radiological Effluent | 4Q / 07 | 1Q / 08 | 2Q / 08 | 3Q / 08 | 4Q / 08 | 1Q / 09 | 2Q / 09 | 3Q / 09 |
|---------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|
| 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.