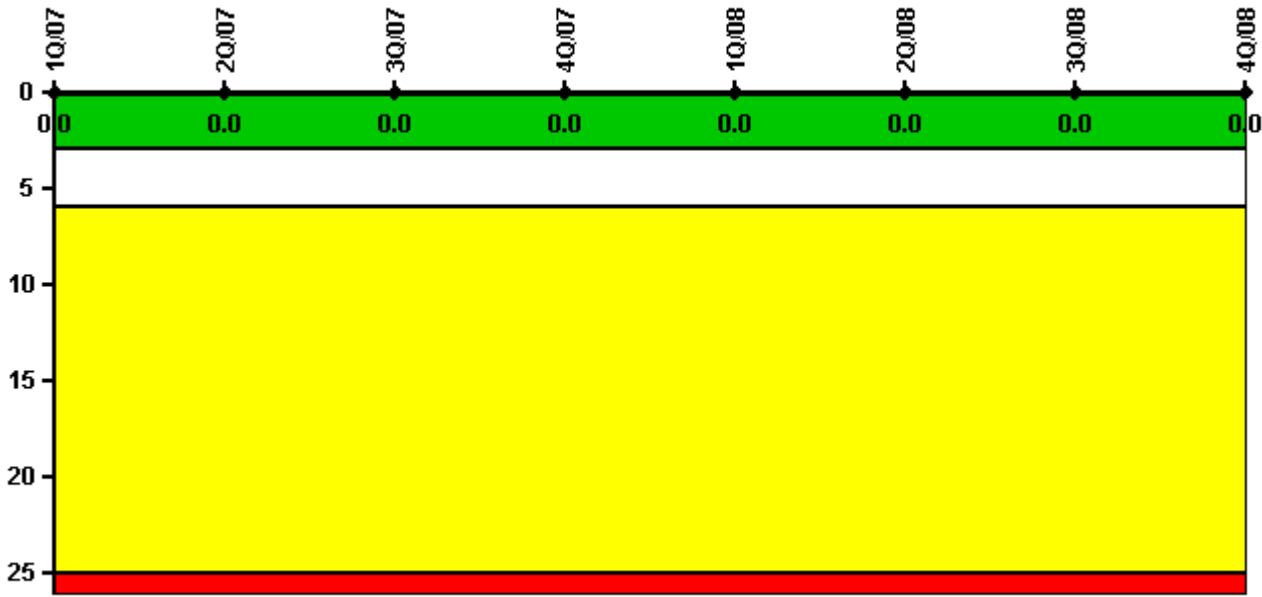


# Byron 1

## 4Q/2008 Performance Indicators

Licensee's General Comments: none

### Unplanned Scrams per 7000 Critical Hrs



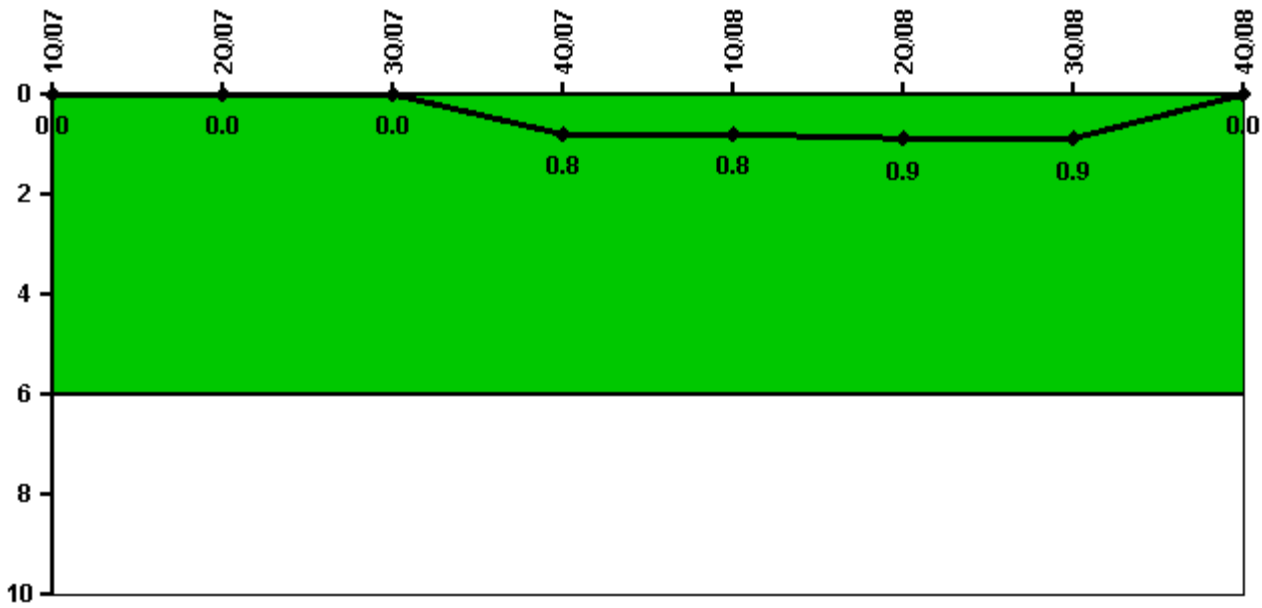
Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

### Notes

Unplanned Scrams per 7000 Critical Hrs	1Q/07	2Q/07	3Q/07	4Q/07	1Q/08	2Q/08	3Q/08	4Q/08
Unplanned scrams	0	0	0	0	0	0	0	0
Critical hours	2159.0	2184.0	2208.0	1944.2	1990.0	1868.7	2208.0	2209.0
Indicator value	0	0	0	0	0	0	0	0

Licensee Comments: none

## Unplanned Power Changes per 7000 Critical Hrs



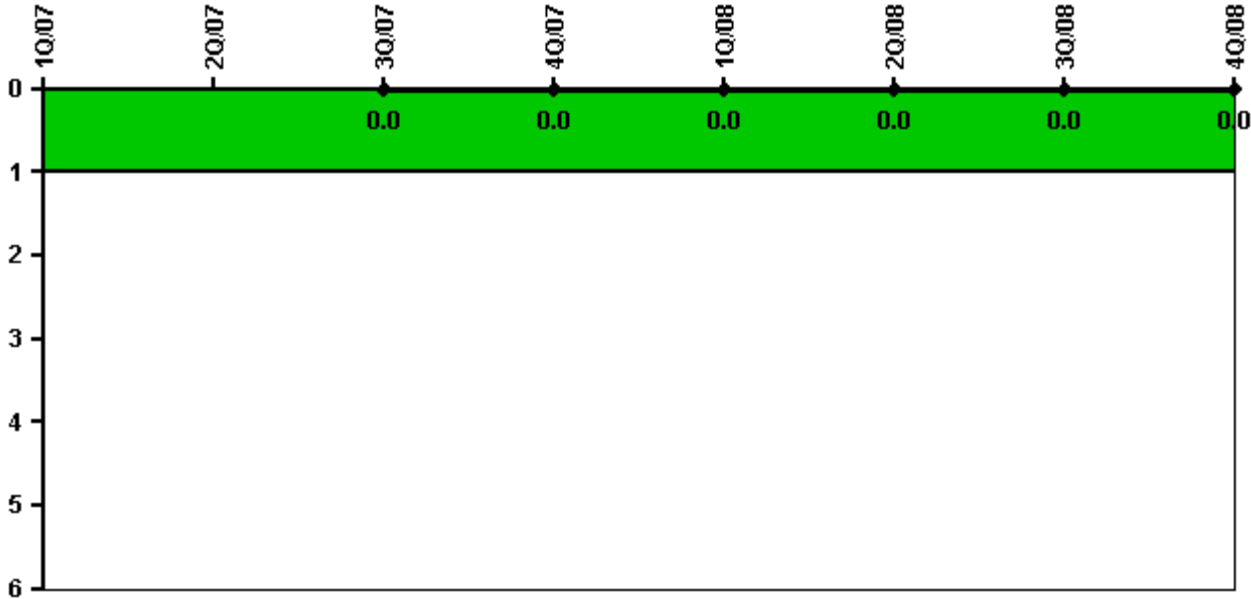
Thresholds: White > 6.0

### Notes

Unplanned Power Changes per 7000 Critical Hrs	1Q/07	2Q/07	3Q/07	4Q/07	1Q/08	2Q/08	3Q/08	4Q/08
Unplanned power changes	0	0	0	1.0	0	0	0	0
Critical hours	2159.0	2184.0	2208.0	1944.2	1990.0	1868.7	2208.0	2209.0
Indicator value	0	0	0	0.8	0.8	0.9	0.9	0

Licensee Comments: none

# Unplanned Scrams with Complications



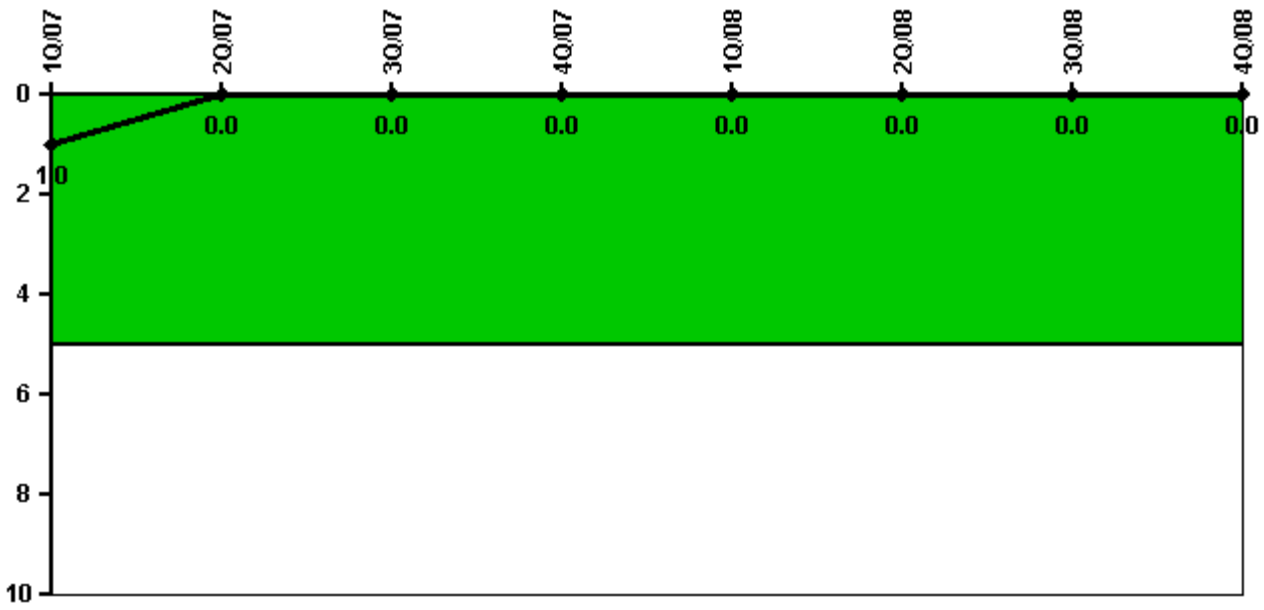
Thresholds: White > 1.0

**Notes**

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

Licensee Comments: none

## Safety System Functional Failures (PWR)



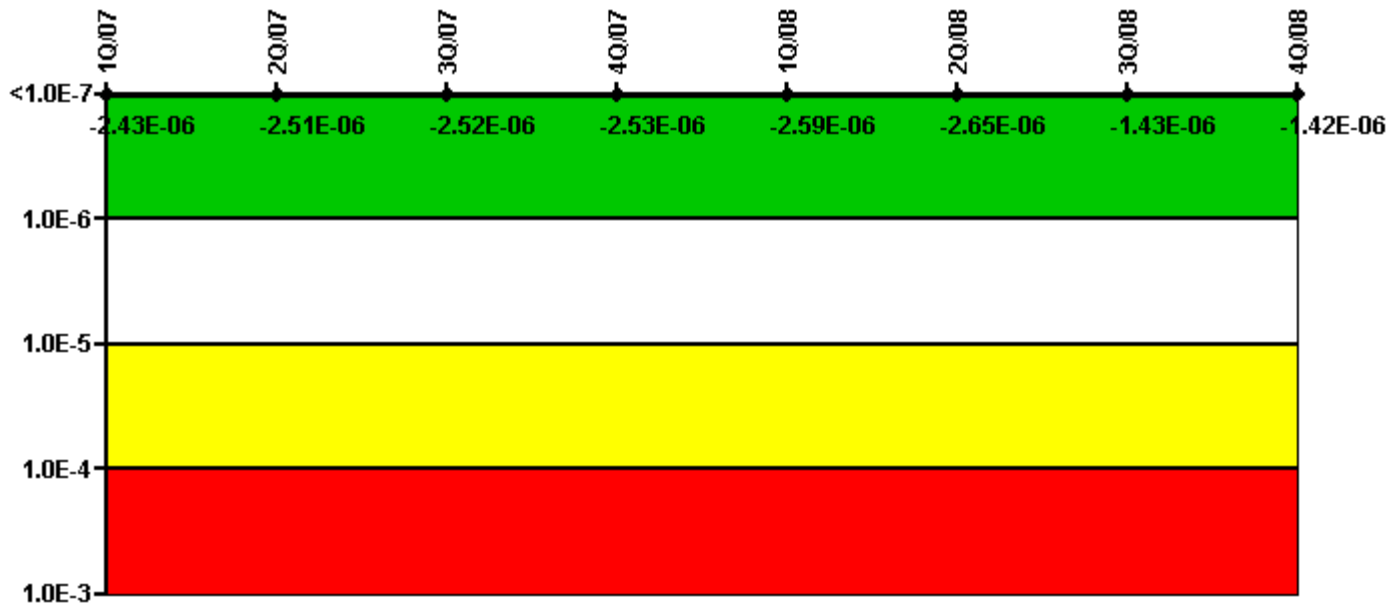
Thresholds: White > 5.0

### Notes

Safety System Functional Failures (PWR)	1Q/07	2Q/07	3Q/07	4Q/07	1Q/08	2Q/08	3Q/08	4Q/08
Safety System Functional Failures	0	0	0	0	0	0	0	0
Indicator value	1	0	0	0	0	0	0	0

Licensee Comments: none

# Mitigating Systems Performance Index, Emergency AC Power System



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

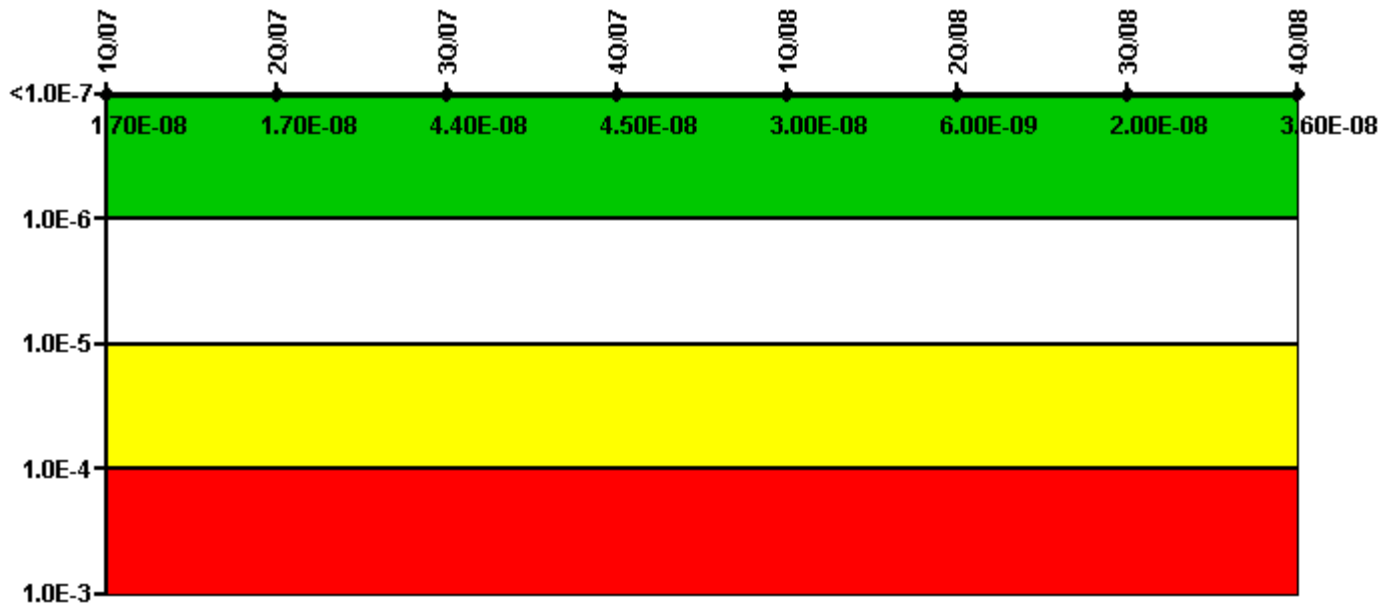
## Notes

Mitigating Systems Performance Index, Emergency AC Power System	1Q/07	2Q/07	3Q/07	4Q/07	1Q/08	2Q/08	3Q/08	4Q/08
UAI ( $\Delta$ CDF)	7.30E-08	8.90E-08	7.80E-08	7.50E-08	8.30E-09	-4.50E-08	-2.90E-08	-1.90E-08
URI ( $\Delta$ CDF)	-2.50E-06	-2.60E-06	-2.60E-06	-2.60E-06	-2.60E-06	-2.60E-06	-1.40E-06	-1.40E-06
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-2.43E-06	-2.51E-06	-2.52E-06	-2.53E-06	-2.59E-06	-2.65E-06	-1.43E-06	-1.42E-06

Licensee Comments:

4Q/08: Changed PRA Parameter(s).

# Mitigating Systems Performance Index, High Pressure Injection System



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

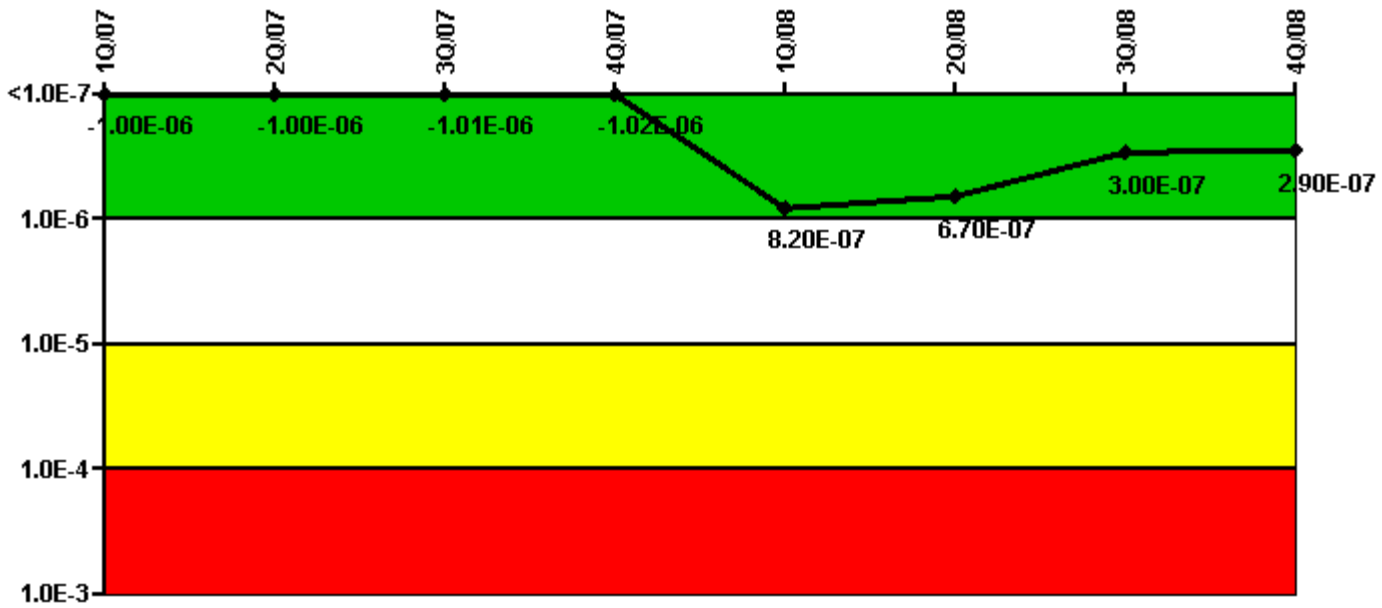
## Notes

Mitigating Systems Performance Index, High Pressure Injection System	1Q/07	2Q/07	3Q/07	4Q/07	1Q/08	2Q/08	3Q/08	4Q/08
UAI ( $\Delta$ CDF)	3.10E-08	3.10E-08	5.80E-08	5.90E-08	4.40E-08	2.00E-08	4.20E-08	5.80E-08
URI ( $\Delta$ CDF)	-1.40E-08	-1.40E-08	-1.40E-08	-1.40E-08	-1.40E-08	-1.40E-08	-2.20E-08	-2.20E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	1.70E-08	1.70E-08	4.40E-08	4.50E-08	3.00E-08	6.00E-09	2.00E-08	3.60E-08

Licensee Comments:

4Q/08: Changed PRA Parameter(s).

# Mitigating Systems Performance Index, Heat Removal System



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

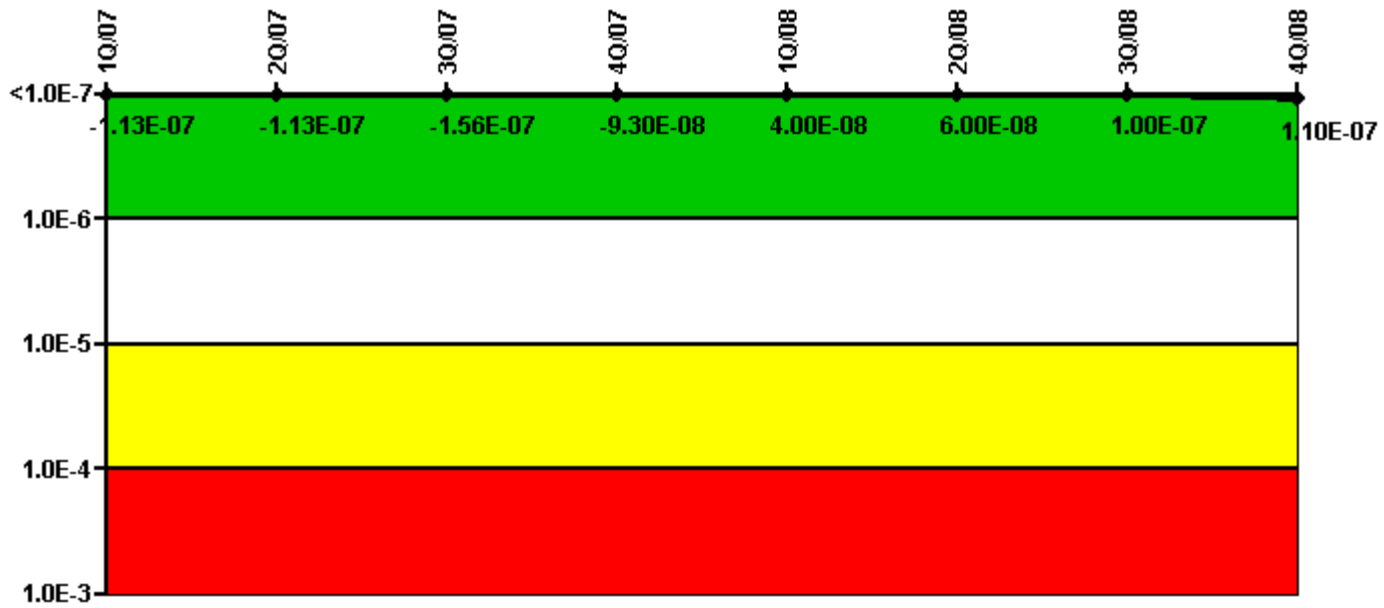
## Notes

Mitigating Systems Performance Index, Heat Removal System	1Q/07	2Q/07	3Q/07	4Q/07	1Q/08	2Q/08	3Q/08	4Q/08
UAI ( $\Delta$ CDF)	1.00E-07	9.70E-08	8.80E-08	8.50E-08	3.20E-07	3.60E-07	1.30E-07	1.20E-07
URI ( $\Delta$ CDF)	-1.10E-06	-1.10E-06	-1.10E-06	-1.10E-06	5.00E-07	3.10E-07	1.70E-07	1.70E-07
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-1.00E-06	-1.00E-06	-1.01E-06	-1.02E-06	8.20E-07	6.70E-07	3.00E-07	2.90E-07

Licensee Comments:

4Q/08: Changed PRA Parameter(s).

# Mitigating Systems Performance Index, Residual Heat Removal System



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

## Notes

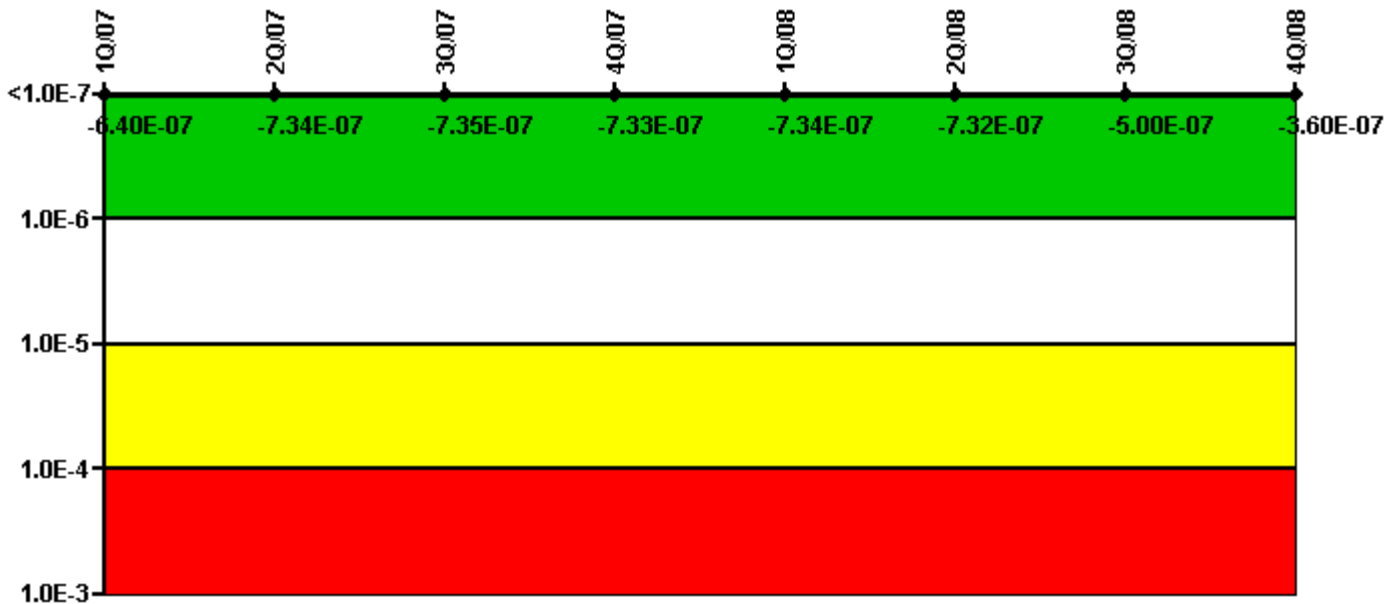
Mitigating Systems Performance Index, Residual Heat Removal System	1Q/07	2Q/07	3Q/07	4Q/07	1Q/08	2Q/08	3Q/08	4Q/08
UAI ( $\Delta$ CDF)	1.70E-08	1.70E-08	-2.60E-08	4.70E-08	1.60E-07	2.00E-07	2.50E-07	2.50E-07
URI ( $\Delta$ CDF)	-1.30E-07	-1.30E-07	-1.30E-07	-1.40E-07	-1.20E-07	-1.40E-07	-1.50E-07	-1.40E-07
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-1.13E-07	-1.13E-07	-1.56E-07	-9.30E-08	4.00E-08	6.00E-08	1.00E-07	1.10E-07

Licensee Comments:

4Q/08: Changed PRA Parameter(s).



# 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/07	2Q/07	3Q/07	4Q/07	1Q/08	2Q/08	3Q/08	4Q/08
UAI ( $\Delta$ CDF)	1.10E-07	2.60E-08	1.50E-08	1.70E-08	1.60E-08	1.80E-08	2.00E-08	1.70E-07
URI ( $\Delta$ CDF)	-7.50E-07	-7.60E-07	-7.50E-07	-7.50E-07	-7.50E-07	-7.50E-07	-5.20E-07	-5.30E-07
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-6.40E-07	-7.34E-07	-7.35E-07	-7.33E-07	-7.34E-07	-7.32E-07	-5.00E-07	-3.60E-07

Licensee Comments:

4Q/08: Changed PRA Parameter(s). Corrected erroneous FV and URPC values for CC and SX from last PRA Model Update (Ref. IR 841513) Also, corrected Runtime error for 1SX01PB in March 08. (Ref. IR # 854124)

3Q/08: Changed PRA Parameter(s).

2Q/08: Changed PRA Parameter(s).

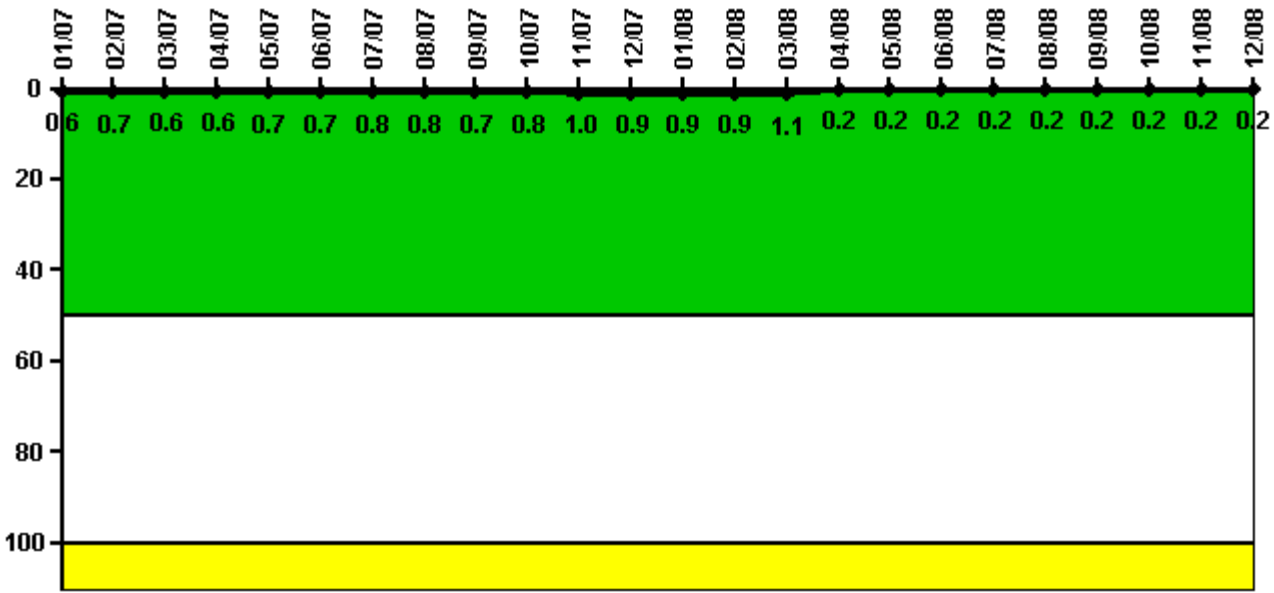
1Q/08: Changed PRA Parameter(s).

4Q/07: Changed PRA Parameter(s).

3Q/07: Changed PRA Parameter(s).

2Q/06: Corrected erroneous FV and URPC values for CC and SX from last PRA Model Update (Ref. IR 841513) Also, corrected Runtime error for 1SX01PB in March 08. (Ref. IR # 854124)

## Reactor Coolant System Activity



Thresholds: White > 50.0 Yellow > 100.0

### Notes

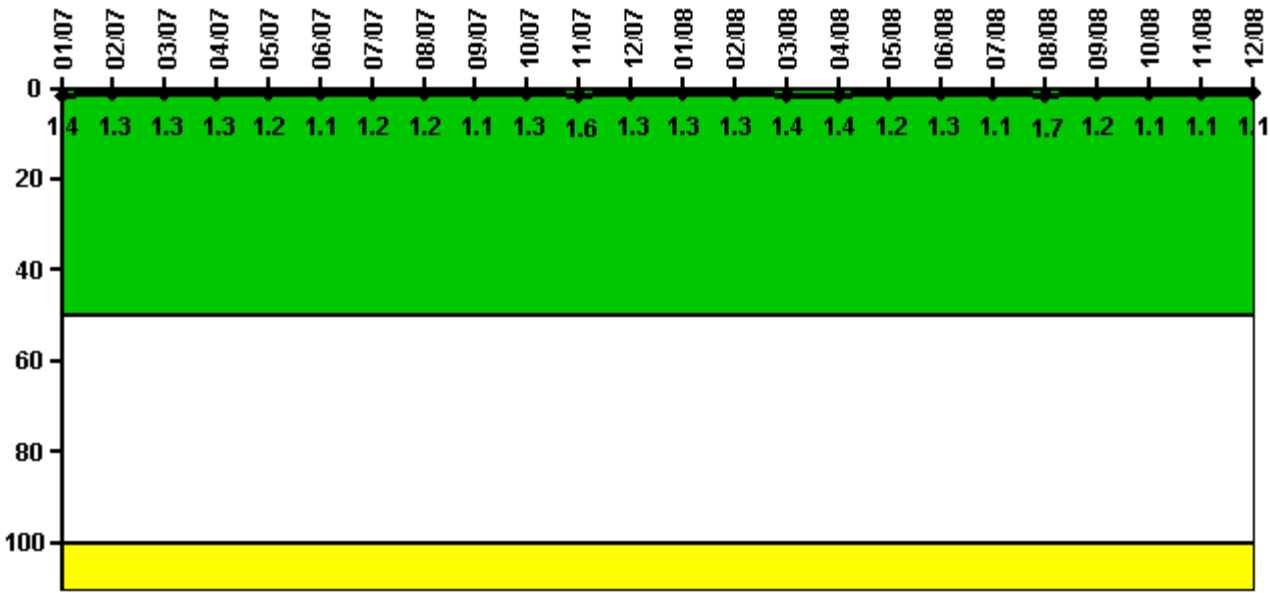
Reactor Coolant System Activity	1/07	2/07	3/07	4/07	5/07	6/07	7/07	8/07	9/07	10/07	11/07	12/07
Maximum activity	0.006490	0.006950	0.006230	0.006430	0.007010	0.007260	0.007640	0.007650	0.007380	0.008000	0.009550	0.008750
Technical specification limit	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Indicator value	0.6	0.7	0.6	0.6	0.7	0.7	0.8	0.8	0.7	0.8	1.0	0.9

Reactor Coolant System Activity	1/08	2/08	3/08	4/08	5/08	6/08	7/08	8/08	9/08	10/08	11/08	12/08
Maximum activity	0.008660	0.008680	0.010500	0.001770	0.001850	0.001920	0.001970	0.002050	0.002140	0.002240	0.002400	0.002470
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	0.9	1.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2

Licensee Comments: none

## Reactor Coolant System Leakage



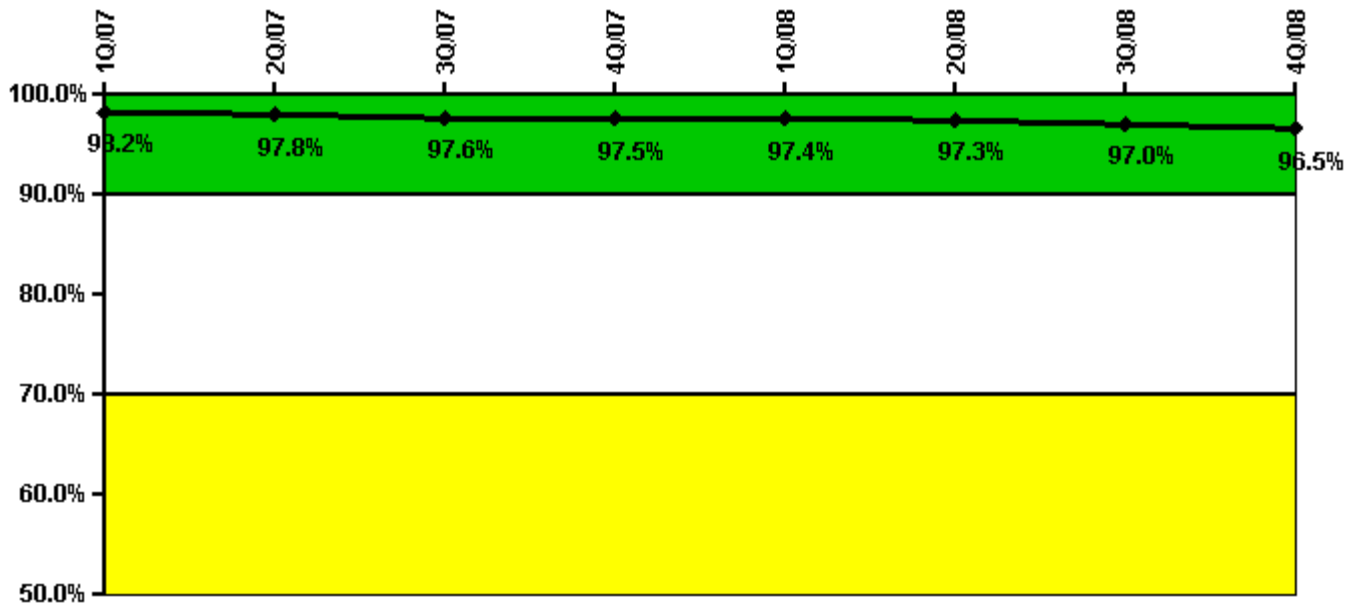
Thresholds: White > 50.0 Yellow > 100.0

### Notes

Reactor Coolant System Leakage	1/07	2/07	3/07	4/07	5/07	6/07	7/07	8/07	9/07	10/07	11/07	12/07
Maximum leakage	0.136	0.128	0.125	0.126	0.118	0.113	0.121	0.115	0.112	0.132	0.160	0.134
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	1.3	1.3	1.2	1.1	1.2	1.2	1.1	1.3	1.6	1.3
Reactor Coolant System Leakage	1/08	2/08	3/08	4/08	5/08	6/08	7/08	8/08	9/08	10/08	11/08	12/08
Maximum leakage	0.132	0.130	0.141	0.140	0.118	0.125	0.108	0.172	0.123	0.112	0.113	0.107
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	1.3	1.3	1.4	1.4	1.2	1.3	1.1	1.7	1.2	1.1	1.1	1.1

Licensee Comments: none

## Drill/Exercise Performance



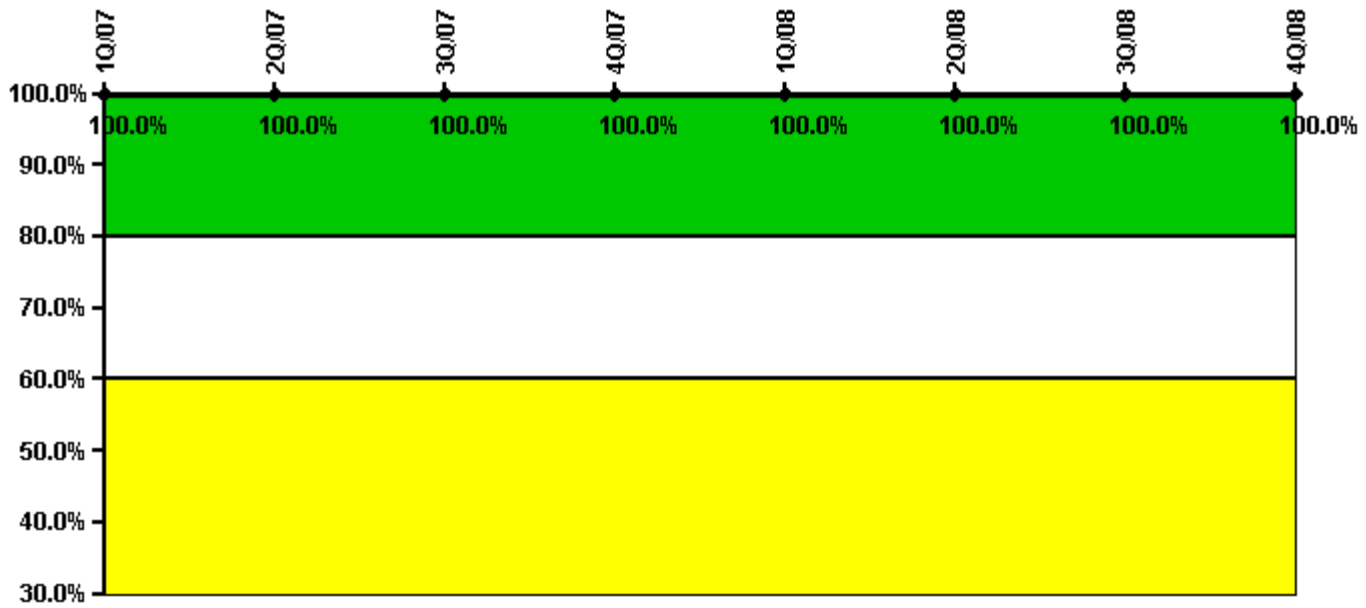
Thresholds: White < 90.0% Yellow < 70.0%

### Notes

Drill/Exercise Performance	1Q/07	2Q/07	3Q/07	4Q/07	1Q/08	2Q/08	3Q/08	4Q/08
Successful opportunities	10.0	45.0	43.0	88.0	4.0	27.0	62.0	53.0
Total opportunities	10.0	49.0	44.0	90.0	4.0	28.0	64.0	55.0
Indicator value	98.2%	97.8%	97.6%	97.5%	97.4%	97.3%	97.0%	96.5%

Licensee Comments: none

## ERO Drill Participation



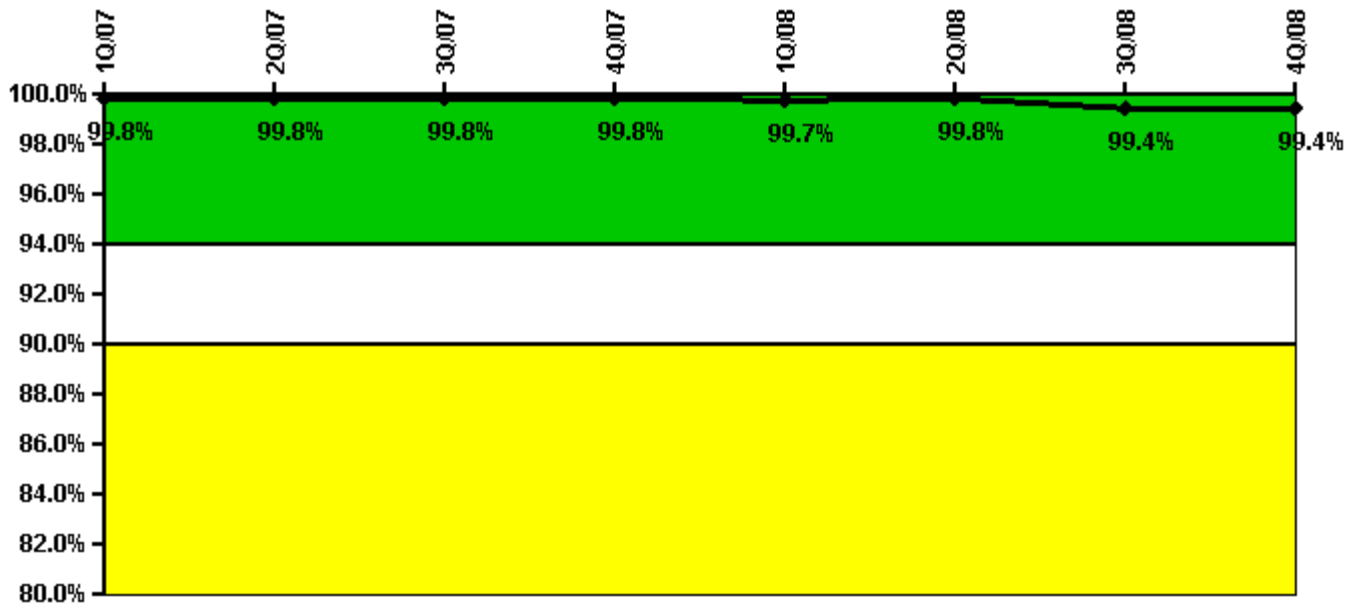
**Thresholds: White < 80.0% Yellow < 60.0%**

### Notes

ERO Drill Participation	1Q/07	2Q/07	3Q/07	4Q/07	1Q/08	2Q/08	3Q/08	4Q/08
Participating Key personnel	71.0	66.0	75.0	75.0	73.0	81.0	83.0	82.0
Total Key personnel	71.0	66.0	75.0	75.0	73.0	81.0	83.0	82.0
Indicator value	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Licensee Comments: none

## Alert & Notification System



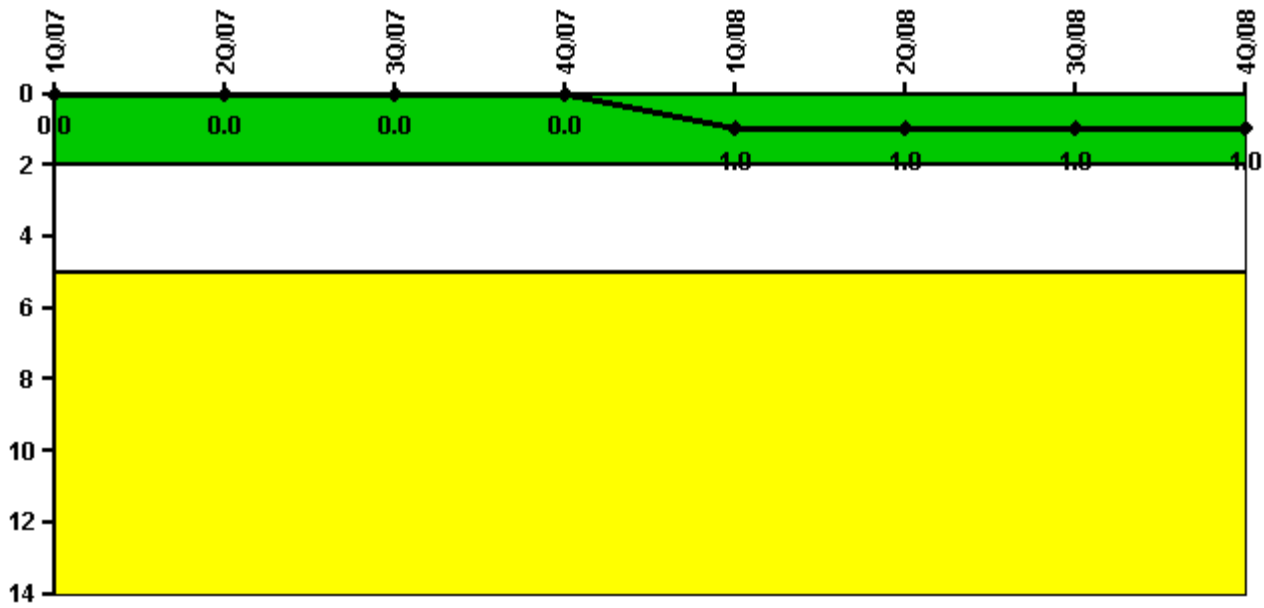
Thresholds: White < 94.0% Yellow < 90.0%

### Notes

Alert & Notification System	1Q/07	2Q/07	3Q/07	4Q/07	1Q/08	2Q/08	3Q/08	4Q/08
Successful siren-tests	6008	5985	5988	5997	5996	6003	6006	5995
Total sirens-tests	6016	6005	6009	6007	6011	6016	6108	6016
Indicator value	99.8%	99.8%	99.8%	99.8%	99.7%	99.8%	99.4%	99.4%

Licensee Comments: none

## Occupational Exposure Control Effectiveness



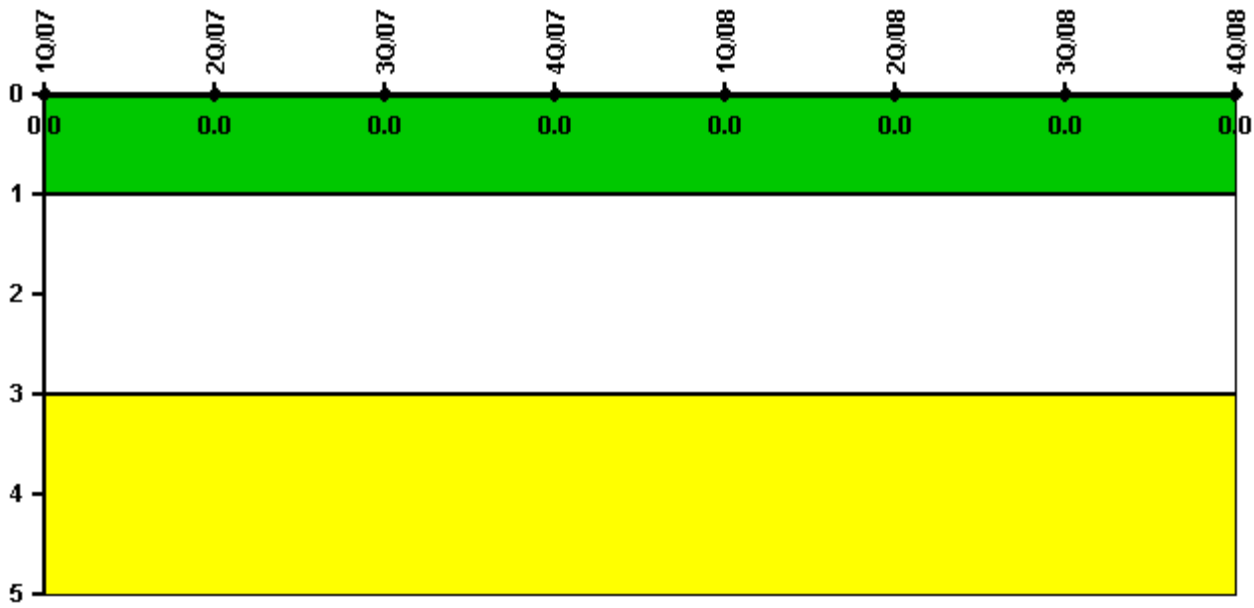
Thresholds: White > 2.0 Yellow > 5.0

### Notes

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

Licensee Comments: none

## RETS/ODCM Radiological Effluent



Thresholds: White > 1.0 Yellow > 3.0

### Notes

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