

# D.C. Cook 1

## 4Q/2011 Performance Indicators

Licensee's General Comments: none

### Unplanned Scrams per 7000 Critical Hrs



Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

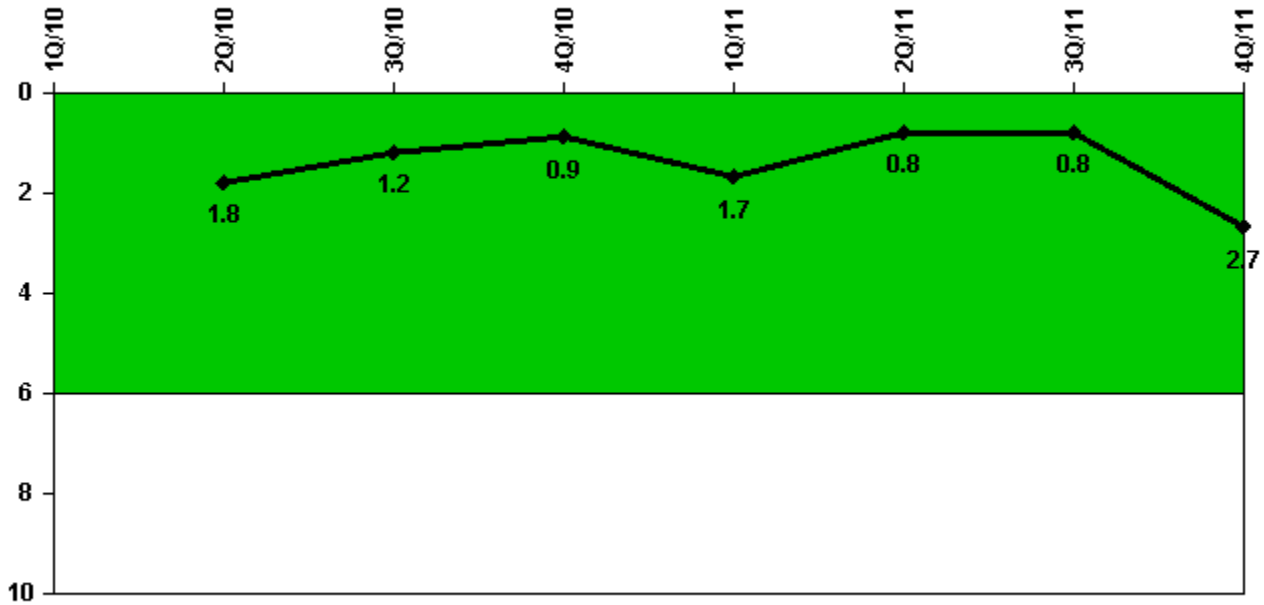
### Notes

Unplanned Scrams per 7000 Critical Hrs	1Q/10	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11
Unplanned scrams	0	0	0	0	0	0	1.0	0
Critical hours	1464.0	1988.1	2208.0	2209.0	2031.6	2184.0	1916.6	1617.1
Indicator value	N/A	0	0	0	0	0	0.8	0.9

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	1Q/10	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11
Unplanned power changes	0	1.0	0	0	1.0	0	0	2.0
Critical hours	1464.0	1988.1	2208.0	2209.0	2031.6	2184.0	1916.6	1617.1
Indicator value	N/A	1.8	1.2	0.9	1.7	0.8	0.8	2.7

Licensee Comments:

4Q/11: Two unplanned power changes: November 25 - power reduced to approximately 54% due to East Main Feedwater Pump high vibrations (turbine shaft failure). December 21 - power reduced to approximately 57% due to EHC fluid leak on West Main Feedwater Pump.

# Unplanned Scrams with Complications



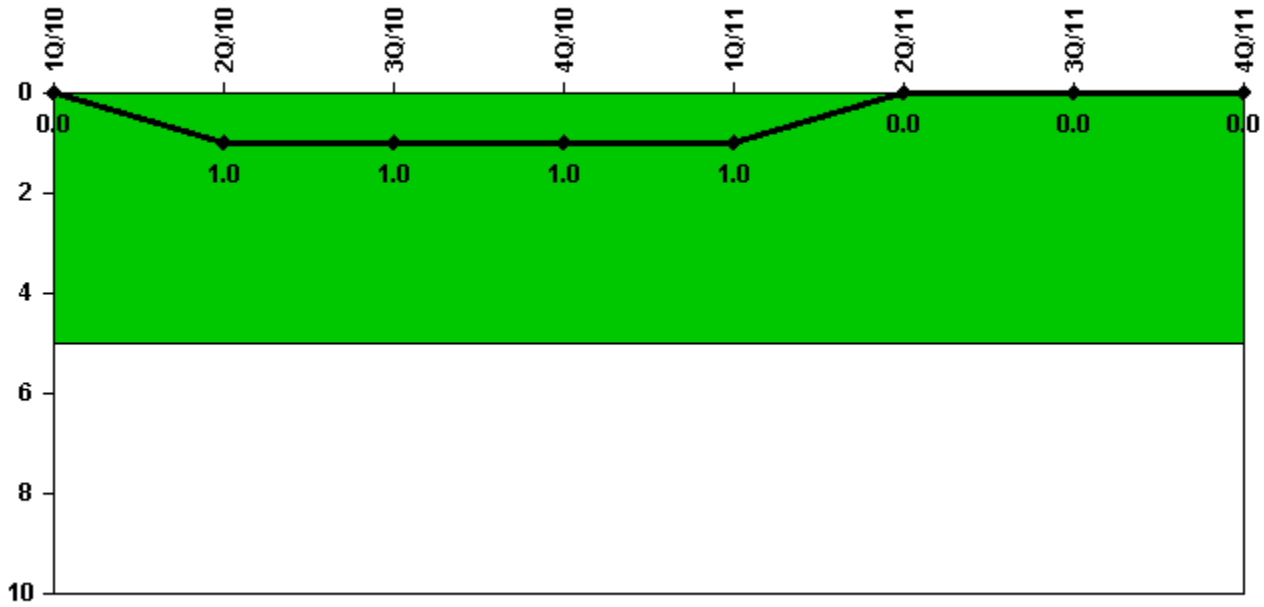
Thresholds: White > 1.0

## Notes

Unplanned Scrams with Complications	1Q/10	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11
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

## Safety System Functional Failures (PWR)



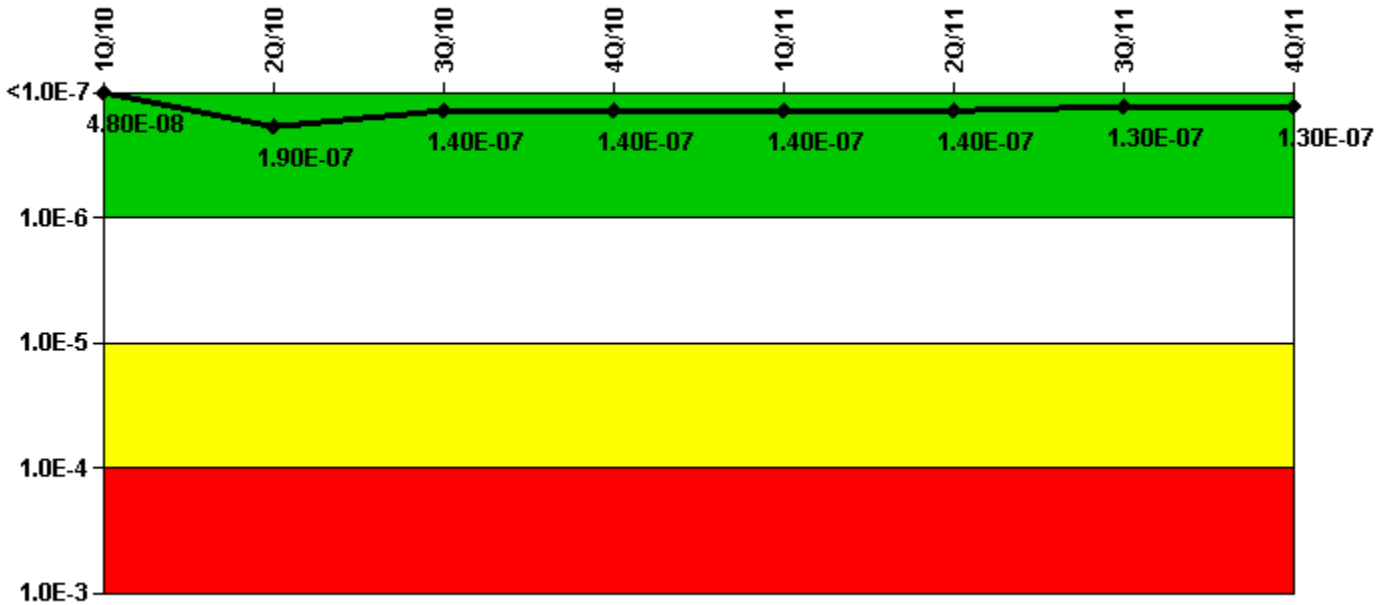
Thresholds: White > 5.0

### Notes

Safety System Functional Failures (PWR)	1Q/10	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11
Safety System Functional Failures	0	1	0	0	0	0	0	0
Indicator value	0	1	1	1	1	0	0	0

Licensee Comments: none

# Mitigating Systems Performance Index, Emergency AC Power System



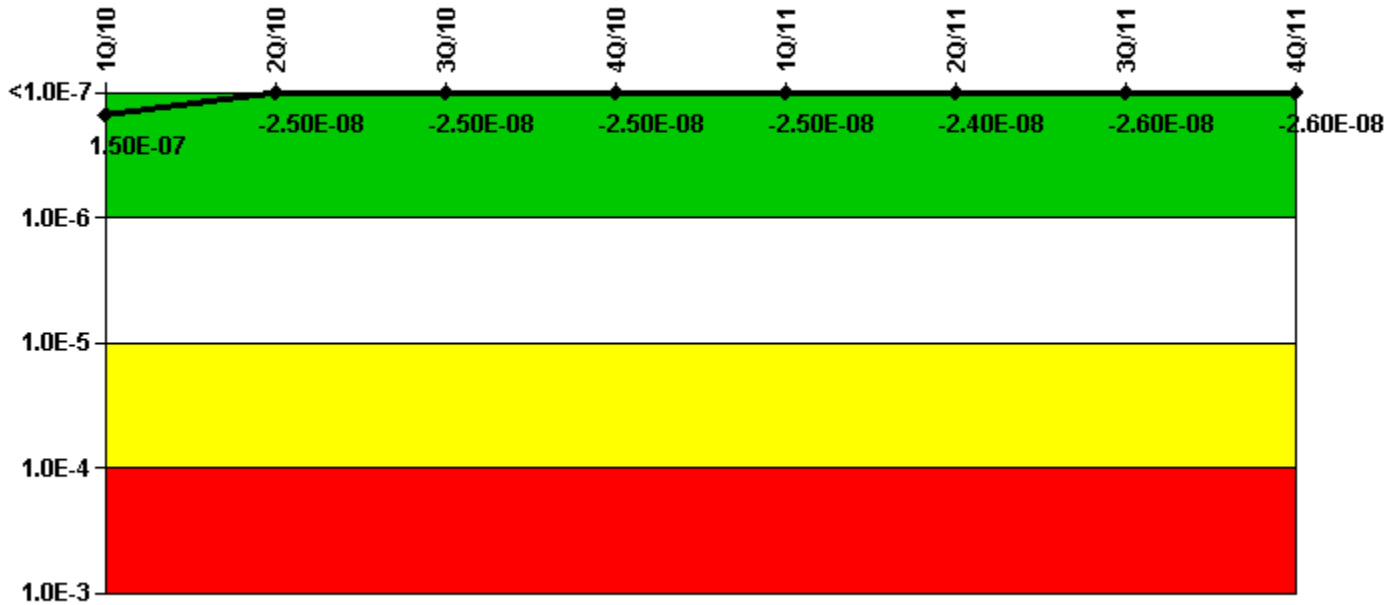
Thresholds: White > 1.00E-6 Yellow > 1.00E-5 Red > 1.00E-4

## Notes

Mitigating Systems Performance Index, Emergency AC Power System	1Q/10	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11
UAI (ΔCDF)	-2.53E-10	6.93E-10	6.21E-10	6.21E-10	6.19E-10	5.74E-10	5.80E-10	4.86E-10
URI (ΔCDF)	4.82E-08	1.90E-07	1.35E-07	1.35E-07	1.35E-07	1.35E-07	1.33E-07	1.33E-07
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	4.80E-08	1.90E-07	1.40E-07	1.40E-07	1.40E-07	1.40E-07	1.30E-07	1.30E-07

Licensee Comments: none

# Mitigating Systems Performance Index, High Pressure Injection System



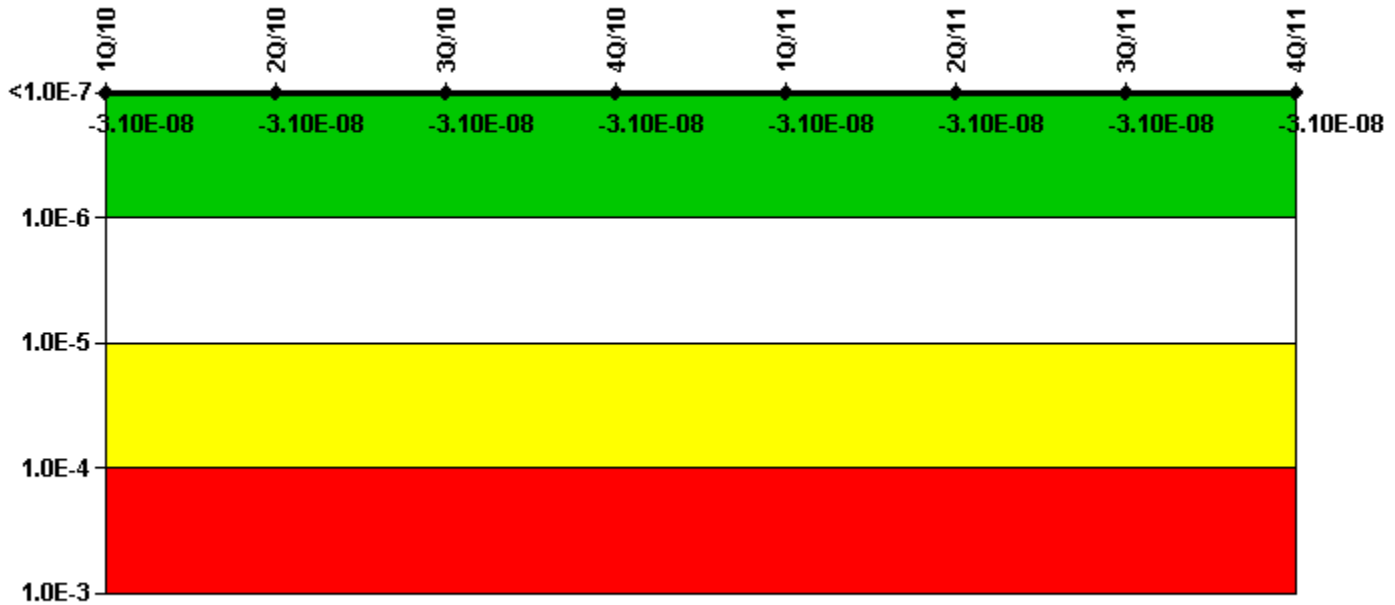
Thresholds: White > 1.00E-6 Yellow > 1.00E-5 Red > 1.00E-4

## Notes

Mitigating Systems Performance Index, High Pressure Injection System	1Q/10	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11
UAI (ΔCDF)	-1.07E-11	-2.67E-11	-2.67E-11	-2.67E-11	-2.67E-11	-3.65E-12	-2.30E-12	-5.56E-12
URI (ΔCDF)	1.48E-07	-2.51E-08	-2.51E-08	-2.51E-08	-2.51E-08	-2.41E-08	-2.58E-08	-2.58E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	1.50E-07	-2.50E-08	-2.50E-08	-2.50E-08	-2.50E-08	-2.40E-08	-2.60E-08	-2.60E-08

Licensee Comments: none

# Mitigating Systems Performance Index, Heat Removal System



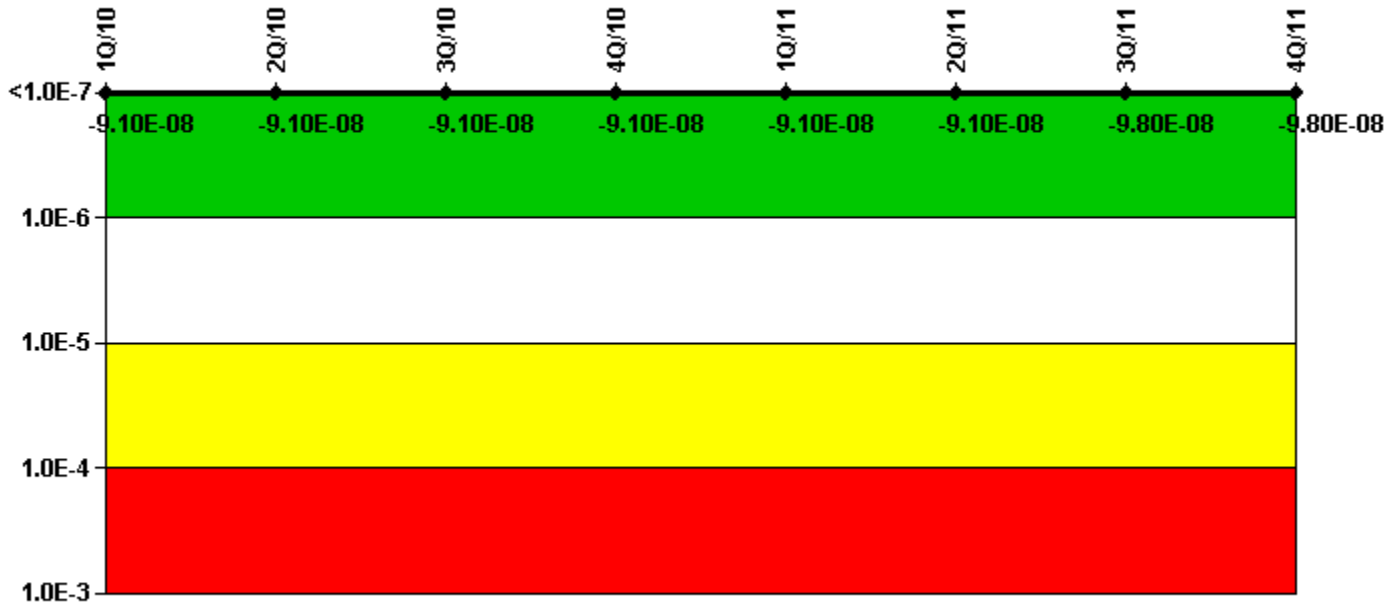
Thresholds: White > 1.00E-6 Yellow > 1.00E-5 Red > 1.00E-4

## Notes

Mitigating Systems Performance Index, Heat Removal System	1Q/10	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11
UAI ( $\Delta$ CDF)	-2.86E-11	-2.86E-11	-2.86E-11	-2.86E-11	-2.86E-11	-2.15E-11	-2.01E-11	-2.37E-11
URI ( $\Delta$ CDF)	-3.06E-08	-3.06E-08	-3.06E-08	-3.06E-08	-3.06E-08	-3.06E-08	-3.15E-08	-3.15E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-3.10E-08	-3.10E-08	-3.10E-08	-3.10E-08	-3.10E-08	-3.10E-08	-3.10E-08	-3.10E-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

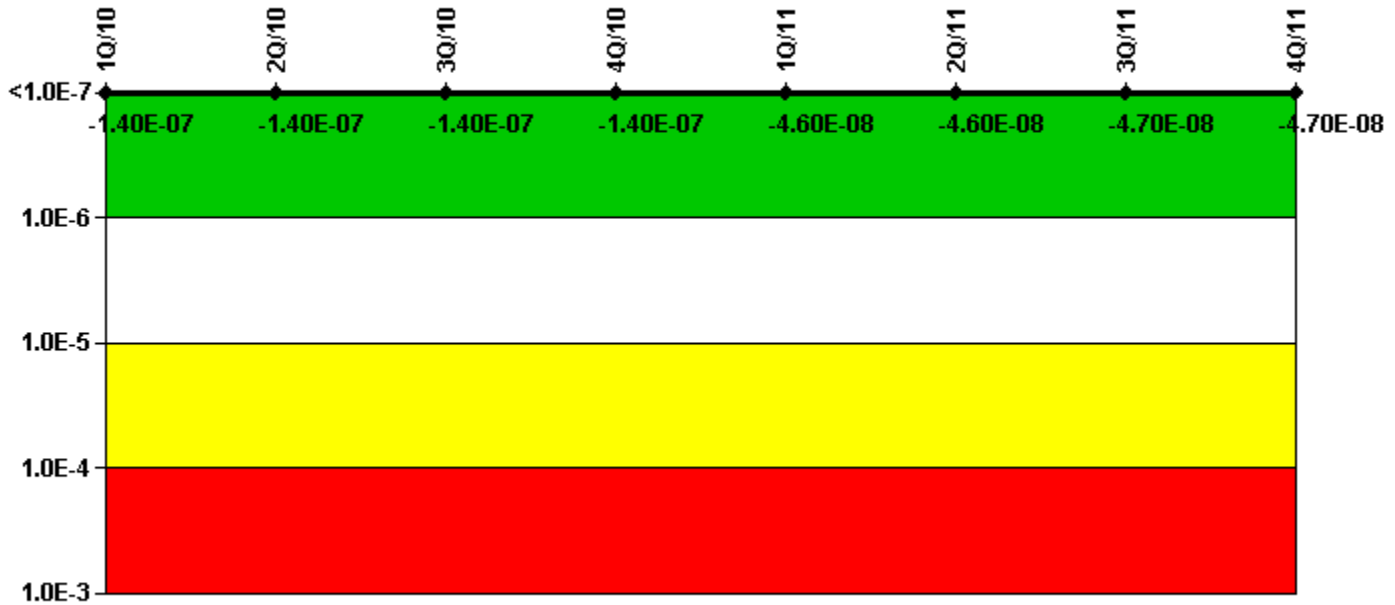
## Notes

Mitigating Systems Performance Index, Residual Heat Removal System	1Q/10	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11
UAI ( $\Delta$ CDF)	-2.12E-13	-2.00E-13	-3.23E-13	-3.23E-13	-3.23E-13	-3.23E-13	-2.18E-13	-3.05E-13
URI ( $\Delta$ CDF)	-9.13E-08	-9.13E-08	-9.13E-08	-9.13E-08	-9.13E-08	-9.13E-08	-9.76E-08	-9.76E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-9.10E-08	-9.10E-08	-9.10E-08	-9.10E-08	-9.10E-08	-9.10E-08	-9.80E-08	-9.80E-08

Licensee Comments: none



# Mitigating Systems Performance Index, Cooling Water Systems



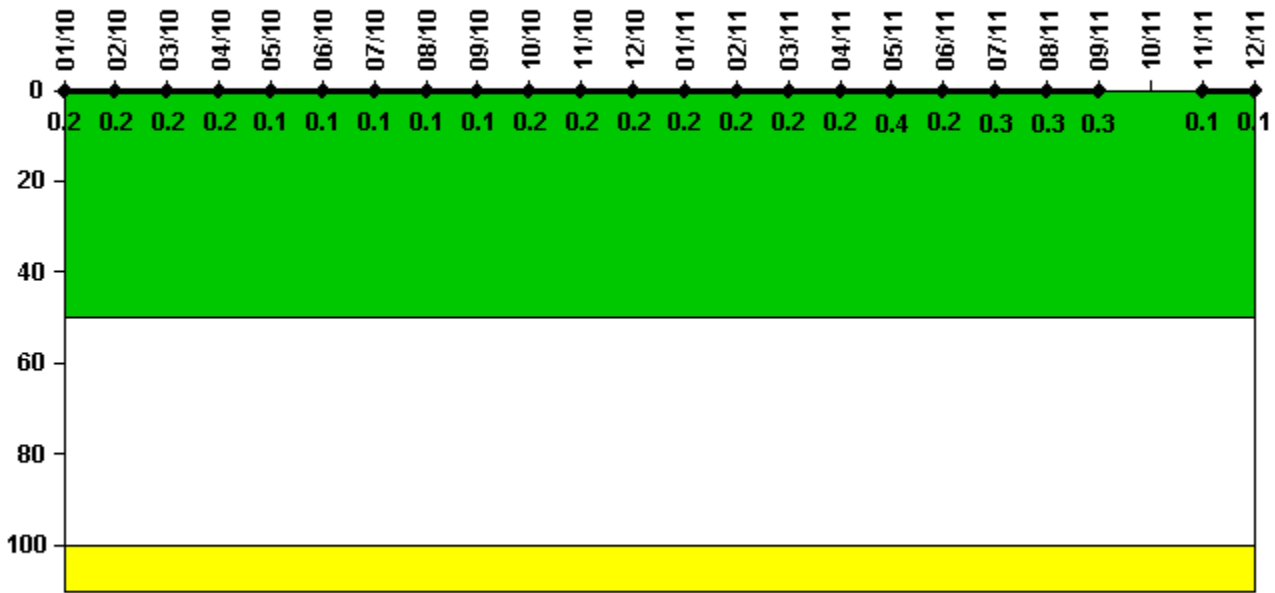
Thresholds: White > 1.00E-6 Yellow > 1.00E-5 Red > 1.00E-4

## Notes

Mitigating Systems Performance Index, Cooling Water Systems	1Q/10	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11
UAI ( $\Delta$ CDF)	2.20E-11	2.27E-11	-3.23E-12	-3.23E-12	3.95E-11	6.25E-11	6.36E-11	4.62E-11
URI ( $\Delta$ CDF)	-1.42E-07	-1.42E-07	-1.42E-07	-1.42E-07	-4.58E-08	-4.58E-08	-4.69E-08	-4.69E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-1.40E-07	-1.40E-07	-1.40E-07	-1.40E-07	-4.60E-08	-4.60E-08	-4.70E-08	-4.70E-08

Licensee Comments: none

## Reactor Coolant System Activity



Thresholds: White > 50.0 Yellow > 100.0

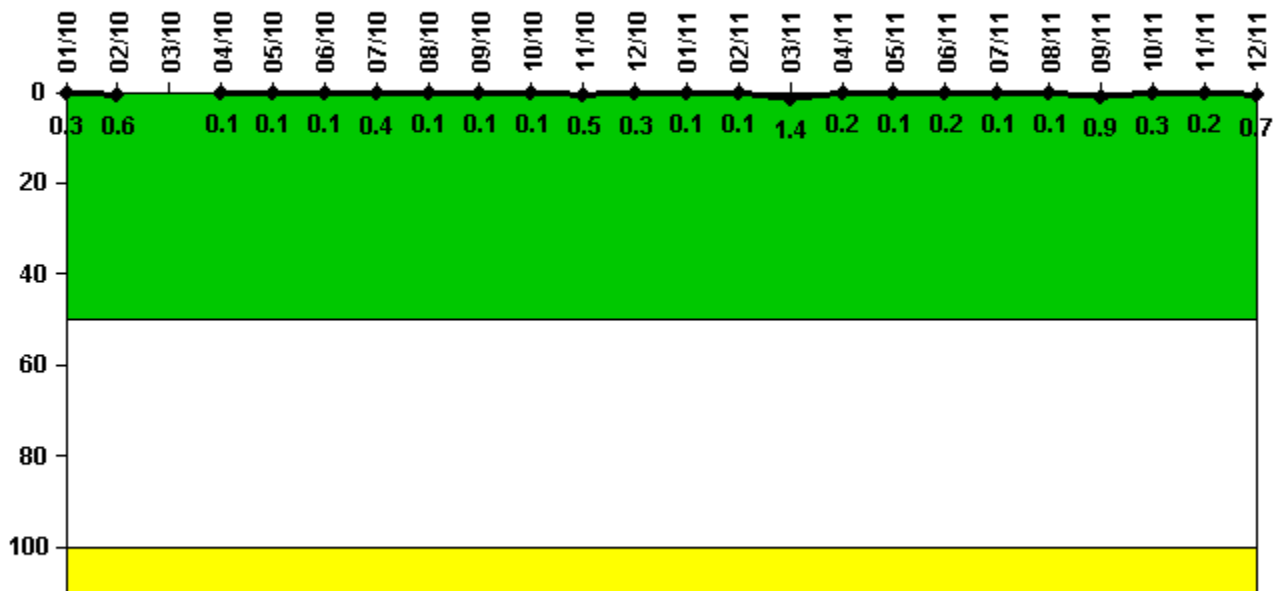
### Notes

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	0.001980	0.002060	0.001630	0.001590	0.001170	0.001240	0.001330	0.001360	0.001420	0.001580	0.001560	0.001610
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	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2
Reactor Coolant System Activity	1/11	2/11	3/11	4/11	5/11	6/11	7/11	8/11	9/11	10/11	11/11	12/11
Maximum activity	0.001680	0.001750	0.001760	0.002300	0.003800	0.002470	0.002560	0.002610	0.003030	N/A	0.000843	0.000793
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	0.2	0.2	0.2	0.4	0.2	0.3	0.3	0.3	N/A	0.1	0.1

Licensee Comments:

12/11: Due to a refueling outage followed by power escalation, RCS Activity data is not available for the month of October.

## Reactor Coolant System Leakage



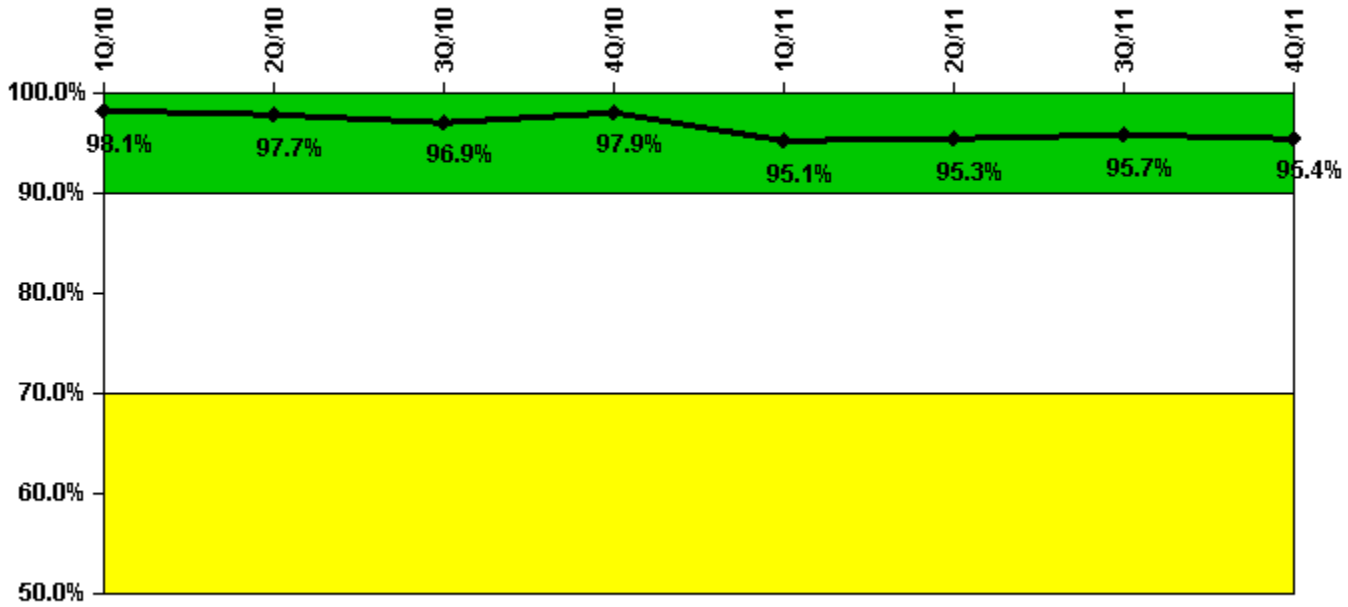
Thresholds: White > 50.0 Yellow > 100.0

### Notes

<b>Reactor Coolant System Leakage</b>	<b>1/10</b>	<b>2/10</b>	<b>3/10</b>	<b>4/10</b>	<b>5/10</b>	<b>6/10</b>	<b>7/10</b>	<b>8/10</b>	<b>9/10</b>	<b>10/10</b>	<b>11/10</b>	<b>12/10</b>
Maximum leakage	0.029	0.068	N/A	0.012	0.014	0.016	0.047	0.006	0.009	0.013	0.057	0.028
Technical specification limit	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.8
Indicator value	0.3	0.6	N/A	0.1	0.1	0.1	0.4	0.1	0.1	0.1	0.5	0.3
<b>Reactor Coolant System Leakage</b>	<b>1/11</b>	<b>2/11</b>	<b>3/11</b>	<b>4/11</b>	<b>5/11</b>	<b>6/11</b>	<b>7/11</b>	<b>8/11</b>	<b>9/11</b>	<b>10/11</b>	<b>11/11</b>	<b>12/11</b>
Maximum leakage	0.011	0.015	0.150	0.026	0.015	0.024	0.012	0.009	0.094	0.036	0.020	0.075
Technical specification limit	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.8
Indicator value	0.1	0.1	1.4	0.2	0.1	0.2	0.1	0.1	0.9	0.3	0.2	0.7

Licensee Comments: none

## Drill/Exercise Performance



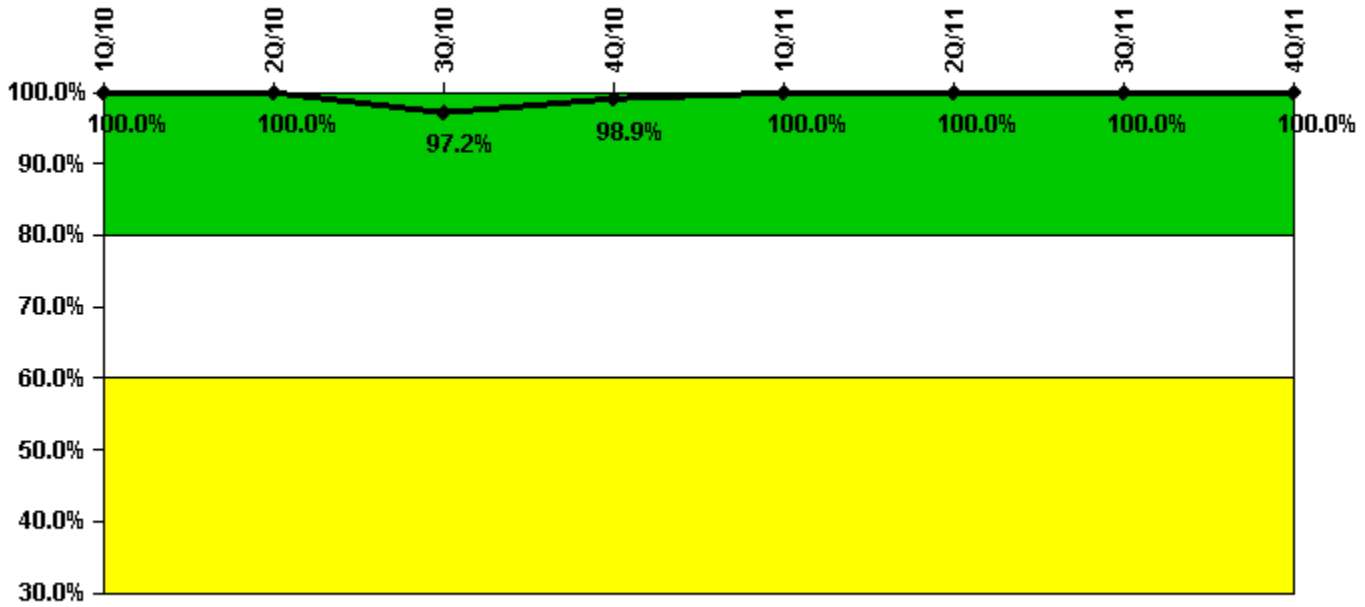
Thresholds: White < 90.0% Yellow < 70.0%

### Notes

Drill/Exercise Performance	1Q/10	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11
Successful opportunities	12.0	26.0	29.0	19.0	43.0	16.0	41.0	0
Total opportunities	12.0	28.0	29.0	19.0	50.0	16.0	41.0	0
Indicator value	98.1%	97.7%	96.9%	97.9%	95.1%	95.3%	95.7%	95.4%

Licensee Comments: none

# ERO Drill Participation



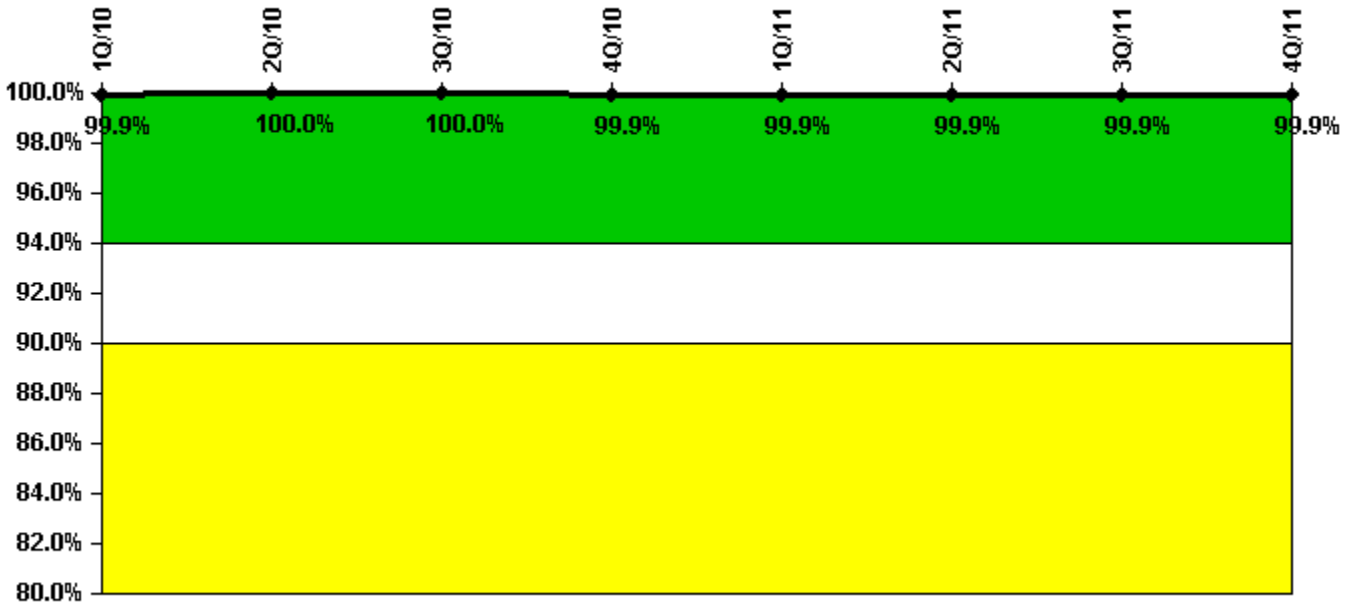
Thresholds: White < 80.0% Yellow < 60.0%

## Notes

ERO Drill Participation	1Q/10	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11
Participating Key personnel	95.0	96.0	103.0	94.0	92.0	92.0	91.0	91.0
Total Key personnel	95.0	96.0	106.0	95.0	92.0	92.0	91.0	91.0
Indicator value	100.0%	100.0%	97.2%	98.9%	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/10	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11
Successful siren-tests	1119	1119	1118	1118	1119	1117	1120	1120
Total sirens-tests	1119	1119	1119	1120	1120	1119	1120	1120
Indicator value	99.9%	100.0%	100.0%	99.9%	99.9%	99.9%	99.9%	99.9%

Licensee Comments: none

# Occupational Exposure Control Effectiveness



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

## Notes

Occupational Exposure Control Effectiveness	1Q/10	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11
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

# RETS/ODCM Radiological Effluent



Thresholds: White > 1.0 Yellow > 3.0

## Notes

RETS/ODCM Radiological Effluent	1Q/10	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11
RETS/ODCM occurrences	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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