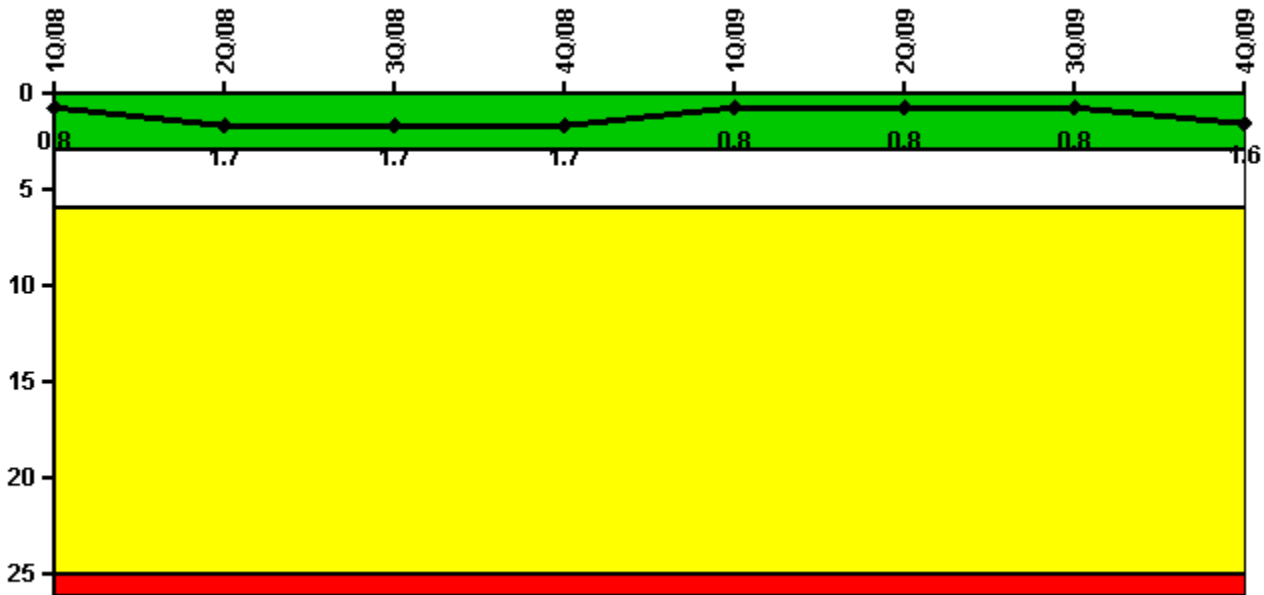


# Indian Point 2

## 4Q/2009 Performance Indicators

Licensee's General Comments: IE01: On November 2, 2009, a automatic reactor trip was initiated as a result of a turbine-generator trip due to a Generator Primary Lockout relay 86P trip caused by a failure of the Generrex exciter 15 volt power supply. IE03: On November 4, 2009, the reactor was made critical after the reactor trip on November 2, 2009, and on November 6, 2009, the power ascension was halted due to Generrex exciter cubical trouble alarm and the reactor was subsequently shutdown.

### Unplanned Scrams per 7000 Critical Hrs



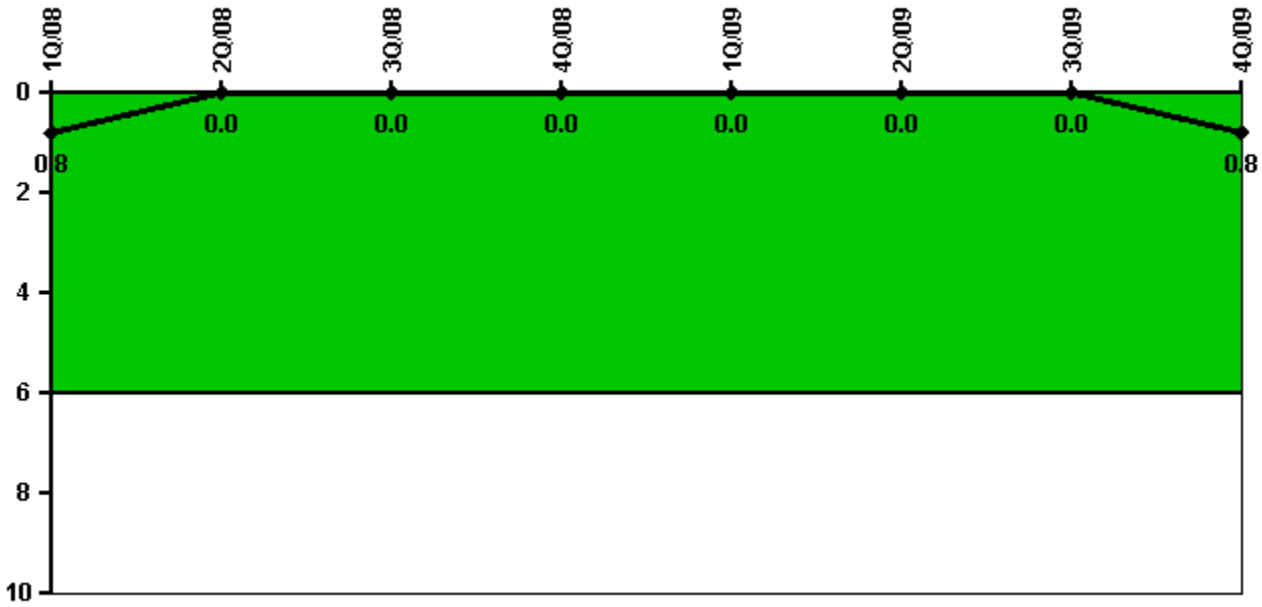
Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

### Notes

Unplanned Scrams per 7000 Critical Hrs	1Q/08	2Q/08	3Q/08	4Q/08	1Q/09	2Q/09	3Q/09	4Q/09
Unplanned scrams	1.0	1.0	0	0	0	1.0	0	1.0
Critical hours	1989.3	1724.9	2208.0	2209.0	2159.0	2160.3	2208.0	2177.4
Indicator value	0.8	1.7	1.7	1.7	0.8	0.8	0.8	1.6

Licensee Comments: none

## Unplanned Power Changes per 7000 Critical Hrs



Thresholds: White > 6.0

### Notes

Unplanned Power Changes per 7000 Critical Hrs	1Q/08	2Q/08	3Q/08	4Q/08	1Q/09	2Q/09	3Q/09	4Q/09
Unplanned power changes	0	0	0	0	0	0	0	1.0
Critical hours	1989.3	1724.9	2208.0	2209.0	2159.0	2160.3	2208.0	2177.4
Indicator value	0.8	0	0	0	0	0	0	0.8

Licensee Comments: none

# Unplanned Scrams with Complications



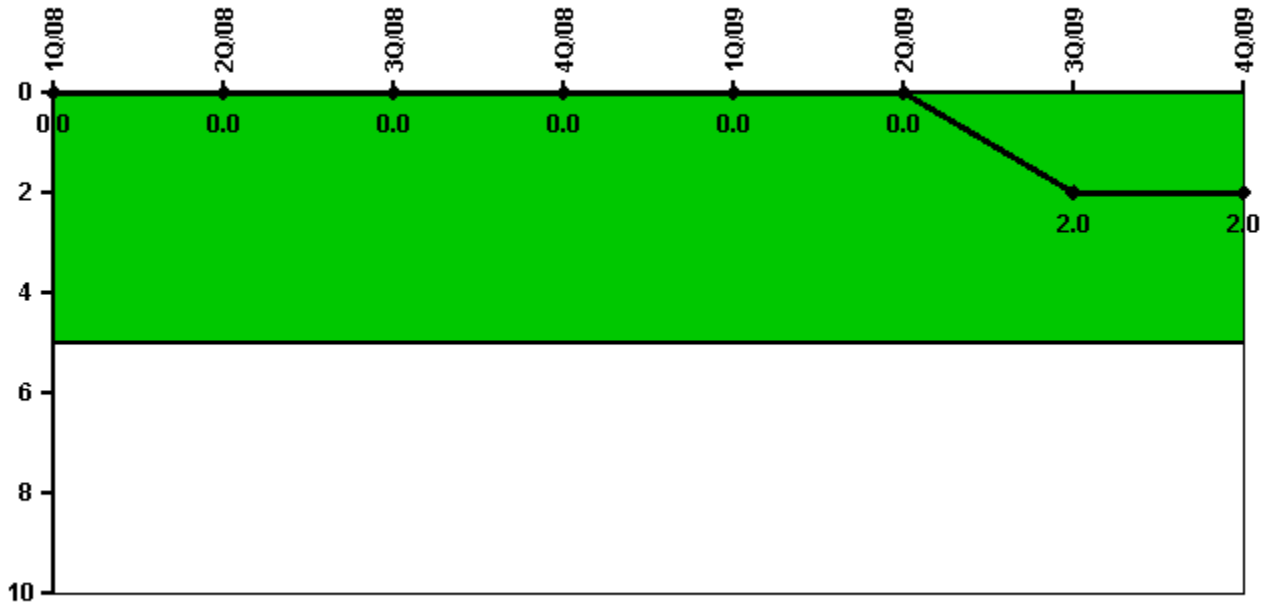
Thresholds: White > 1.0

## Notes

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

## Safety System Functional Failures (PWR)



Thresholds: White > 5.0

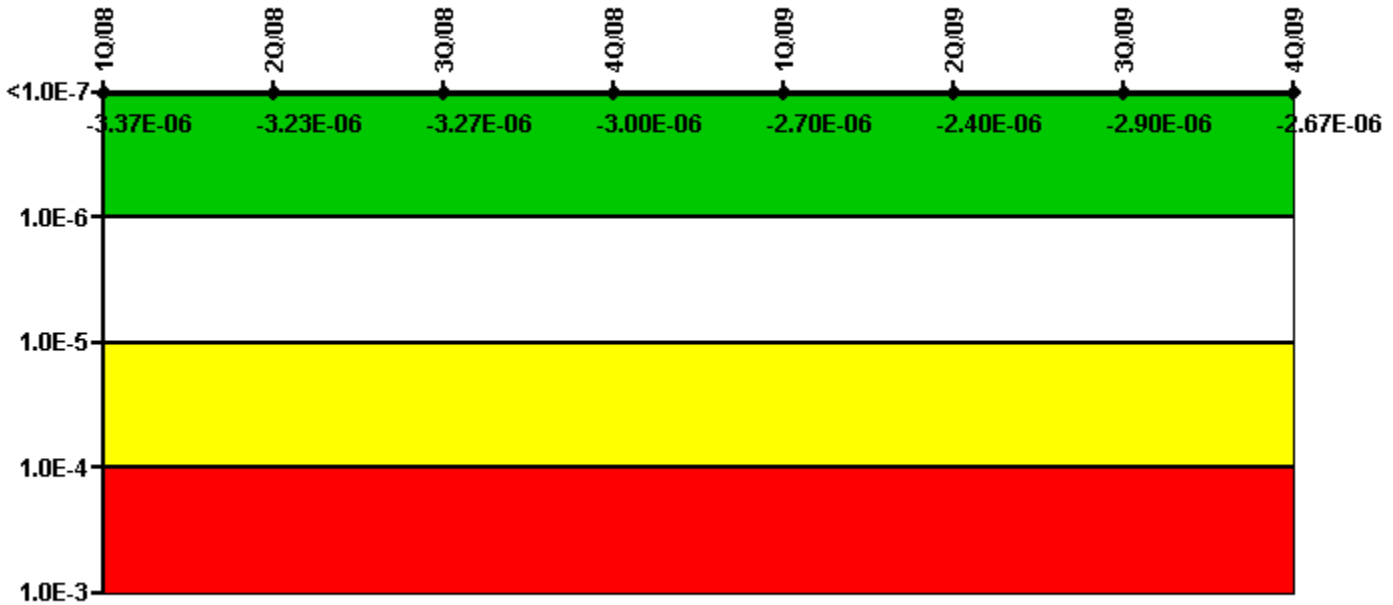
### Notes

Safety System Functional Failures (PWR)	1Q/08	2Q/08	3Q/08	4Q/08	1Q/09	2Q/09	3Q/09	4Q/09
Safety System Functional Failures	0	0	0	0	0	0	2	0
Indicator value	0	0	0	0	0	0	2	2

Licensee Comments: none

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# Mitigating Systems Performance Index, Emergency AC Power System



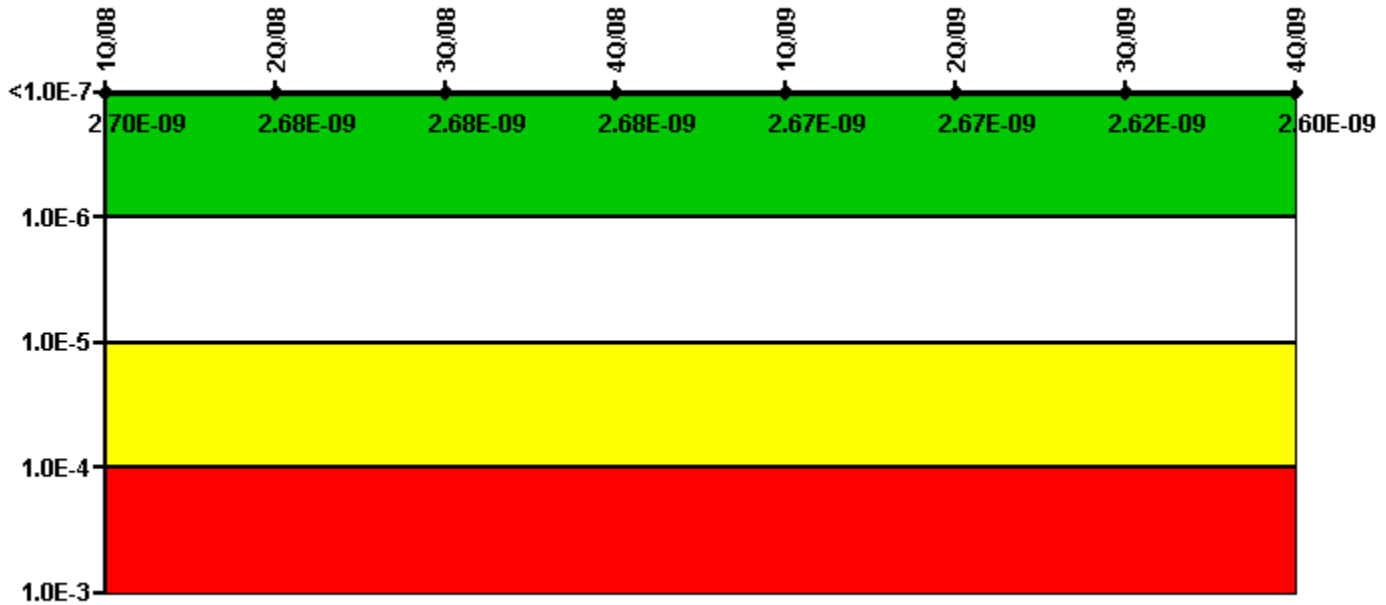
Thresholds: White > 1.00E-6 Yellow > 1.00E-5 Red > 1.00E-4

## Notes

Mitigating Systems Performance Index, Emergency AC Power System	1Q/08	2Q/08	3Q/08	4Q/08	1Q/09	2Q/09	3Q/09	4Q/09
UAI ( $\Delta$ CDF)	5.30E-07	6.70E-07	6.30E-07	8.00E-07	1.10E-06	1.10E-06	6.00E-07	7.30E-07
URI ( $\Delta$ CDF)	-3.90E-06	-3.90E-06	-3.90E-06	-3.80E-06	-3.80E-06	-3.50E-06	-3.50E-06	-3.40E-06
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-3.37E-06	-3.23E-06	-3.27E-06	-3.00E-06	-2.70E-06	-2.40E-06	-2.90E-06	-2.67E-06

Licensee Comments: none

# Mitigating Systems Performance Index, High Pressure Injection System



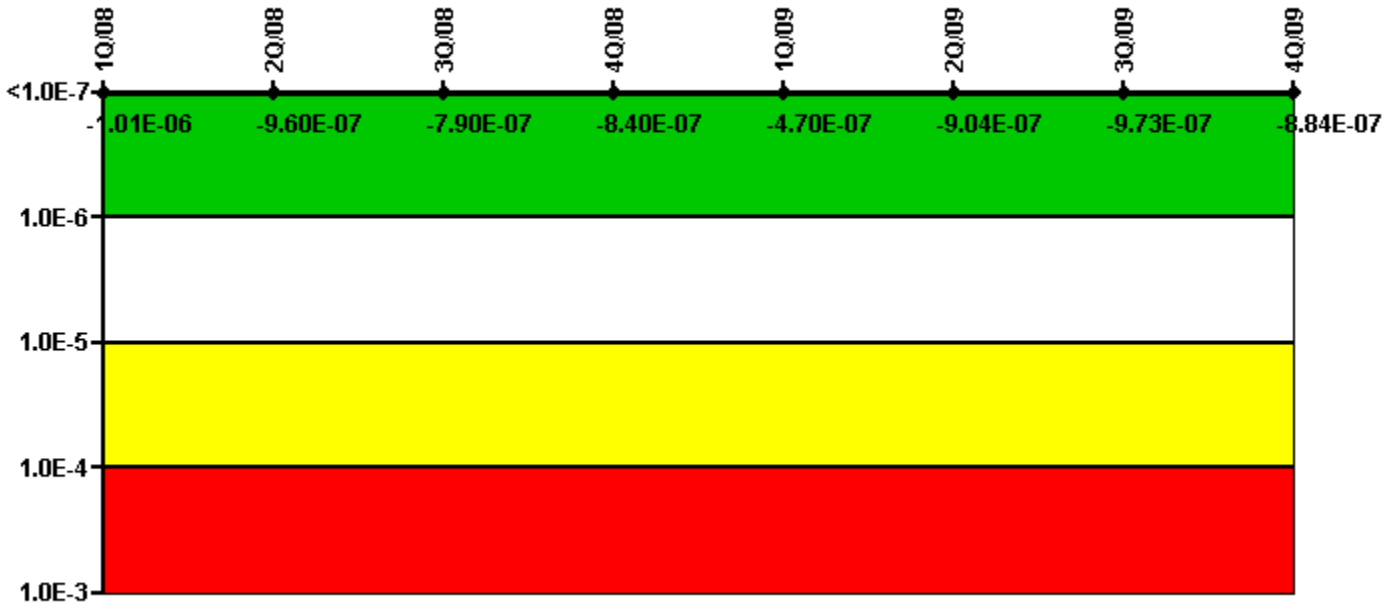
Thresholds: White > 1.00E-6 Yellow > 1.00E-5 Red > 1.00E-4

## Notes

Mitigating Systems Performance Index, High Pressure Injection System	1Q/08	2Q/08	3Q/08	4Q/08	1Q/09	2Q/09	3Q/09	4Q/09
UAI ( $\Delta$ CDF)	-9.80E-11	-1.20E-10	-1.20E-10	-1.20E-10	-1.30E-10	-1.30E-10	-1.80E-10	-2.00E-10
URI ( $\Delta$ CDF)	2.80E-09	2.80E-09	2.80E-09	2.80E-09	2.80E-09	2.80E-09	2.80E-09	2.80E-09
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	2.70E-09	2.68E-09	2.68E-09	2.68E-09	2.67E-09	2.67E-09	2.62E-09	2.60E-09

Licensee Comments: none

# Mitigating Systems Performance Index, Heat Removal System



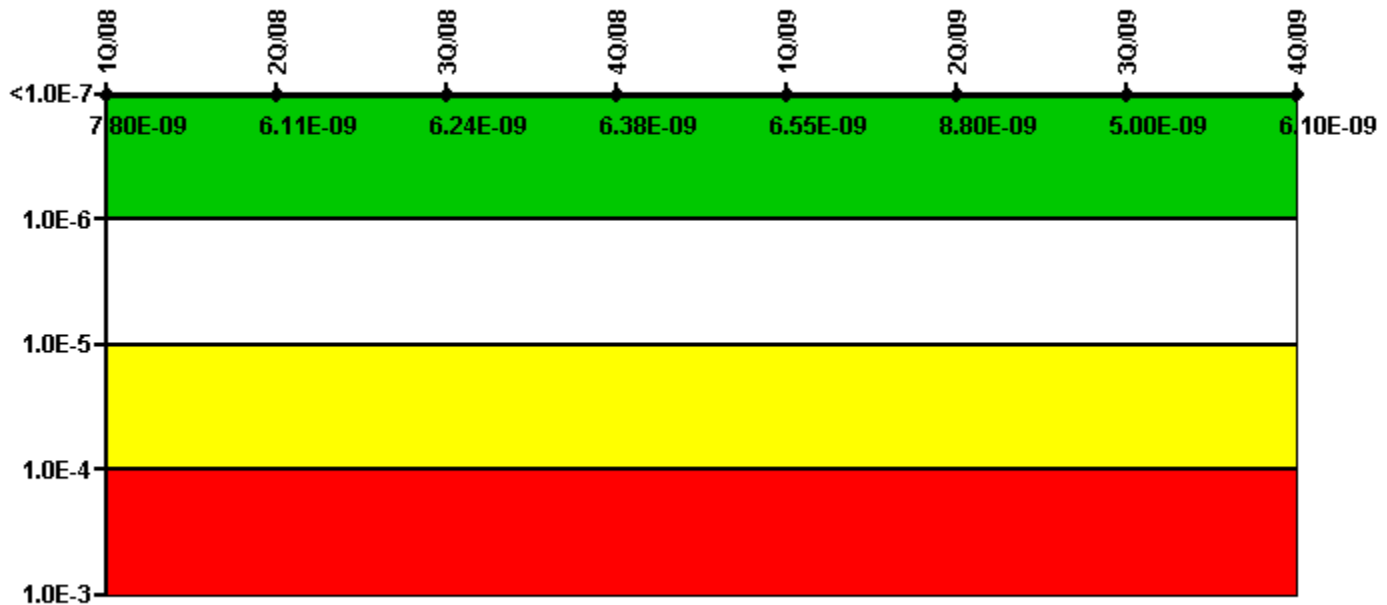
Thresholds: White > 1.00E-6 Yellow > 1.00E-5 Red > 1.00E-4

## Notes

Mitigating Systems Performance Index, Heat Removal System	1Q/08	2Q/08	3Q/08	4Q/08	1Q/09	2Q/09	3Q/09	4Q/09
UAI ( $\Delta$ CDF)	1.90E-07	2.40E-07	4.10E-07	3.60E-07	6.30E-07	9.60E-08	-1.30E-08	2.60E-08
URI ( $\Delta$ CDF)	-1.20E-06	-1.20E-06	-1.20E-06	-1.20E-06	-1.10E-06	-1.00E-06	-9.60E-07	-9.10E-07
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-1.01E-06	-9.60E-07	-7.90E-07	-8.40E-07	-4.70E-07	-9.04E-07	-9.73E-07	-8.84E-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

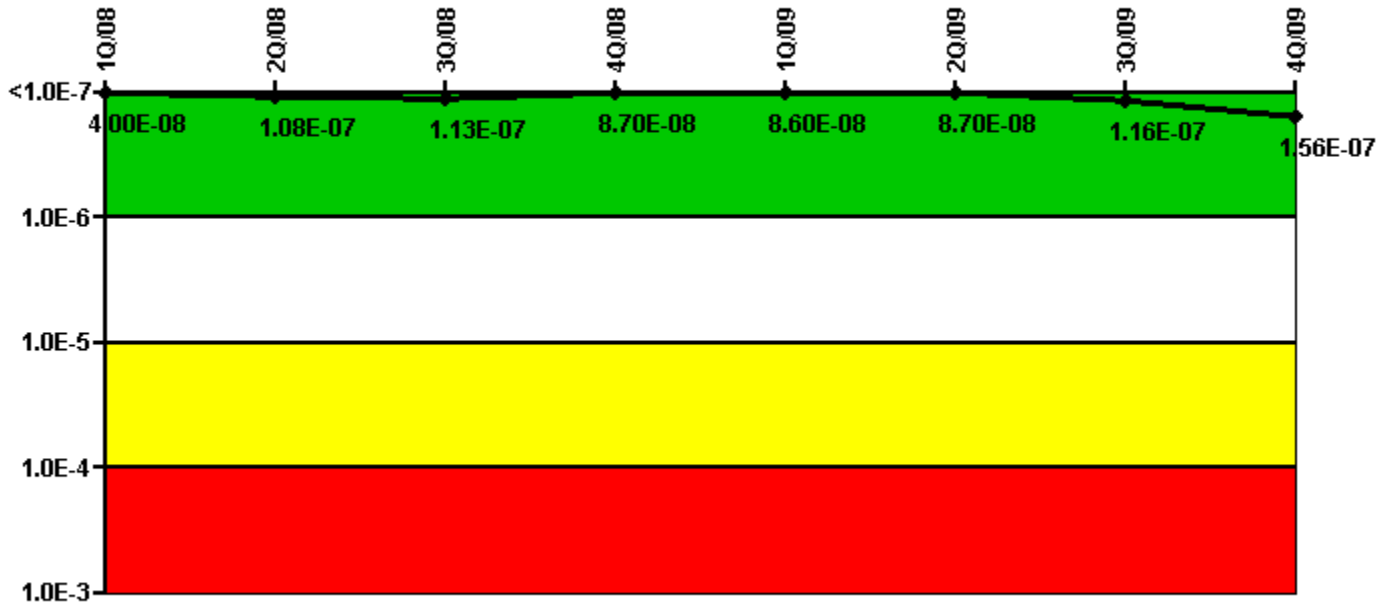
## Notes

Mitigating Systems Performance Index, Residual Heat Removal System	1Q/08	2Q/08	3Q/08	4Q/08	1Q/09	2Q/09	3Q/09	4Q/09
UAI ( $\Delta$ CDF)	-1.10E-09	-9.90E-10	-9.60E-10	-9.20E-10	-9.50E-10	-1.20E-09	-6.00E-09	-5.90E-09
URI ( $\Delta$ CDF)	8.90E-09	7.10E-09	7.20E-09	7.30E-09	7.50E-09	1.00E-08	1.10E-08	1.20E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	7.80E-09	6.11E-09	6.24E-09	6.38E-09	6.55E-09	8.80E-09	5.00E-09	6.10E-09

Licensee Comments: none



# Mitigating Systems Performance Index, Cooling Water Systems



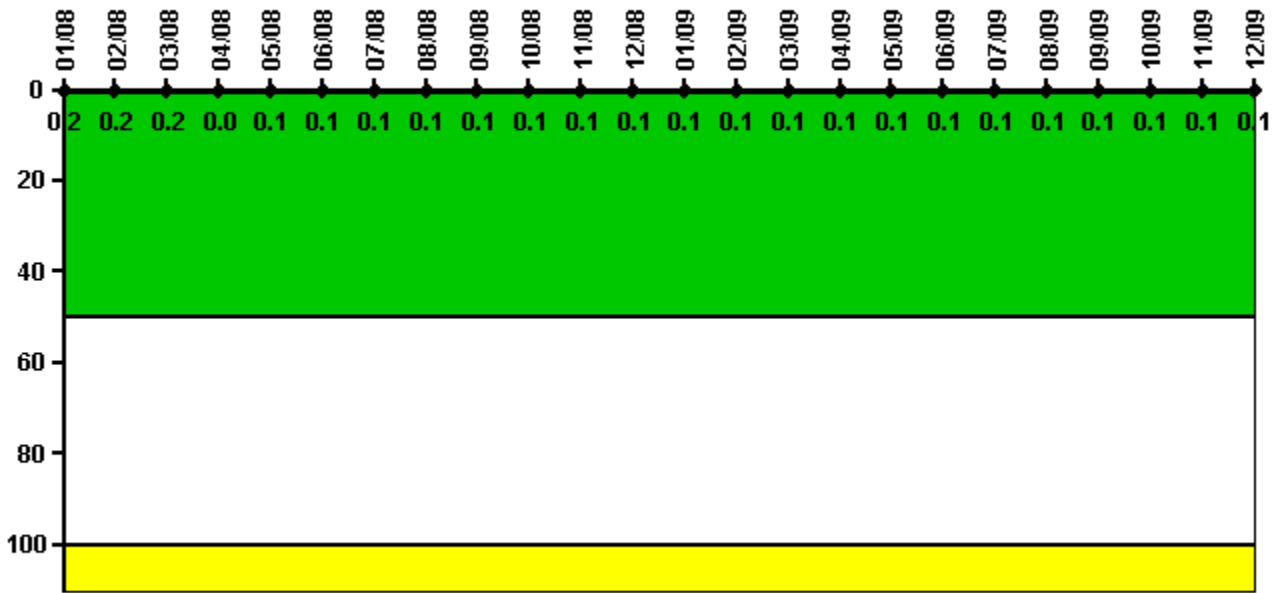
Thresholds: White > 1.00E-6 Yellow > 1.00E-5 Red > 1.00E-4

## Notes

Mitigating Systems Performance Index, Cooling Water Systems	1Q/08	2Q/08	3Q/08	4Q/08	1Q/09	2Q/09	3Q/09	4Q/09
UAI (ΔCDF)	-6.00E-09	3.70E-08	4.20E-08	1.60E-08	1.50E-08	1.40E-08	1.60E-08	5.70E-08
URI (ΔCDF)	4.60E-08	7.10E-08	7.10E-08	7.10E-08	7.10E-08	7.30E-08	1.00E-07	9.90E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	4.00E-08	1.08E-07	1.13E-07	8.70E-08	8.60E-08	8.70E-08	1.16E-07	1.56E-07

Licensee Comments: none

# Reactor Coolant System Activity



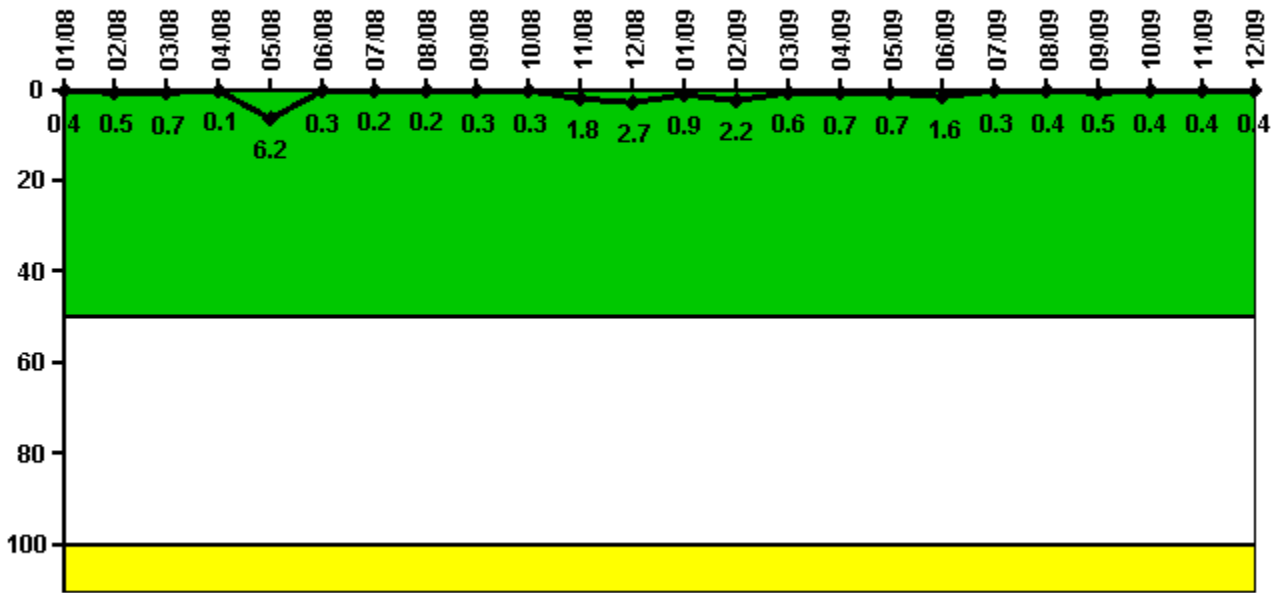
Thresholds: White > 50.0 Yellow > 100.0

## Notes

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	0.002140	0.002070	0.002220	0.000449	0.000501	0.000717	0.000595	0.000579	0.000614	0.000667	0.000608	0.000647
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	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Reactor Coolant System Activity	1/09	2/09	3/09	4/09	5/09	6/09	7/09	8/09	9/09	10/09	11/09	12/09
Maximum activity	0.000627	0.000653	0.000690	0.000740	0.000733	0.000725	0.000809	0.000816	0.000795	0.000839	0.000789	0.000918
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	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1

Licensee Comments: none

## Reactor Coolant System Leakage



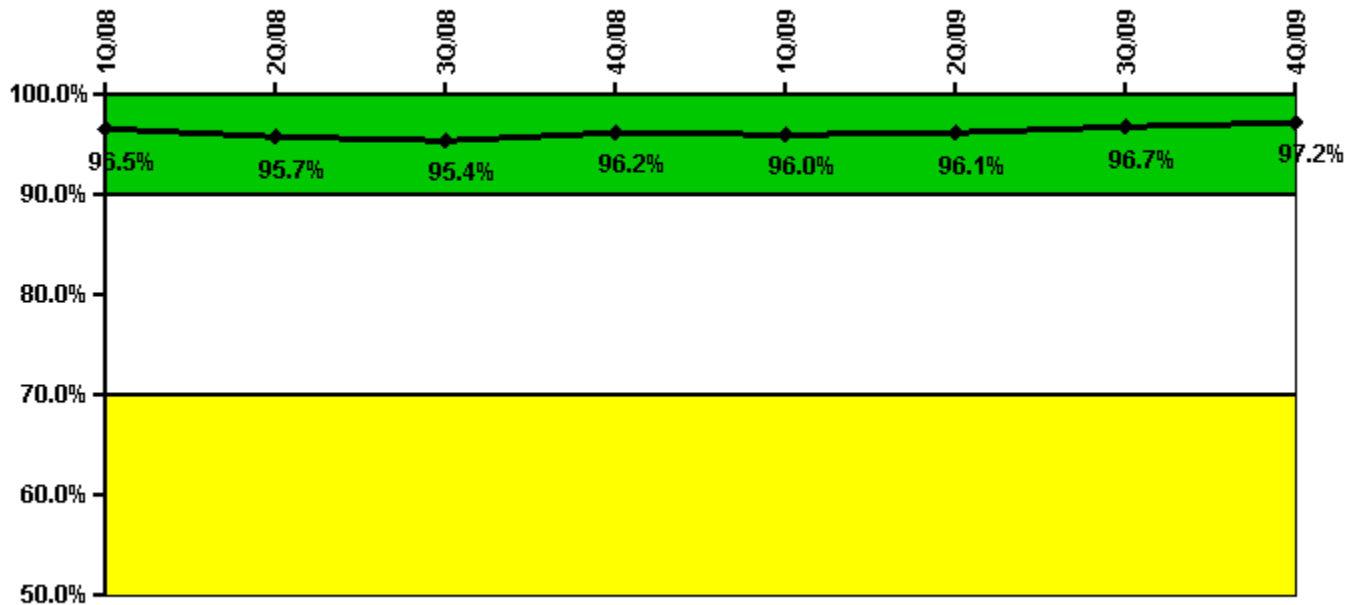
Thresholds: White > 50.0 Yellow > 100.0

### Notes

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	0.040	0.050	0.070	0.010	0.620	0.030	0.020	0.020	0.030	0.030	0.180	0.270
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	0.4	0.5	0.7	0.1	6.2	0.3	0.2	0.2	0.3	0.3	1.8	2.7
Reactor Coolant System Leakage	1/09	2/09	3/09	4/09	5/09	6/09	7/09	8/09	9/09	10/09	11/09	12/09
Maximum leakage	0.090	0.220	0.060	0.070	0.070	0.160	0.030	0.040	0.050	0.040	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	0.9	2.2	0.6	0.7	0.7	1.6	0.3	0.4	0.5	0.4	0.4	0.4

Licensee Comments: none

## Drill/Exercise Performance



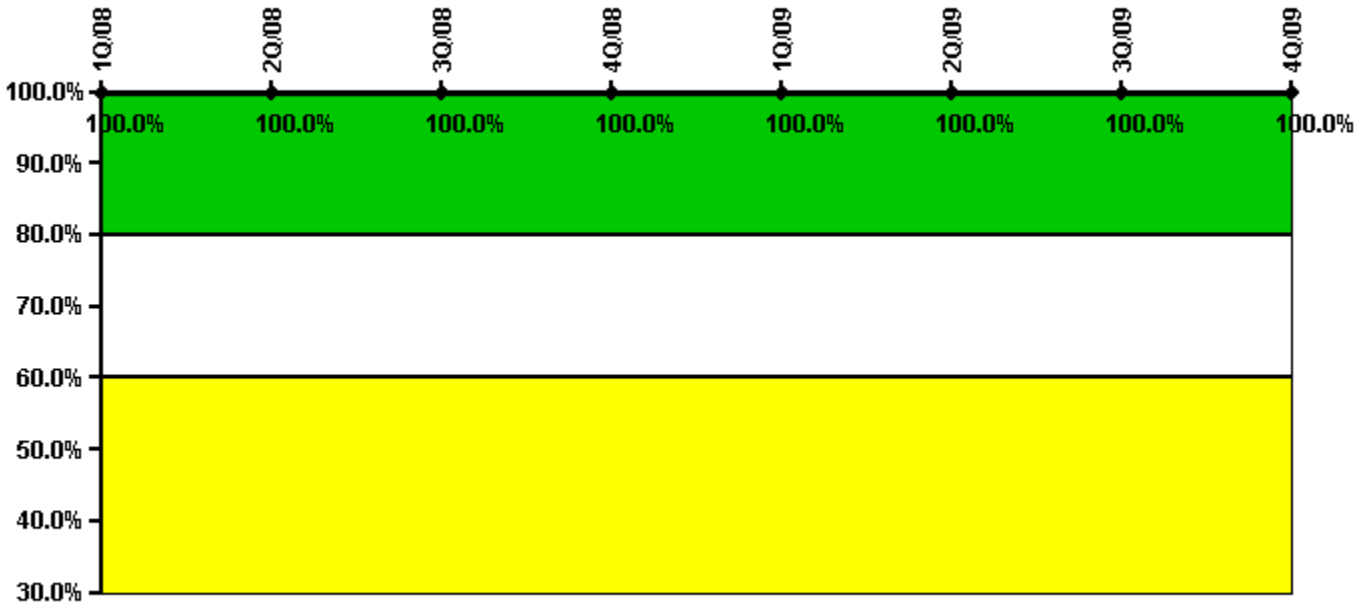
Thresholds: White < 90.0% Yellow < 70.0%

### Notes

Drill/Exercise Performance	1Q/08	2Q/08	3Q/08	4Q/08	1Q/09	2Q/09	3Q/09	4Q/09
Successful opportunities	28.0	50.0	90.0	74.0	22.0	38.0	95.0	62.0
Total opportunities	28.0	54.0	92.0	76.0	24.0	38.0	96.0	64.0
Indicator value	96.5%	95.7%	95.4%	96.2%	96.0%	96.1%	96.7%	97.2%

Licensee Comments: none

## ERO Drill Participation



Thresholds: White < 80.0% Yellow < 60.0%

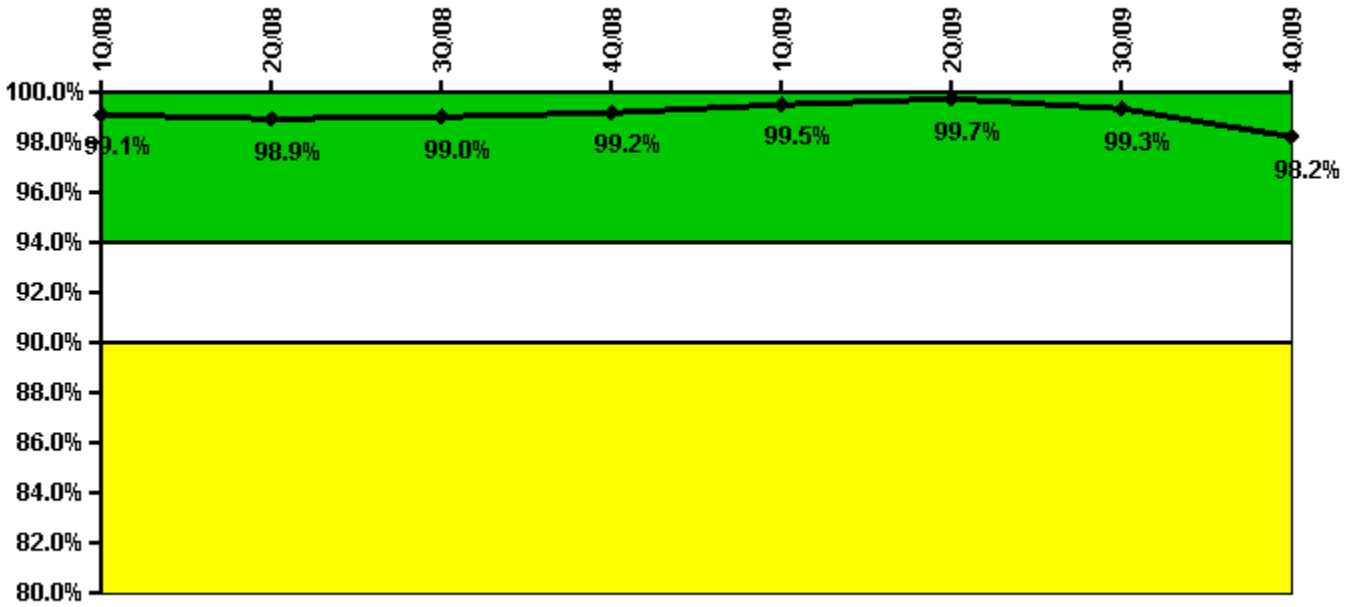
### Notes

ERO Drill Participation	1Q/08	2Q/08	3Q/08	4Q/08	1Q/09	2Q/09	3Q/09	4Q/09
Participating Key personnel	114.0	99.0	94.0	93.0	94.0	98.0	100.0	103.0
Total Key personnel	114.0	99.0	94.0	93.0	94.0	98.0	100.0	103.0
Indicator value	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Licensee Comments: none

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# Alert & Notification System



**Thresholds: White < 94.0% Yellow < 90.0%**

## Notes

Alert & Notification System	1Q/08	2Q/08	3Q/08	4Q/08	1Q/09	2Q/09	3Q/09	4Q/09
Successful siren-tests	786	627	486	1220	1156	1200	1159	1105
Total sirens-tests	793	637	488	1225	1158	1204	1181	1163
Indicator value	99.1%	98.9%	99.0%	99.2%	99.5%	99.7%	99.3%	98.2%

Licensee Comments: none

# Occupational Exposure Control Effectiveness



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

## Notes

Occupational Exposure Control Effectiveness	1Q/08	2Q/08	3Q/08	4Q/08	1Q/09	2Q/09	3Q/09	4Q/09
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

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# RETS/ODCM Radiological Effluent



Thresholds: White > 1.0 Yellow > 3.0

## Notes

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