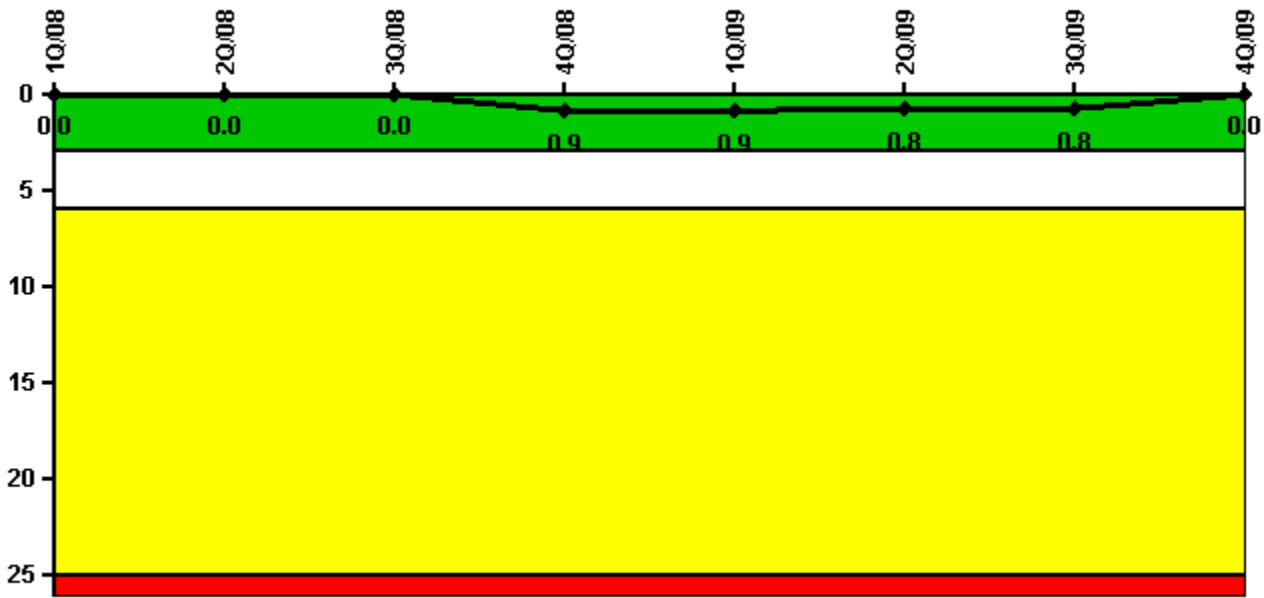


# Brunswick 1

## 4Q/2009 Performance Indicators

Licensee's General Comments: A Change File is required this quarter due to the addition of missed Unavailability hours from OPT-10.1.1, which added approximately 1 hour per quarter since the 2nd quarter 2008. The reported MSPI values did not change over this time period and the color remained Green.

### Unplanned Scrams per 7000 Critical Hrs



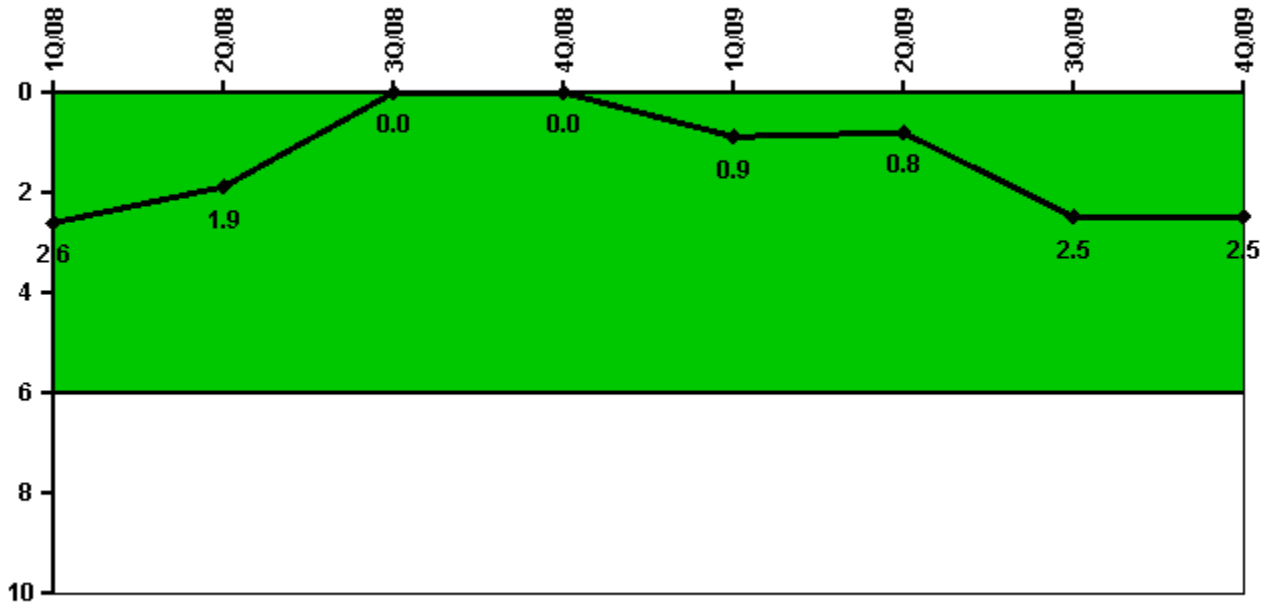
Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

### 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	0	0	0	1.0	0	0	0	0
Critical hours	1778.0	1532.6	2208.0	2032.9	2159.0	2184.0	1971.6	2209.0
Indicator value	0	0	0	0.9	0.9	0.8	0.8	0

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	1.0	0	2.0	0
Critical hours	1778.0	1532.6	2208.0	2032.9	2159.0	2184.0	1971.6	2209.0
Indicator value	2.6	1.9	0	0	0.9	0.8	2.5	2.5

Licensee Comments: none

## Unplanned Scrams with Complications



Thresholds: White > 1.0

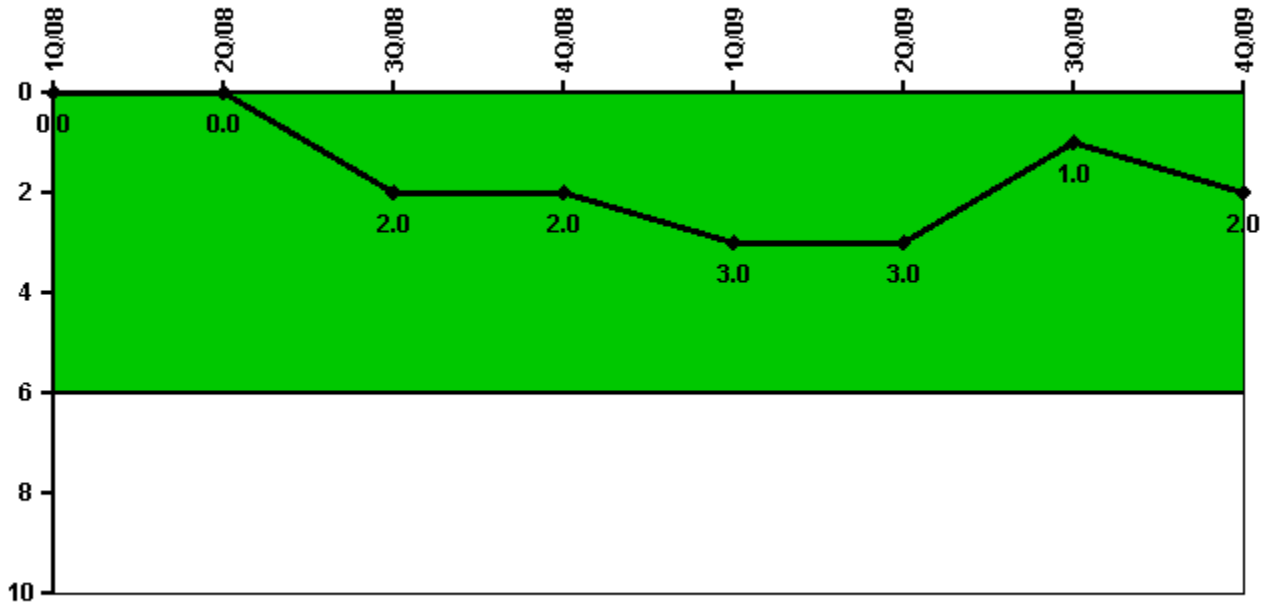
### Notes

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

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## Safety System Functional Failures (BWR)



Thresholds: White > 6.0

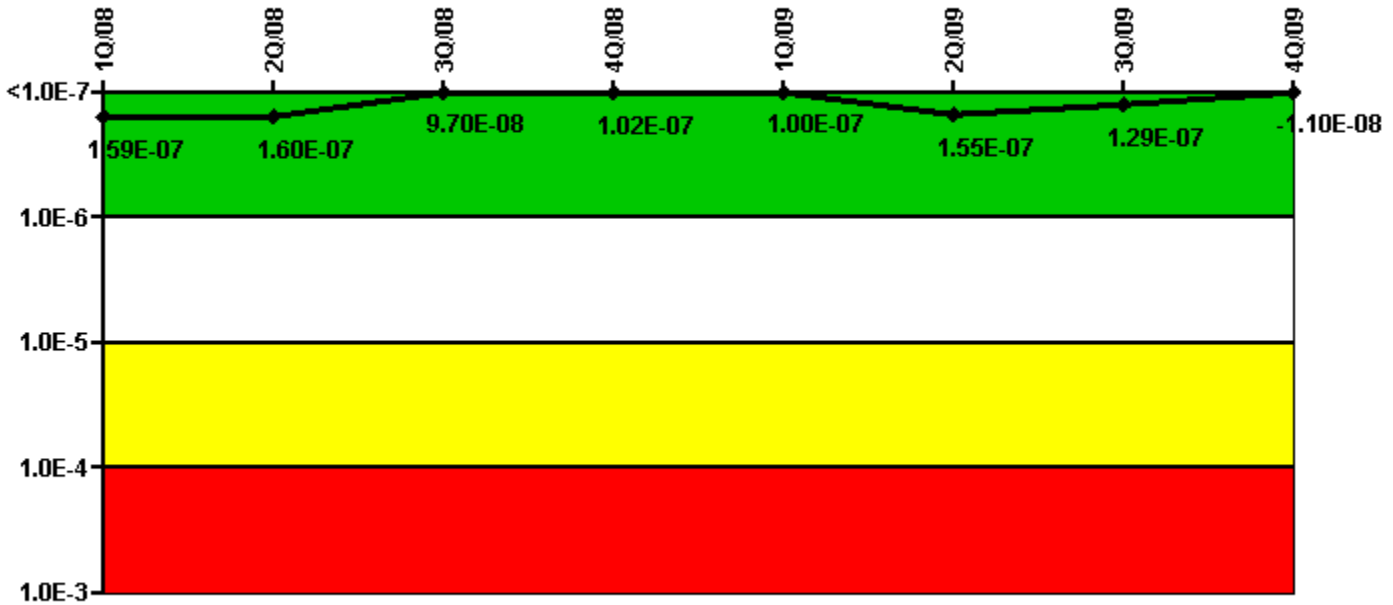
### Notes

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

Licensee Comments:

4Q/09: LER 1-2009-003 was submitted on 10/13/2009. This LER reported inoperability of HPCI due to a failure in the NUMAC steam leak detection system (thermocouple input board failure).

# Mitigating Systems Performance Index, Emergency AC Power System



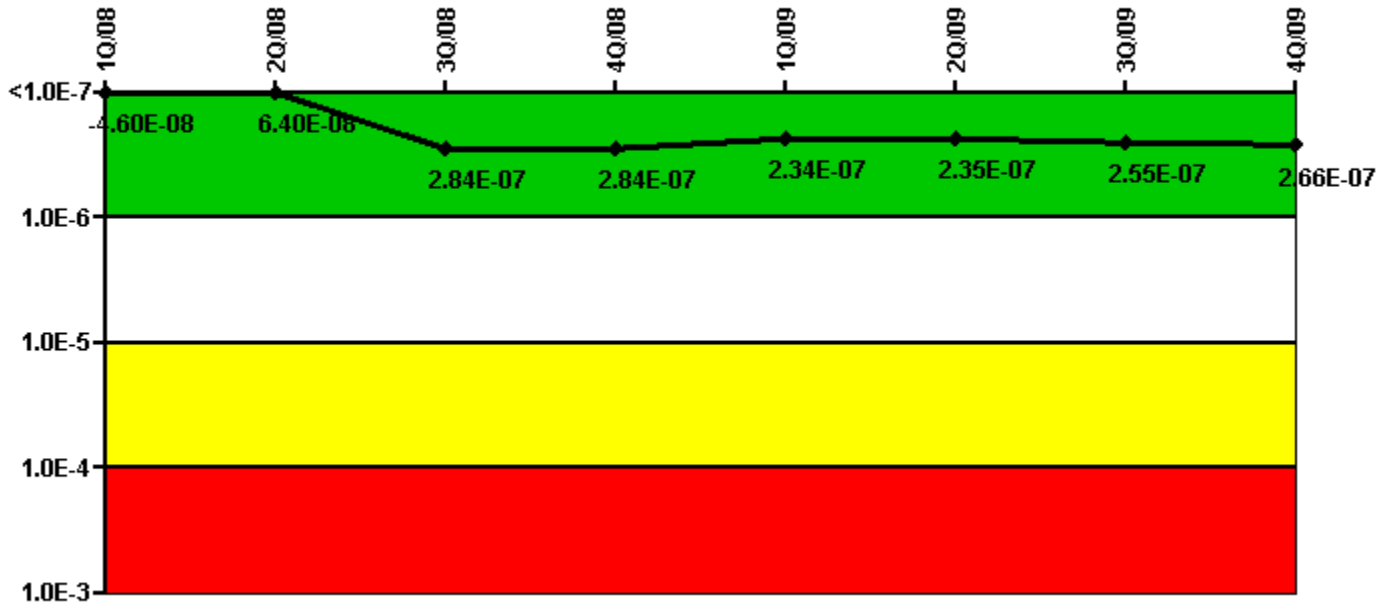
Thresholds: White > 1.00E-6 Yellow > 1.00E-5 Red > 1.00E-4

## 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 (ΔCDF)	1.90E-08	2.00E-08	1.30E-08	1.90E-08	1.80E-08	2.50E-08	3.20E-08	1.10E-08
URI (ΔCDF)	1.40E-07	1.40E-07	8.40E-08	8.30E-08	8.20E-08	1.30E-07	9.70E-08	-2.20E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	1.59E-07	1.60E-07	9.70E-08	1.02E-07	1.00E-07	1.55E-07	1.29E-07	-1.10E-08

Licensee Comments: none

# Mitigating Systems Performance Index, High Pressure Injection System



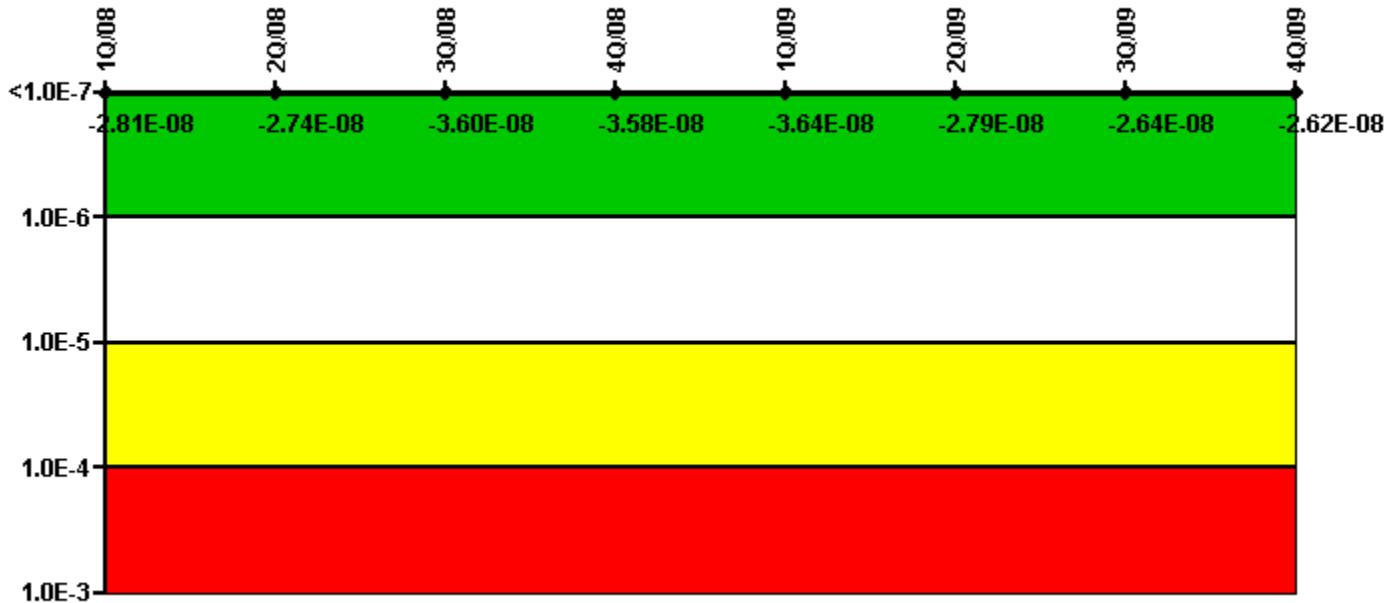
Thresholds: White > 1.00E-6 Yellow > 1.00E-5 Red > 1.00E-4

## 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)	2.10E-08	1.00E-07	2.10E-07	2.10E-07	1.60E-07	1.60E-07	1.80E-07	1.90E-07
URI ( $\Delta$ CDF)	-6.70E-08	-3.60E-08	7.40E-08	7.40E-08	7.40E-08	7.50E-08	7.50E-08	7.60E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-4.60E-08	6.40E-08	2.84E-07	2.84E-07	2.34E-07	2.35E-07	2.55E-07	2.66E-07

Licensee Comments: none

# Mitigating Systems Performance Index, Heat Removal System



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

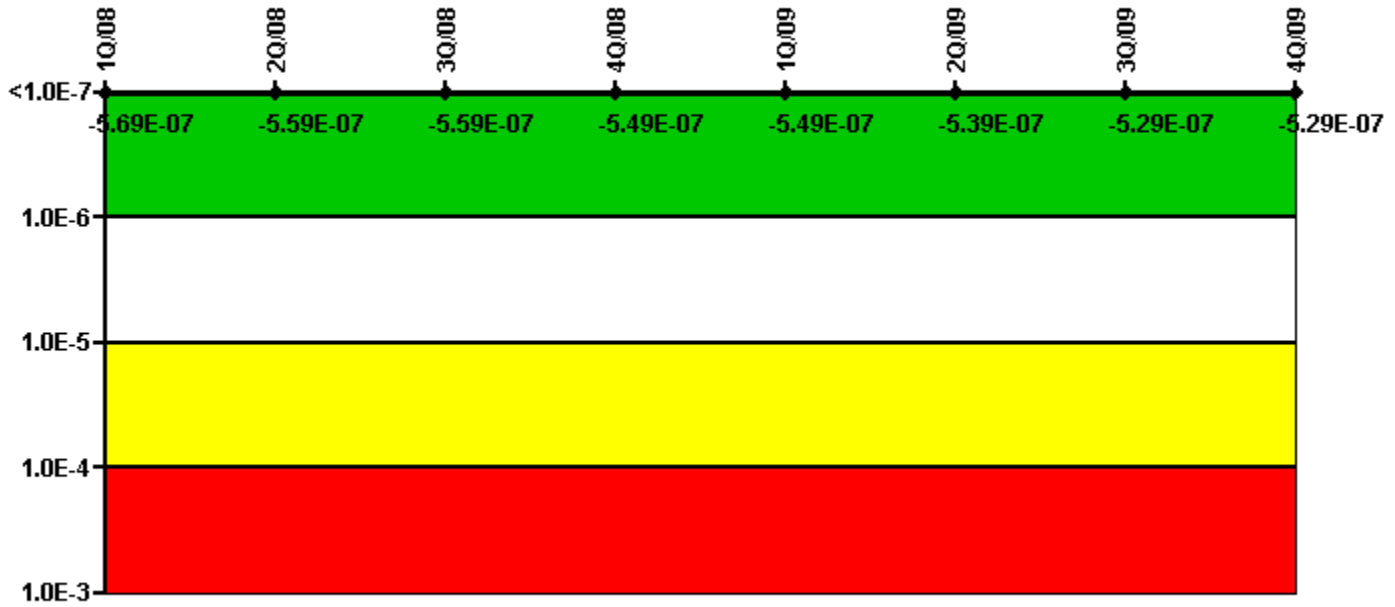
## Notes

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)	8.80E-10	1.60E-09	9.70E-10	1.20E-09	6.50E-10	8.10E-09	9.60E-09	9.80E-09
URI ( $\Delta$ CDF)	-2.90E-08	-2.90E-08	-3.70E-08	-3.70E-08	-3.70E-08	-3.60E-08	-3.60E-08	-3.60E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-2.81E-08	-2.74E-08	-3.60E-08	-3.58E-08	-3.64E-08	-2.79E-08	-2.64E-08	-2.62E-08

## Licensee Comments:

4Q/09: Revision to previously submitted data: Unit 1 and Unit 2 RCIC required the addition of unavailable hours due to not reporting the performance of OPT-10.1.1. This added approximately 1 hour of planned unavailability per quarter beginning the 2nd quarter of 2008. This resulted in no change to the reported MSPI for this time period.

# Mitigating Systems Performance Index, Residual Heat Removal System



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

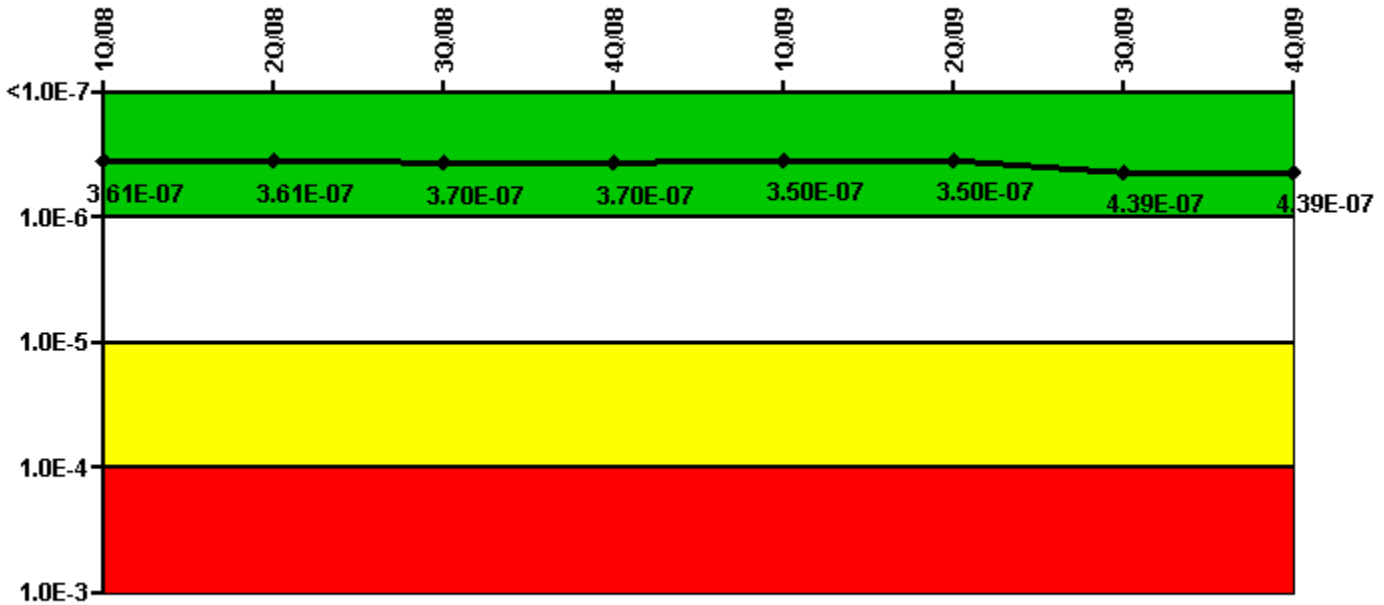
## Notes

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)	-9.90E-08	-9.90E-08	-9.90E-08	-9.90E-08	-9.90E-08	-9.90E-08	-9.90E-08	-9.90E-08
URI ( $\Delta$ CDF)	-4.70E-07	-4.60E-07	-4.60E-07	-4.50E-07	-4.50E-07	-4.40E-07	-4.30E-07	-4.30E-07
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-5.69E-07	-5.59E-07	-5.59E-07	-5.49E-07	-5.49E-07	-5.39E-07	-5.29E-07	-5.29E-07

Licensee Comments: none



# Mitigating Systems Performance Index, Cooling Water Systems



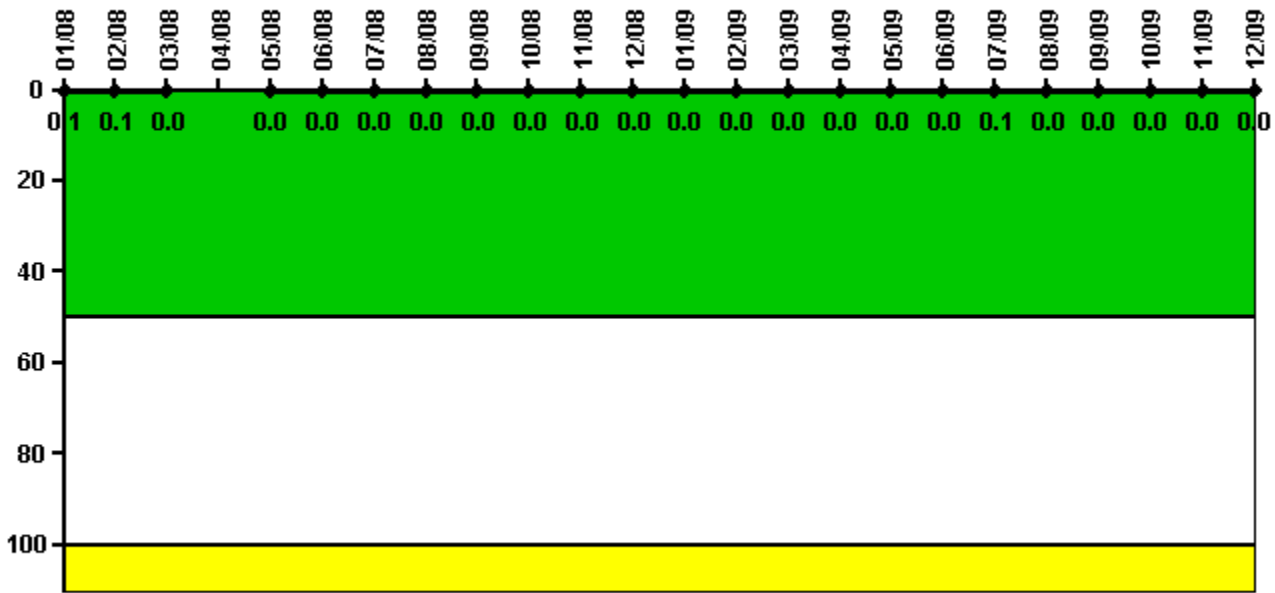
Thresholds: White > 1.00E-6 Yellow > 1.00E-5 Red > 1.00E-4

## 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 ( $\Delta$ CDF)	3.20E-07	3.20E-07	3.30E-07	3.30E-07	3.10E-07	3.10E-07	4.00E-07	4.00E-07
URI ( $\Delta$ CDF)	4.10E-08	4.10E-08	4.00E-08	4.00E-08	4.00E-08	4.00E-08	3.90E-08	3.90E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	3.61E-07	3.61E-07	3.70E-07	3.70E-07	3.50E-07	3.50E-07	4.39E-07	4.39E-07

Licensee Comments: none

# Reactor Coolant System Activity



Thresholds: White > 50.0 Yellow > 100.0

## Notes

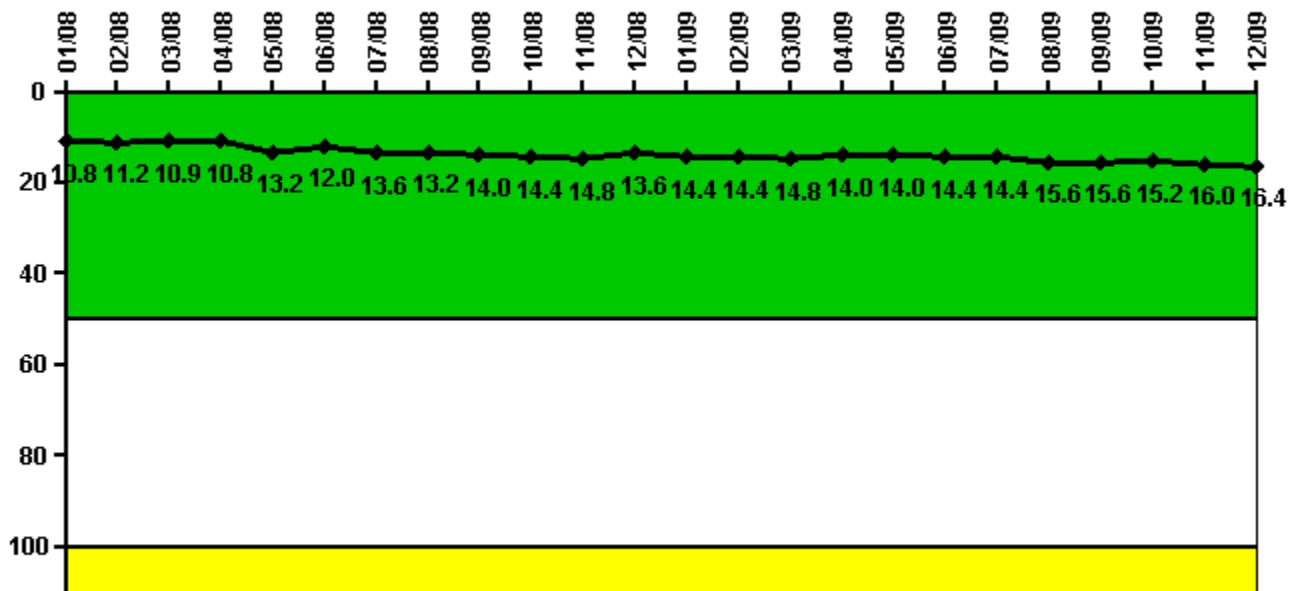
Reactor Coolant System Activity	1/08	2/08	3/08	4/08	5/08	6/08	7/08	8/08	9/08	10/08	11/08	12/08
Maximum activity	0.000130	0.000169	0.000089	N/A	0.000057	0.000058	0.000065	0.000056	0.000062	0.000060	0.000060	0.000089
Technical specification limit	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Indicator value	0.1	0.1	0	N/A	0	0	0	0	0	0	0	0

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	0.000063	0.000065	0.000068	0.000070	0.000077	0.000067	0.000130	0.000071	0.000054	0.000072	0.000076	0.000068
Technical specification limit	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Indicator value	0	0	0	0	0	0	0.1	0	0	0	0	0

Licensee Comments: none

## Reactor Coolant System Leakage



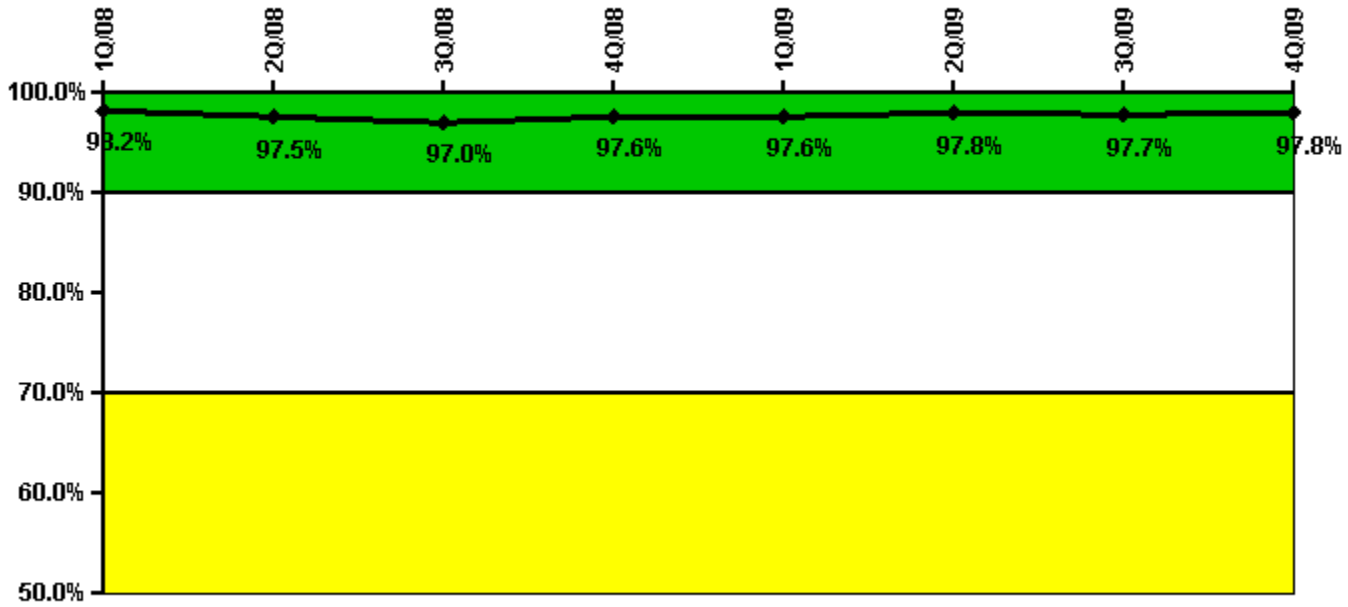
Thresholds: White > 50.0 Yellow > 100.0

### 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	2.700	2.800	2.730	2.700	3.300	3.000	3.400	3.300	3.500	3.600	3.700	3.400
Technical specification limit	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
Indicator value	10.8	11.2	10.9	10.8	13.2	12.0	13.6	13.2	14.0	14.4	14.8	13.6
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	3.600	3.600	3.700	3.500	3.500	3.600	3.600	3.900	3.900	3.800	4.000	4.100
Technical specification limit	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
Indicator value	14.4	14.4	14.8	14.0	14.0	14.4	14.4	15.6	15.6	15.2	16.0	16.4

Licensee Comments: none

## Drill/Exercise Performance



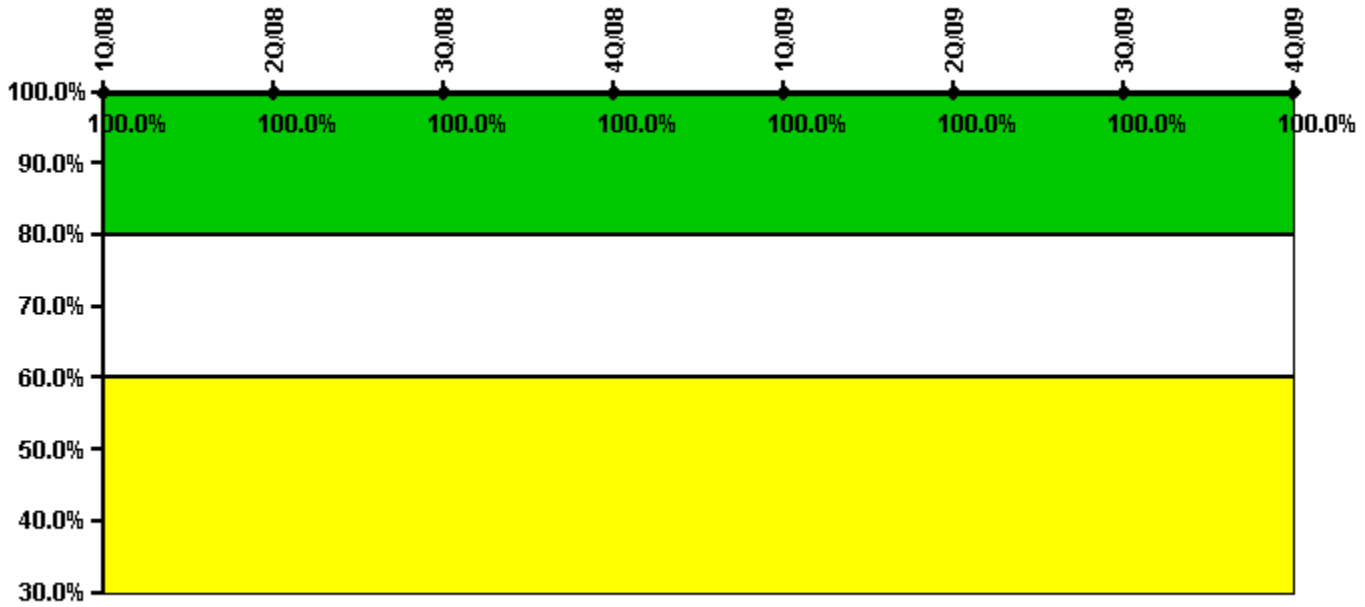
Thresholds: White < 90.0% Yellow < 70.0%

### Notes

Drill/Exercise Performance	1Q/08	2Q/08	3Q/08	4Q/08	1Q/09	2Q/09	3Q/09	4Q/09
Successful opportunities	0	13.0	21.0	58.0	0	27.0	16.0	39.0
Total opportunities	0	14.0	22.0	60.0	0	27.0	16.0	39.0
Indicator value	98.2%	97.5%	97.0%	97.6%	97.6%	97.8%	97.7%	97.8%

Licensee Comments: none

## ERO Drill Participation



Thresholds: White < 80.0% Yellow < 60.0%

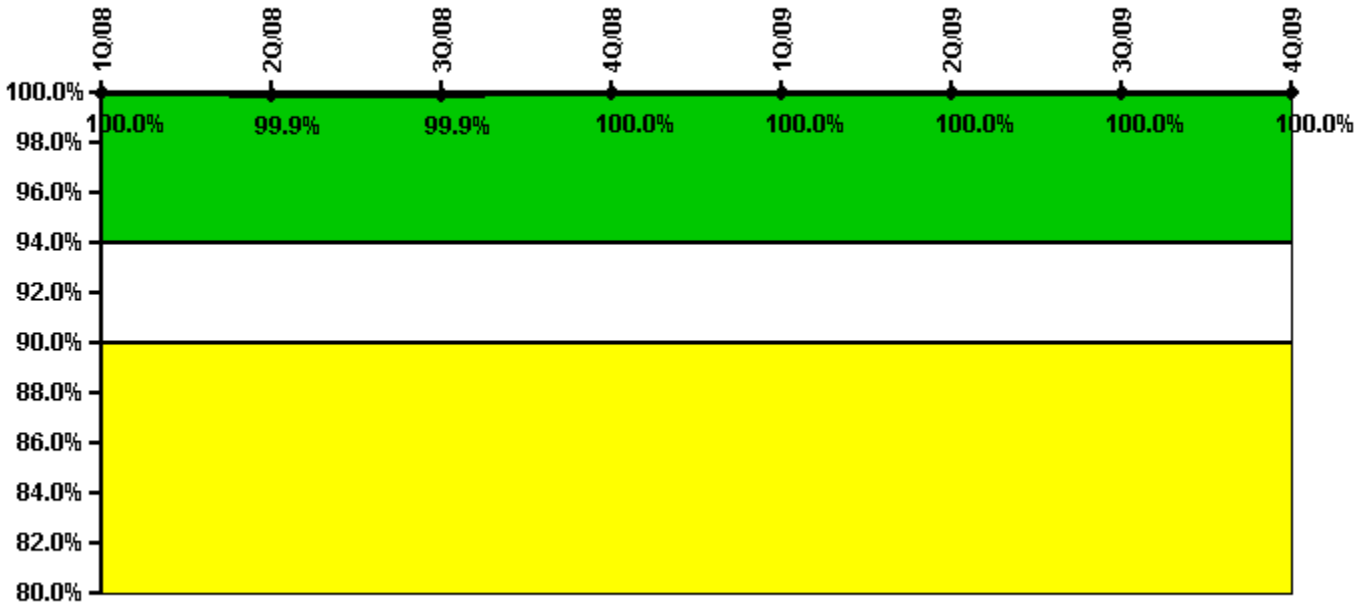
### Notes

ERO Drill Participation	1Q/08	2Q/08	3Q/08	4Q/08	1Q/09	2Q/09	3Q/09	4Q/09
Participating Key personnel	97.0	95.0	93.0	95.0	92.0	97.0	102.0	97.0
Total Key personnel	97.0	95.0	93.0	95.0	92.0	97.0	102.0	97.0
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	532	531	570	570	532	532	531	570
Total sirens-tests	532	532	570	570	532	532	532	570
Indicator value	100.0%	99.9%	99.9%	100.0%	100.0%	100.0%	100.0%	100.0%

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.