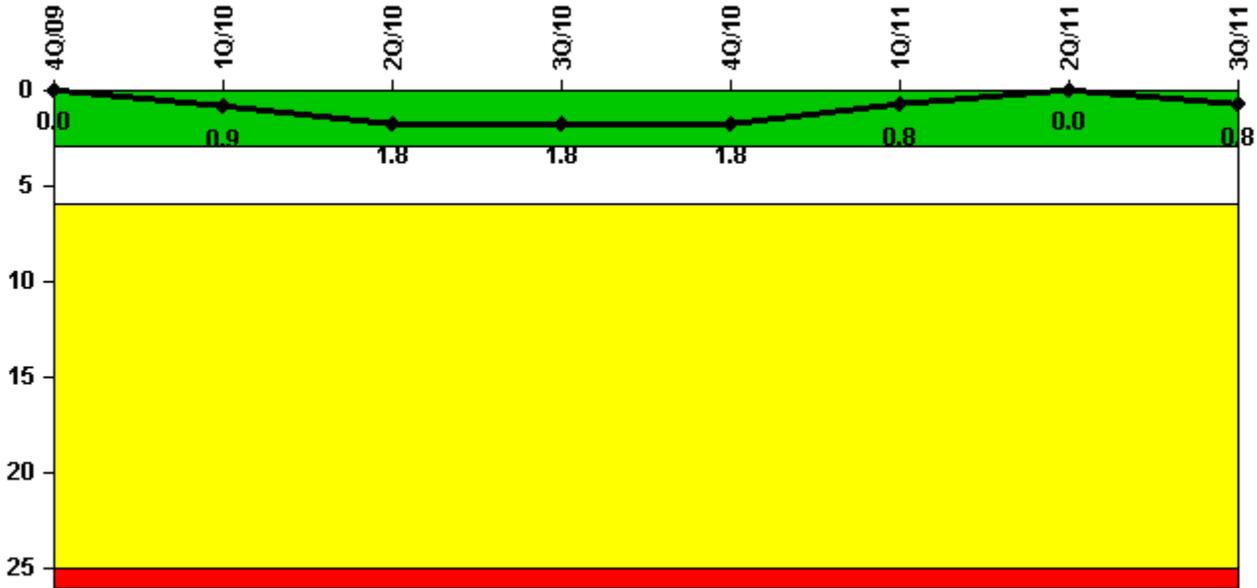


# Calvert Cliffs 1

## 3Q/2011 Performance Indicators

Licensee's General Comments: Several changes were made in ePix due to PRA and planned baseline unavailability data due to errors made when entering updated PRA model data in March. Other changes were made due to assignment of MSPI Unit effect for the AFW alternate Unit supply valves to the affected Unit all the way back to the MSPI origin in 2Q2006.

### Unplanned Scrams per 7000 Critical Hrs



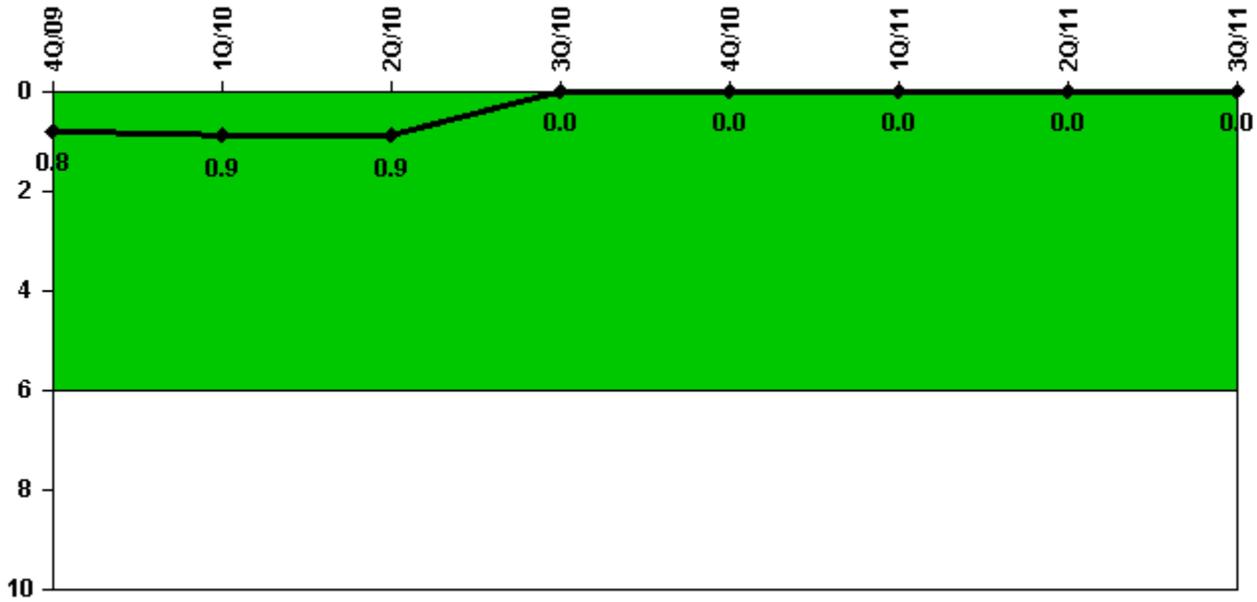
Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

### Notes

Unplanned Scrams per 7000 Critical Hrs	4Q/09	1Q/10	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11
Unplanned scrams	0	1.0	1.0	0	0	0	0	1.0
Critical hours	2209.0	1390.9	2031.4	2208.0	2209.0	2159.0	2184.0	2133.6
Indicator value	0	0.9	1.8	1.8	1.8	0.8	0	0.8

Licensee Comments: none

## Unplanned Power Changes per 7000 Critical Hrs



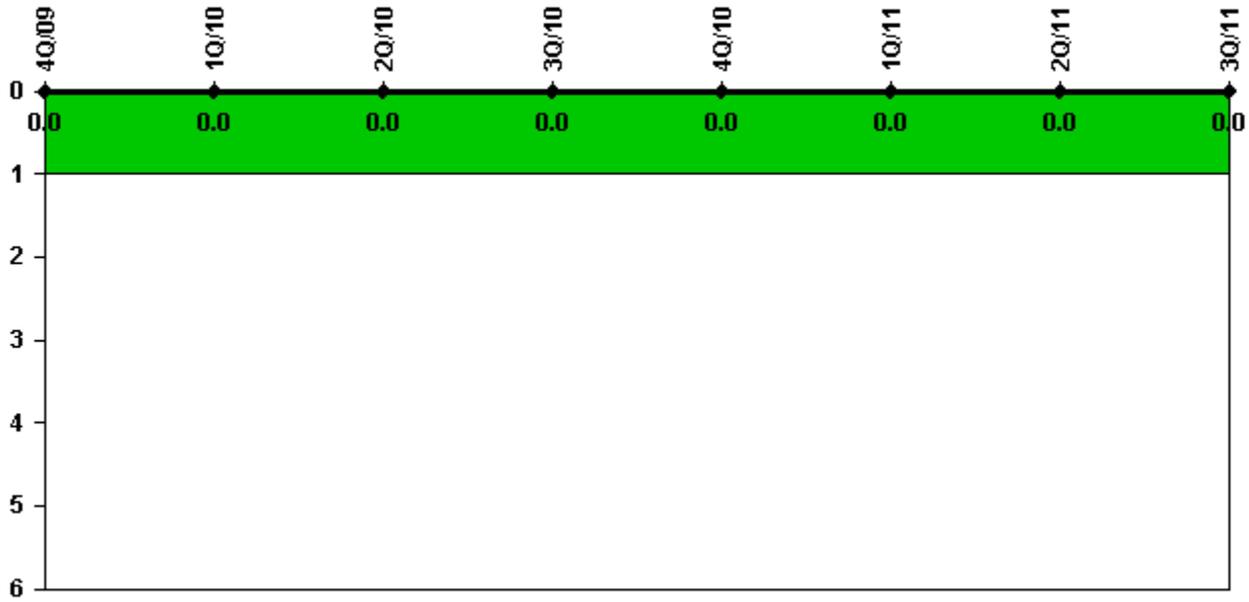
Thresholds: White > 6.0

### Notes

Unplanned Power Changes per 7000 Critical Hrs	4Q/09	1Q/10	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11
Unplanned power changes	0	0	0	0	0	0	0	0
Critical hours	2209.0	1390.9	2031.4	2208.0	2209.0	2159.0	2184.0	2133.6
Indicator value	0.8	0.9	0.9	0	0	0	0	0

Licensee Comments: none

# Unplanned Scrams with Complications



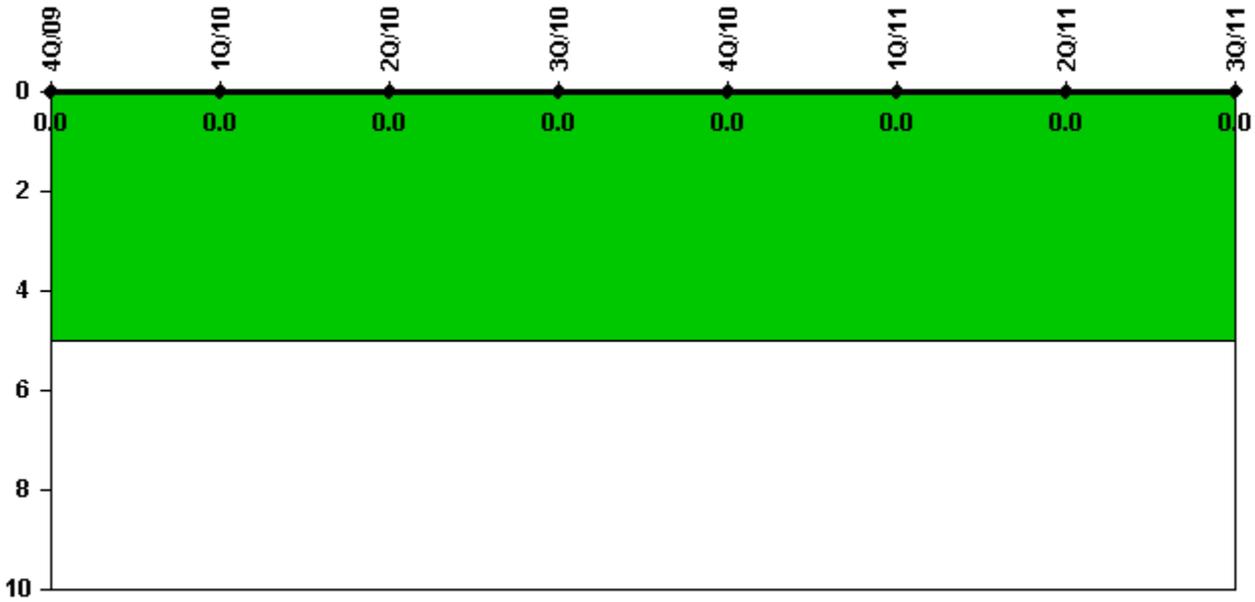
Thresholds: White > 1.0

## Notes

Unplanned Scrams with Complications	4Q/09	1Q/10	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11	3Q/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)



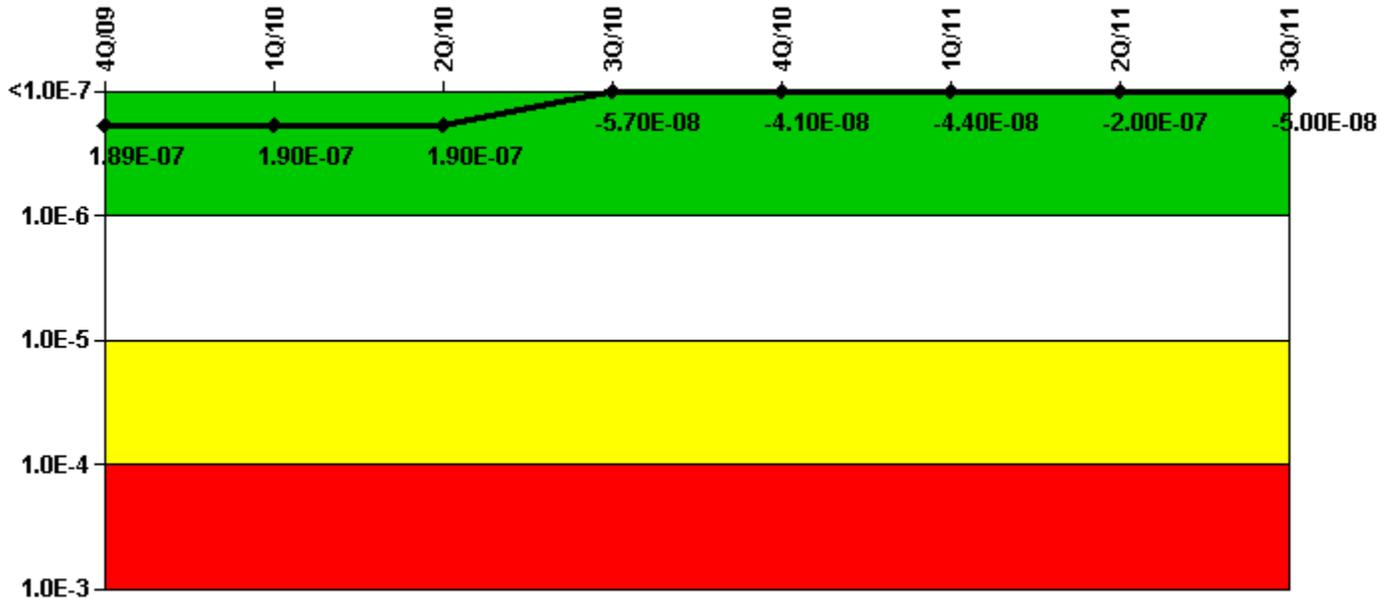
Thresholds: White > 5.0

### Notes

Safety System Functional Failures (PWR)	4Q/09	1Q/10	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11
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

# Mitigating Systems Performance Index, Emergency AC Power System



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

## Notes

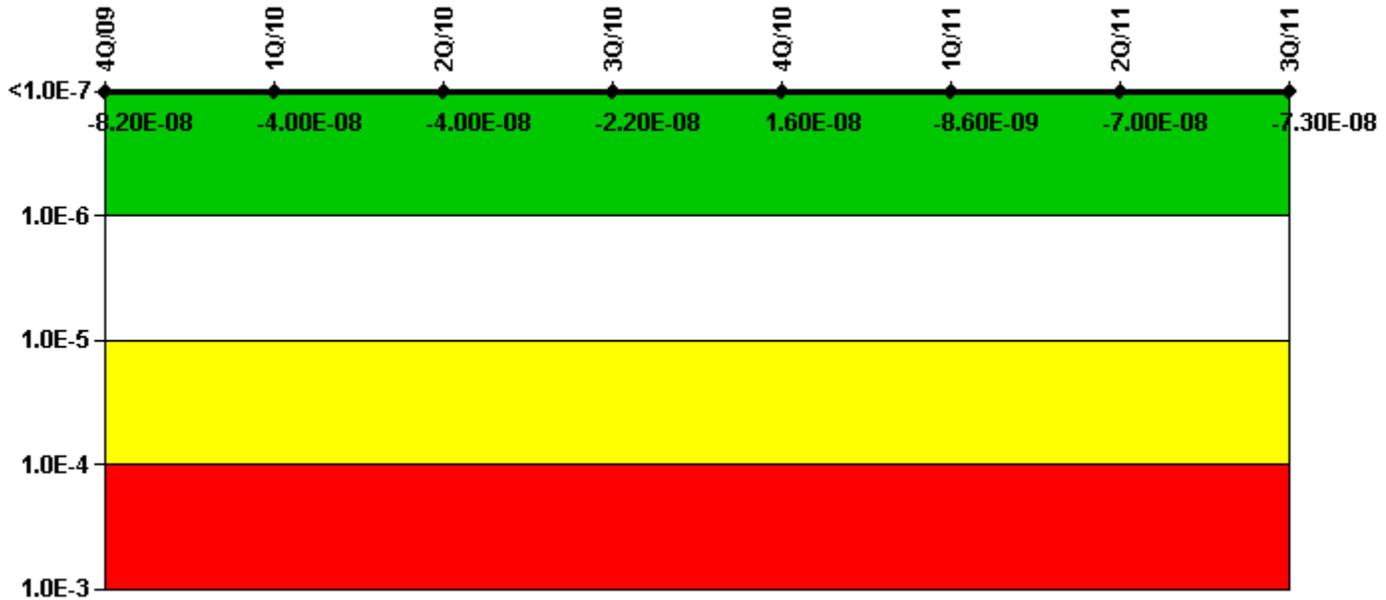
Mitigating Systems Performance Index, Emergency AC Power System	4Q/09	1Q/10	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11
UAI ( $\Delta$ CDF)	1.40E-07	1.42E-07	1.49E-07	5.95E-08	7.66E-08	7.32E-08	-3.38E-08	-1.22E-08
URI ( $\Delta$ CDF)	4.90E-08	4.43E-08	4.37E-08	-1.17E-07	-1.17E-07	-1.17E-07	-1.69E-07	-3.76E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	1.89E-07	1.90E-07	1.90E-07	-5.70E-08	-4.10E-08	-4.40E-08	-2.00E-07	-5.00E-08

Licensee Comments:

3Q/11: Correction to PRA and planned baseline unavailability data due to errors made when entering updated PRA model data in March 2011 (Ref: CR-2011-008850)

2Q/11: Changed PRA Parameter(s). 10-11-11: Correction to PRA and planned baseline unavailability data due to errors made when entering updated PRA model data in March 2011 (Ref: CR-2011-008850)

# Mitigating Systems Performance Index, High Pressure Injection System



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

## Notes

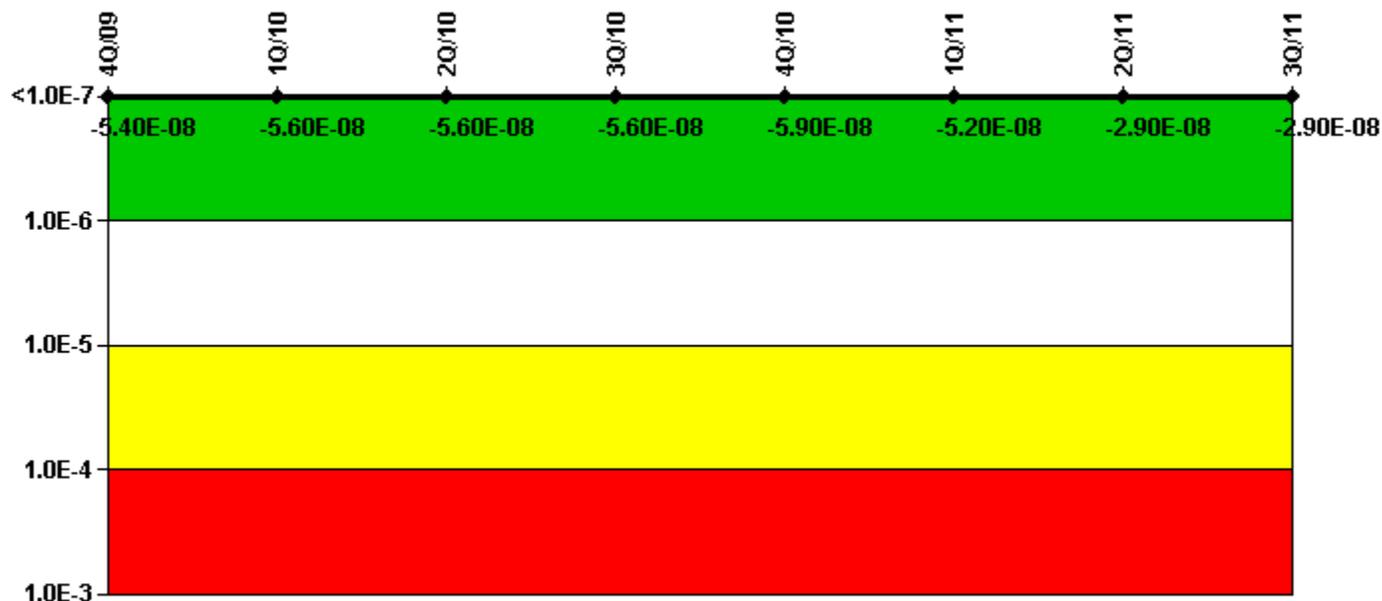
Mitigating Systems Performance Index, High Pressure Injection System	4Q/09	1Q/10	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11
UAI ( $\Delta$ CDF)	-2.20E-08	2.53E-08	2.52E-08	4.31E-08	7.86E-08	4.45E-08	-3.60E-08	-3.96E-08
URI ( $\Delta$ CDF)	-6.00E-08	-6.57E-08	-6.52E-08	-6.55E-08	-6.27E-08	-5.31E-08	-3.43E-08	-3.35E-08
PLE	NO							
Indicator value	-8.20E-08	-4.00E-08	-4.00E-08	-2.20E-08	1.60E-08	-8.60E-09	-7.00E-08	-7.30E-08

Licensee Comments:

3Q/11: Correction to PRA and planned baseline unavailability data due to errors made when entering updated PRA model data in March 2011 (Ref: CR-2011-008850)

2Q/11: Changed PRA Parameter(s). 10-11-11: Correction to PRA and planned baseline unavailability data due to errors made when entering updated PRA model data in March 2011 (Ref: CR-2011-008850)

## 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/09	1Q/10	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11
UAI ( $\Delta$ CDF)	6.86E-09	7.68E-09	7.40E-09	6.15E-09	1.39E-09	-1.91E-09	-7.61E-09	-7.61E-09
URI ( $\Delta$ CDF)	-6.10E-08	-6.42E-08	-6.34E-08	-6.25E-08	-6.08E-08	-5.02E-08	-2.13E-08	-2.19E-08
PLE	NO							
Indicator value	-5.40E-08	-5.60E-08	-5.60E-08	-5.60E-08	-5.90E-08	-5.20E-08	-2.90E-08	-2.90E-08

### Licensee Comments:

1Q/11: 10-11-11: Allocation of Unit cross-connect valve to affected Unit (Ref: CR-2011-008850)

4Q/10: 10-11-11: Allocation of Unit cross-connect valve to affected Unit (Ref: CR-2011-008850)

3Q/10: 10-11-11: Allocation of Unit cross-connect valve to affected Unit (Ref: CR-2011-008850)

2Q/10: 10-11-11: Allocation of Unit cross-connect valve to affected Unit (Ref: CR-2011-008850)

1Q/10: 10-11-11: Allocation of Unit cross-connect valve to affected Unit (Ref: CR-2011-008850)

4Q/09: Review of unavailability indicated planned and unplanned hours did not get recorded. No thresholds or color changes were crossed as result of this change. 10-11-11: Allocation of Unit cross-connect valve to affected Unit (Ref: CR-2011-008850)

3Q/09: 10-11-11: Allocation of Unit cross-connect valve to affected Unit (Ref: CR-2011-008850)

2Q/09: 10-11-11: Allocation of Unit cross-connect valve to affected Unit (Ref: CR-2011-008850)

1Q/09: 10-11-11: Allocation of Unit cross-connect valve to affected Unit (Ref: CR-2011-008850)

4Q/08: 4-9-9, changes result from changes made in August 2007 unavailability data. 10-11-11: Allocation of Unit cross-connect valve to affected Unit (Ref: CR-2011-008850)

3Q/08: 4-9-9, changes result from changes made in August 2007 unavailability data. 10-11-11: Allocation of Unit cross-connect valve to affected Unit (Ref: CR-2011-008850)

2Q/08: 4-9-9, changes result from changes made in August 2007 unavailability data. 10-11-11: Allocation of Unit cross-connect valve to affected Unit (Ref: CR-2011-008850)

1Q/08: 4-9-9, changes result from changes made in August 2007 unavailability data. 10-11-11: Allocation of Unit cross-connect valve to affected Unit (Ref: CR-2011-008850)

4Q/07: Unavailable hours originally included time whenever AFW room doors were open due to HELB concerns. Room doors are outside AFW system boundaries and NEI-99-02 does not require unavailable hours solely from support systems to be cascaded to MSPI system. 10-11-11: Allocation of Unit cross-connect valve to affected Unit (Ref: CR-2011-008850)

3Q/07: Unavailable hours originally included time whenever AFW room doors were open due to HELB concerns. Room doors are outside AFW system boundaries and NEI-99-02 does not require unavailable hours solely from support systems to be cascaded to MSPI system. 10-11-11: Allocation of Unit cross-connect valve to affected Unit (Ref: CR-2011-008850)

2Q/07: Unavailable hours originally included time whenever AFW room doors were open due to HELB concerns. Room doors are outside AFW system boundaries and NEI-99-02 does not require unavailable hours solely from support systems to be cascaded to MSPI system. 10-10-11: Allocation of Unit cross-connect valve to affected Unit (Ref: CR-2011-008850)

1Q/07: Unavailable hours originally included time whenever AFW room doors were open due to HELB concerns. Room doors are outside AFW system boundaries and NEI-99-02 does not require unavailable hours solely from support systems to be cascaded to MSPI system. 10-10-11: Allocation of Unit cross-connect valve to affected Unit (Ref: CR-2011-008850)

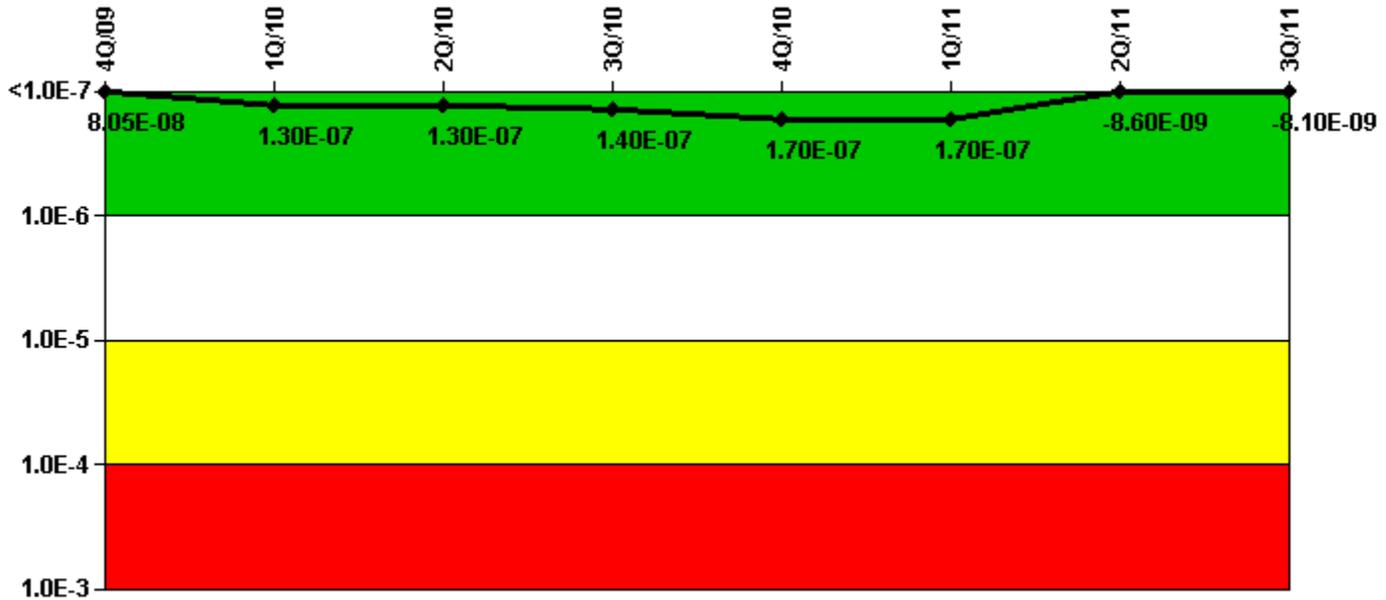
4Q/06: Unavailable hours originally included time whenever AFW room doors were open due to HELB concerns. Room doors are outside AFW system boundaries and NEI-99-02 does not require unavailable hours solely from support systems to be cascaded to MSPI system. 10-11-11: Allocation of Unit cross-connect valve to affected Unit (Ref: CR-2011-008850)

3Q/06: Unavailable hours originally included time whenever AFW room doors were open due to HELB concerns. Room doors are outside AFW system boundaries and NEI-99-02 does not require unavailable hours solely from support systems to be cascaded to MSPI system. 10-11-11: Allocation of Unit cross-connect valve to affected Unit (Ref: CR-2011-008850)

2Q/06: Allocation of Unit cross-connect valve to affected Unit (Ref: CR-2011-008850)

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# Mitigating Systems Performance Index, Residual Heat Removal System



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

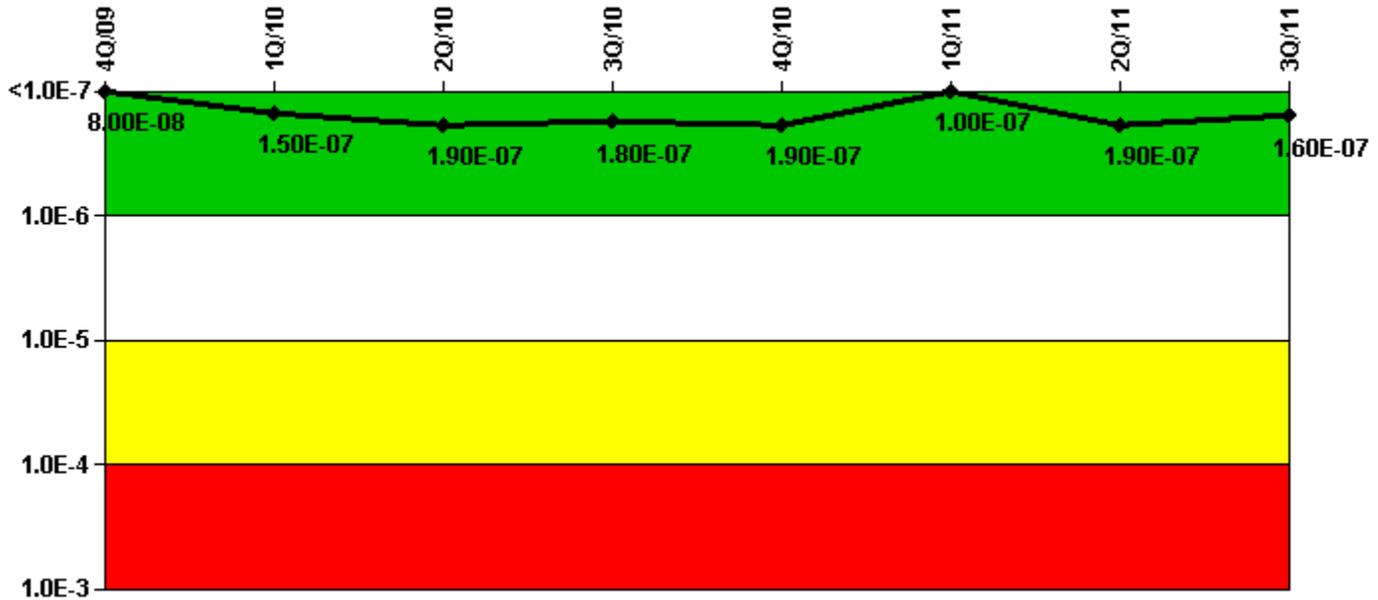
## Notes

Mitigating Systems Performance Index, Residual Heat Removal System	4Q/09	1Q/10	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11
UAI ( $\Delta$ CDF)	8.60E-08	1.34E-07	1.40E-07	1.45E-07	1.76E-07	1.73E-07	-4.29E-09	-3.89E-09
URI ( $\Delta$ CDF)	-5.50E-09	-6.05E-09	-5.87E-09	-5.50E-09	-5.59E-09	-4.58E-09	-4.26E-09	-4.17E-09
PLE	NO							
Indicator value	8.05E-08	1.30E-07	1.30E-07	1.40E-07	1.70E-07	1.70E-07	-8.60E-09	-8.10E-09

Licensee Comments:

2Q/11: Changed PRA Parameter(s). 10-11-11: Correction to PRA and planned baseline unavailability data due to errors made when entering updated PRA model data in March 2011 (Ref: CR-2011-008850)

# Mitigating Systems Performance Index, Cooling Water Systems



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

## Notes

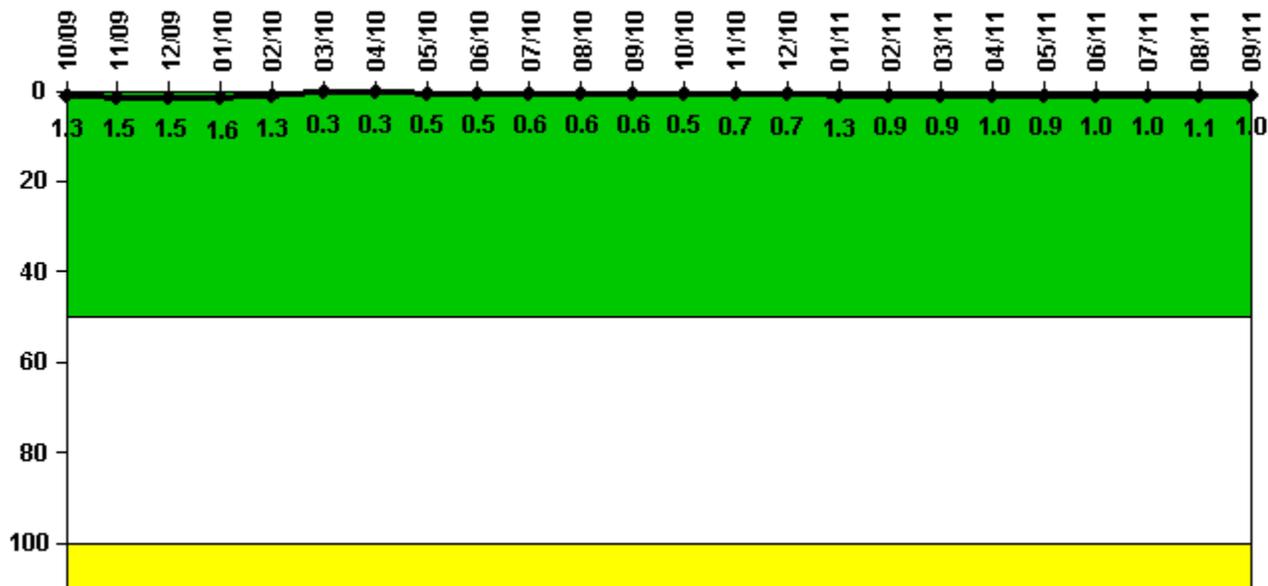
Mitigating Systems Performance Index, Cooling Water Systems	4Q/09	1Q/10	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11
UAI (ΔCDF)	2.00E-08	9.00E-08	1.25E-07	1.24E-07	1.25E-07	4.13E-08	1.61E-07	1.34E-07
URI (ΔCDF)	6.00E-08	6.07E-08	6.07E-08	6.06E-08	6.05E-08	6.06E-08	2.76E-08	2.55E-08
PLE	NO							
Indicator value	8.00E-08	1.50E-07	1.90E-07	1.80E-07	1.90E-07	1.00E-07	1.90E-07	1.60E-07

## Licensee Comments:

2Q/11: Changed PRA Parameter(s). 10-11-11: Correction to PRA and planned baseline unavailability data due to errors made when entering updated PRA model data in March 2011 (Ref: CR-2011-008850)

3Q/09: 3 changes were made to 13 CC Pp in 3Q2008: 1) Aug. 08 - Failure 1276 was not screened correctly resulting in incorrect information entered into ePIC which is now corrected. 2) Aug. 08 - No demand or run hours were reported. Demands corrected to report 1, and Unplanned Unavailable hours corrected to report 32.57. 3) Sep. 08 ??? Unplanned Unavailable hours were incorrectly reported as 0 and were corrected to 205.66.

# Reactor Coolant System Activity



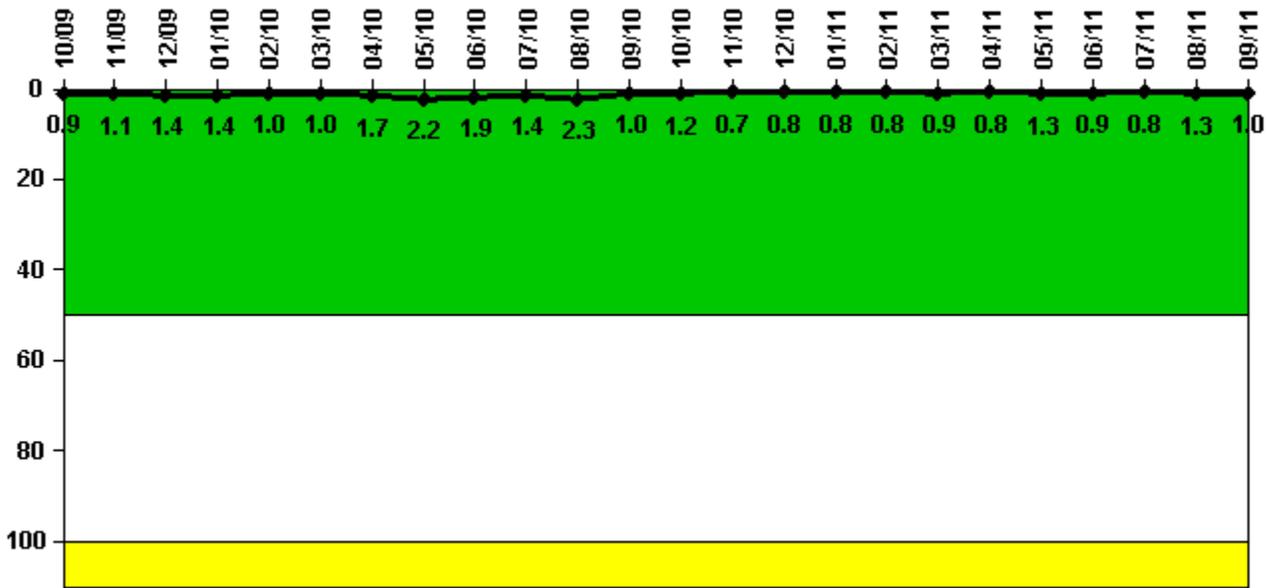
Thresholds: White > 50.0 Yellow > 100.0

## Notes

Reactor Coolant System Activity	10/09	11/09	12/09	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10
Maximum activity	0.013200	0.014500	0.015400	0.015700	0.013000	0.002870	0.003390	0.004800	0.005030	0.005990	0.005840	0.005910
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	1.3	1.5	1.5	1.6	1.3	0.3	0.3	0.5	0.5	0.6	0.6	0.6
Reactor Coolant System Activity	10/10	11/10	12/10	1/11	2/11	3/11	4/11	5/11	6/11	7/11	8/11	9/11
Maximum activity	0.005480	0.006660	0.007140	0.006540	0.004740	0.004530	0.004750	0.004730	0.004790	0.005080	0.005420	0.004790
Technical specification limit	1.0	1.0	1.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Indicator value	0.5	0.7	0.7	1.3	0.9	0.9	1.0	0.9	1.0	1.0	1.1	1.0

Licensee Comments: none

## Reactor Coolant System Leakage



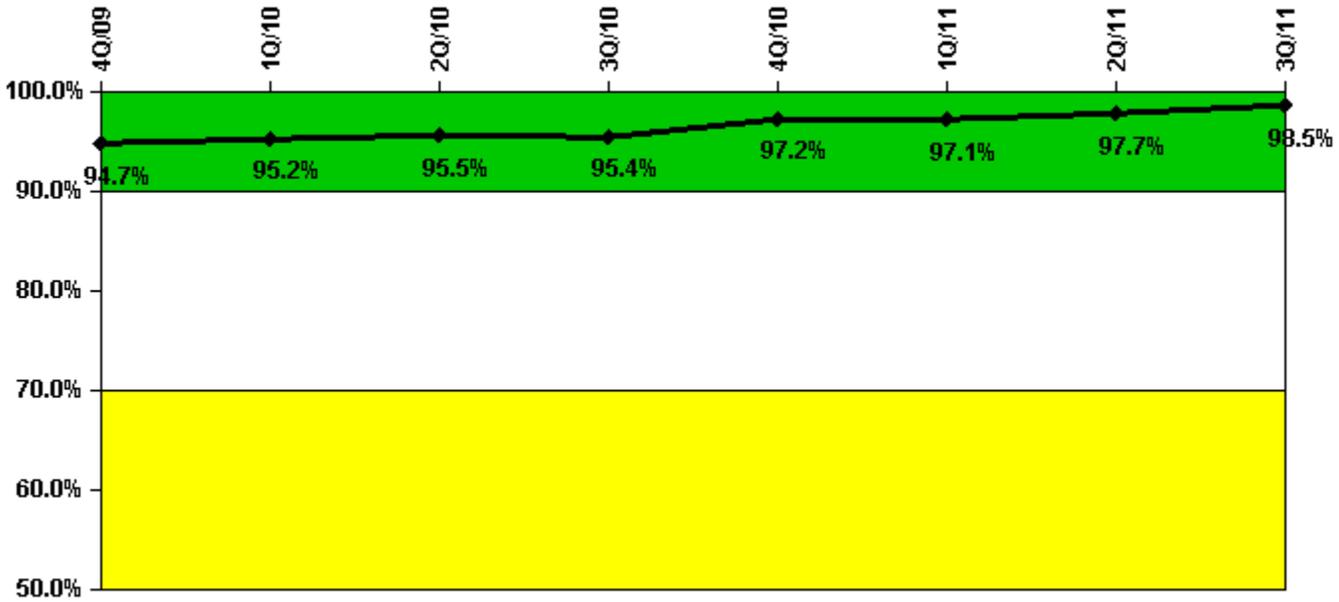
Thresholds: White > 50.0 Yellow > 100.0

### Notes

Reactor Coolant System Leakage	10/09	11/09	12/09	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10
Maximum leakage	0.090	0.110	0.140	0.140	0.100	0.100	0.168	0.224	0.194	0.140	0.230	0.100
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	1.1	1.4	1.4	1.0	1.0	1.7	2.2	1.9	1.4	2.3	1.0
Reactor Coolant System Leakage	10/10	11/10	12/10	1/11	2/11	3/11	4/11	5/11	6/11	7/11	8/11	9/11
Maximum leakage	0.120	0.070	0.080	0.080	0.080	0.090	0.080	0.130	0.090	0.080	0.130	0.100
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	1.2	0.7	0.8	0.8	0.8	0.9	0.8	1.3	0.9	0.8	1.3	1.0

Licensee Comments: none

## Drill/Exercise Performance



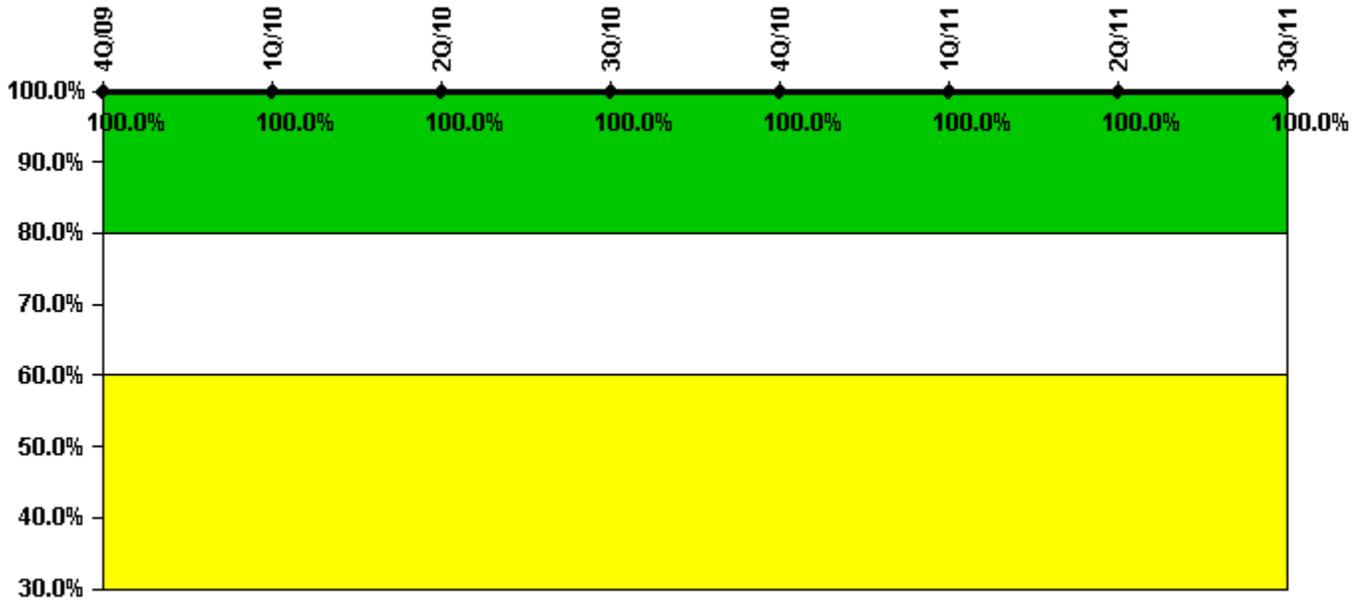
Thresholds: White < 90.0% Yellow < 70.0%

### Notes

Drill/Exercise Performance	4Q/09	1Q/10	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11
Successful opportunities	63.0	13.0	23.0	76.0	53.0	4.0	58.0	30.0
Total opportunities	64.0	13.0	23.0	78.0	54.0	4.0	59.0	30.0
Indicator value	94.7%	95.2%	95.5%	95.4%	97.2%	97.1%	97.7%	98.5%

Licensee Comments: none

## ERO Drill Participation



Thresholds: White < 80.0% Yellow < 60.0%

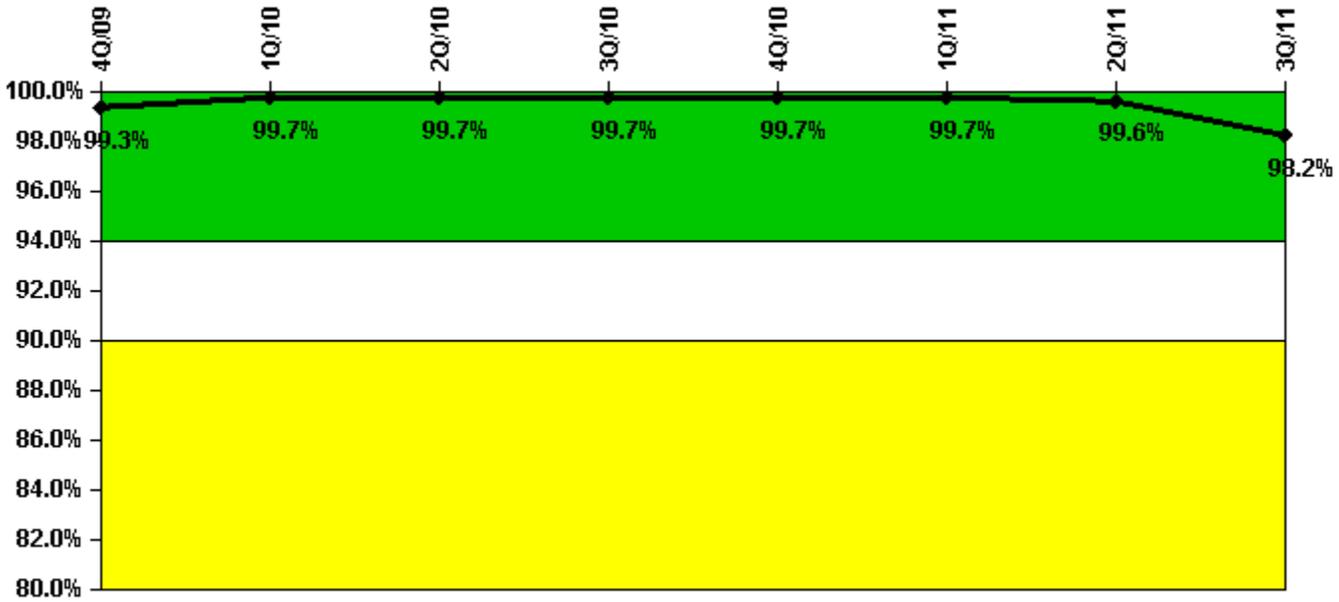
### Notes

ERO Drill Participation	4Q/09	1Q/10	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11
Participating Key personnel	95.0	98.0	87.0	86.0	88.0	85.0	88.0	83.0
Total Key personnel	95.0	98.0	87.0	86.0	88.0	85.0	88.0	83.0
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



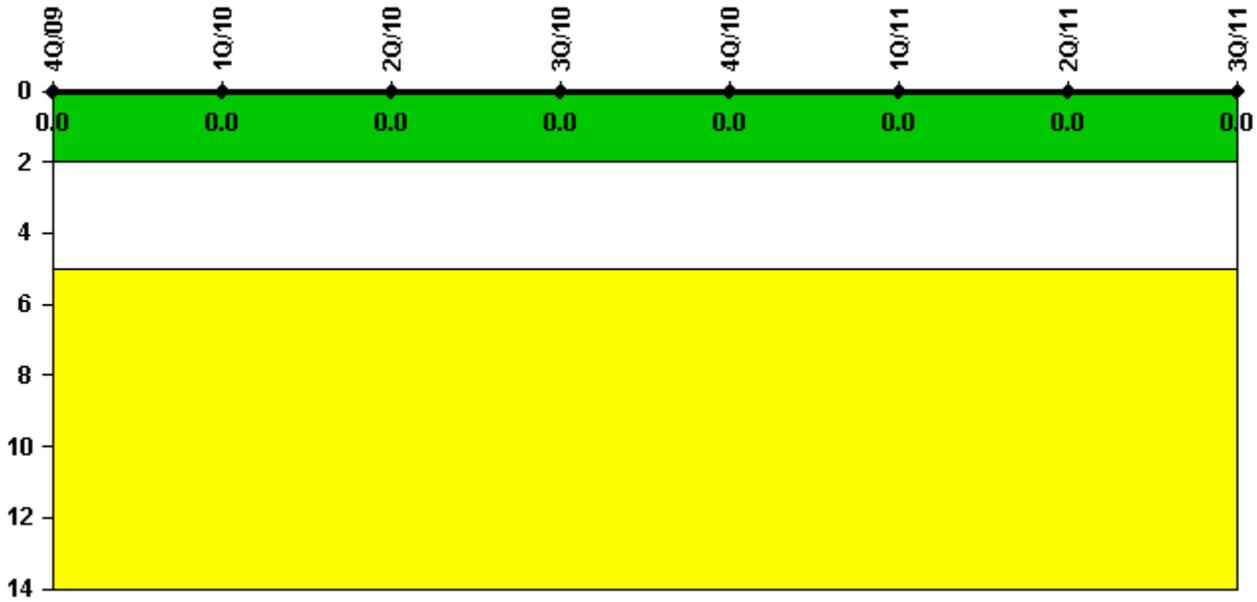
Thresholds: White < 94.0% Yellow < 90.0%

## Notes

Alert & Notification System	4Q/09	1Q/10	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11
Successful siren-tests	942	948	948	948	940	949	945	892
Total sirens-tests	949	949	949	949	949	949	949	949
Indicator value	99.3%	99.7%	99.7%	99.7%	99.7%	99.7%	99.6%	98.2%

Licensee Comments: none

# Occupational Exposure Control Effectiveness



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

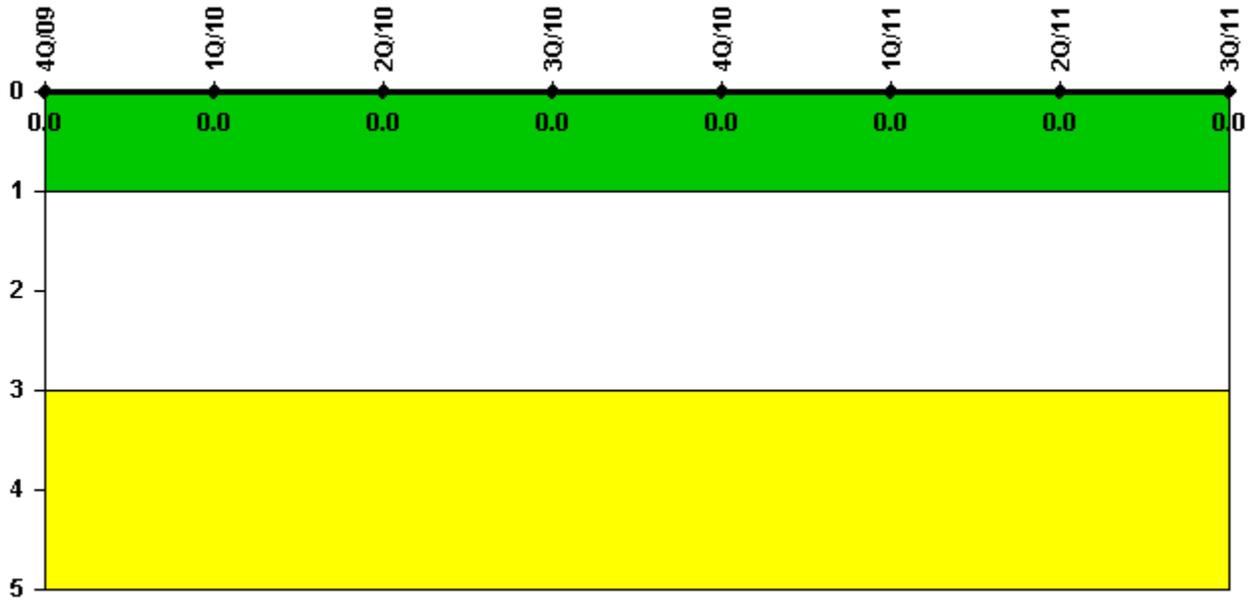
## Notes

Occupational Exposure Control Effectiveness	4Q/09	1Q/10	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11	3Q/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>							

Licensee Comments: none

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# RETS/ODCM Radiological Effluent



Thresholds: White > 1.0 Yellow > 3.0

## Notes

RETS/ODCM Radiological Effluent	4Q/09	1Q/10	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11	3Q/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

[Security](#) information not publicly available.