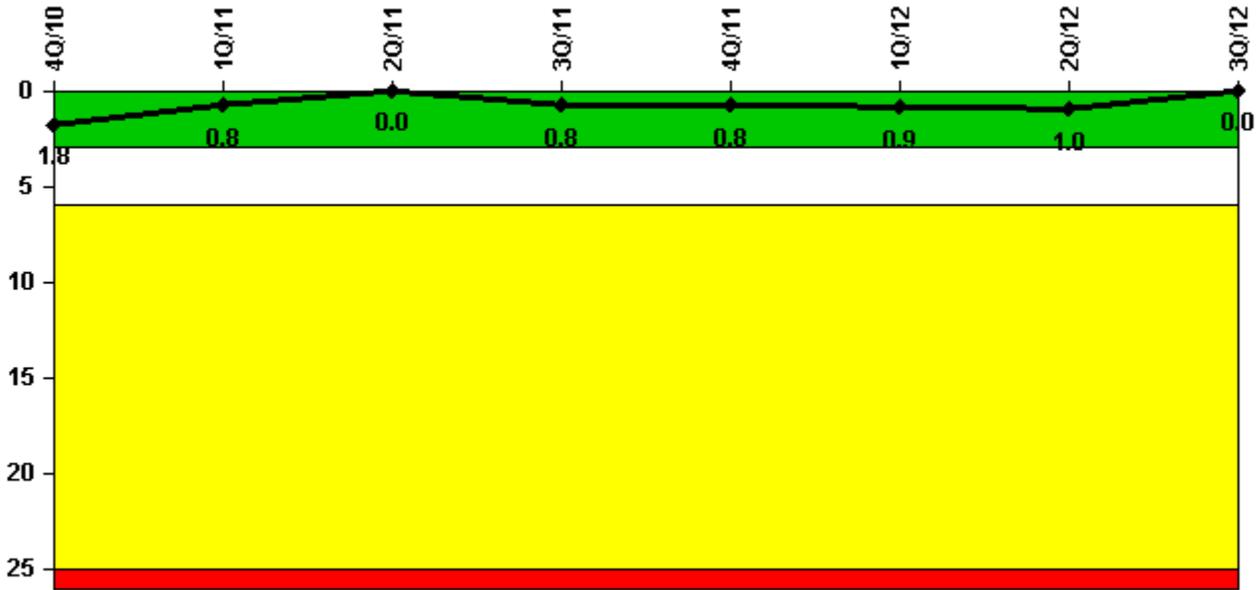


# Calvert Cliffs 1

## 3Q/2012 Performance Indicators

Licensee's General Comments: none

### Unplanned Scrams per 7000 Critical Hrs



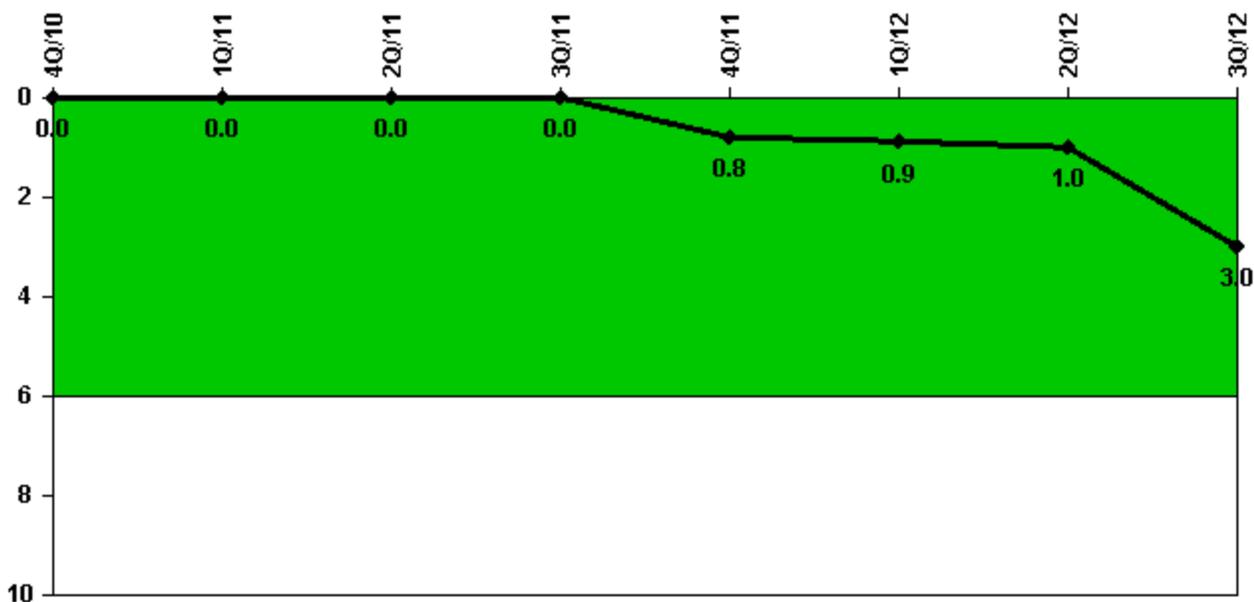
Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

### Notes

Unplanned Scrams per 7000 Critical Hrs	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11	1Q/12	2Q/12	3Q/12
Unplanned scrams	0	0	0	1.0	0	0	0	0
Critical hours	2209.0	2159.0	2184.0	2133.6	2209.0	849.7	1997.4	2038.3
<b>Indicator value</b>	<b>1.8</b>	<b>0.8</b>	<b>0</b>	<b>0.8</b>	<b>0.8</b>	<b>0.9</b>	<b>1.0</b>	<b>0</b>

Licensee Comments: none

### Unplanned Power Changes per 7000 Critical Hrs



Thresholds: White > 6.0

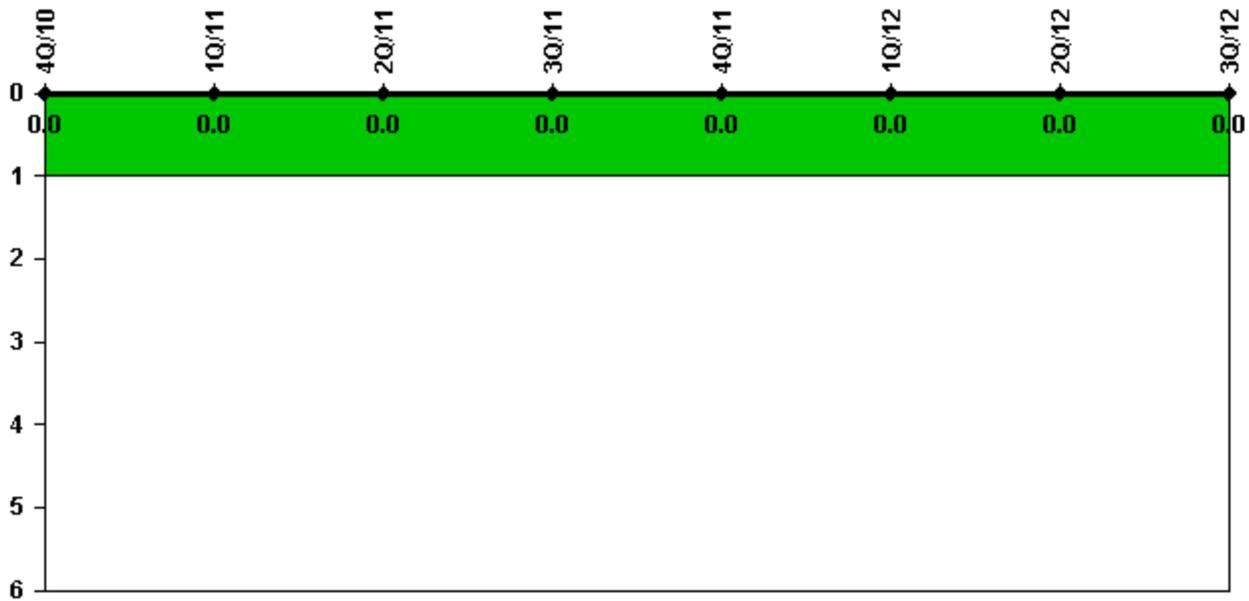
#### Notes

Unplanned Power Changes per 7000 Critical Hrs	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11	1Q/12	2Q/12	3Q/12
Unplanned power changes	0	0	0	0	1.0	0	0	2.0
Critical hours	2209.0	2159.0	2184.0	2133.6	2209.0	849.7	1997.4	2038.3
<b>Indicator value</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.8</b>	<b>0.9</b>	<b>1.0</b>	<b>3.0</b>

#### Licensee Comments:

4Q/11: Power change occurrence selected during data entry in 11-2011 should have been "unplanned, NOT excluded per NEI 99-02" vs. incorrect selection "unplanned, excluded per NEI 99-02". Error discovered in October 2012 and corrected, CR-2012-009097 written. No thresholds or color changes were crossed as a result of including these power changes.

### Unplanned Scrams with Complications



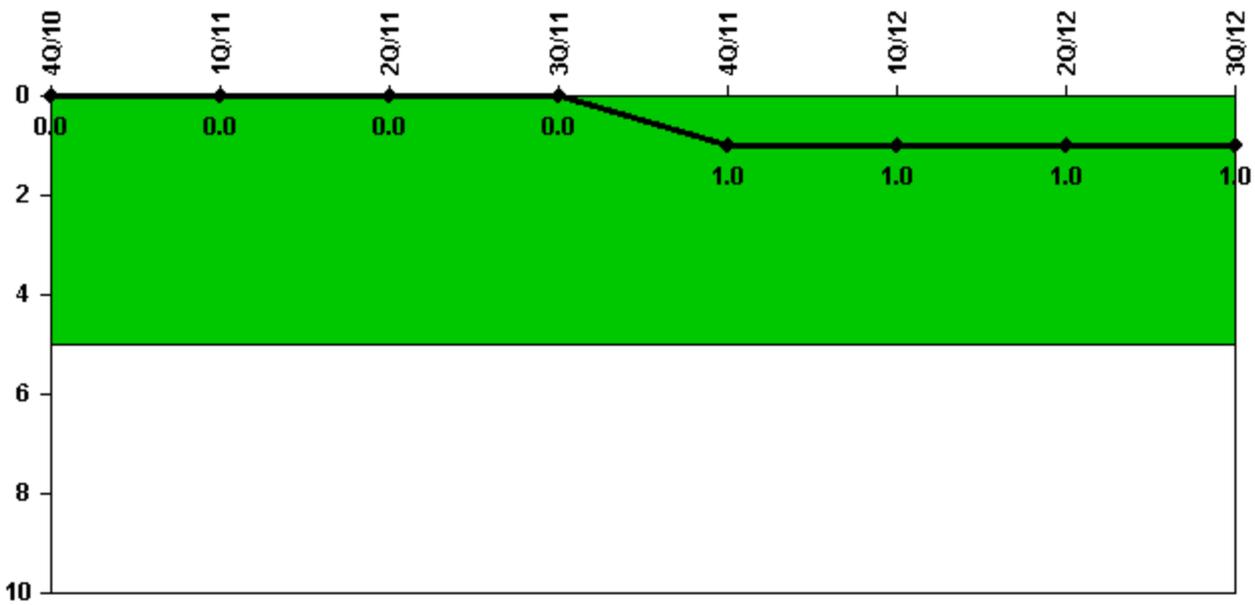
Thresholds: White > 1.0

#### Notes

Unplanned Scrams with Complications	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11	1Q/12	2Q/12	3Q/12
Scrams with complications	0	0	0	0	0	0	0	0
<b>Indicator value</b>	<b>0.0</b>							

Licensee Comments: none

### Safety System Functional Failures (PWR)



Thresholds: White > 5.0

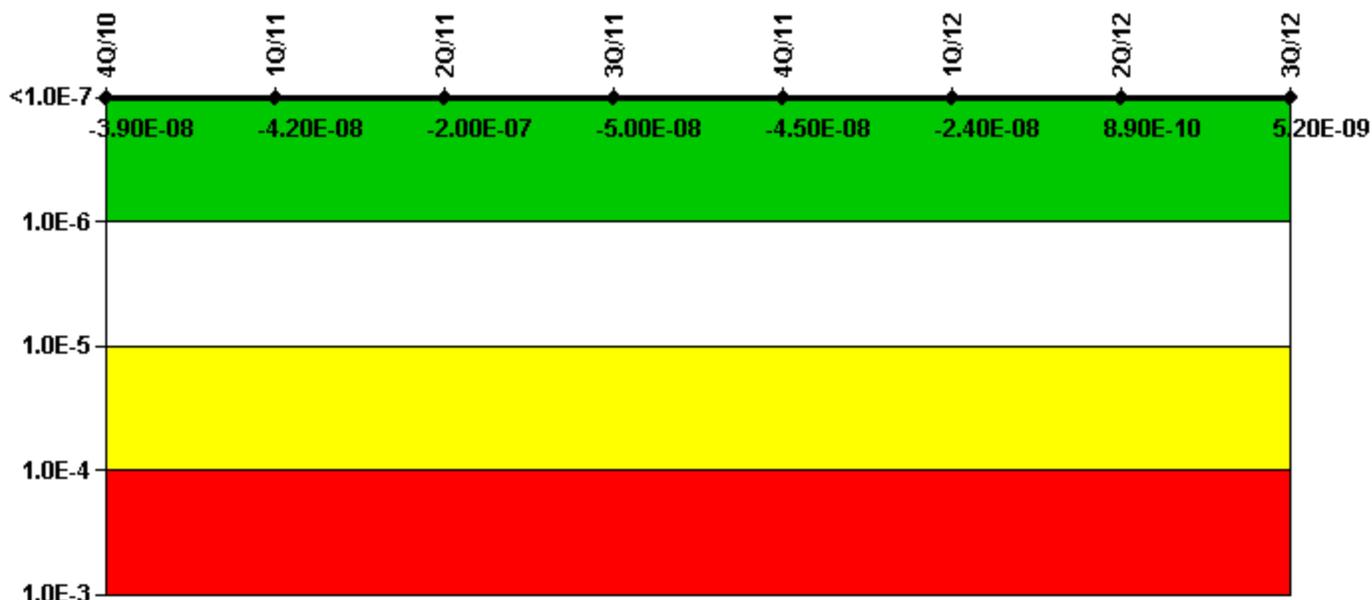
#### Notes

Safety System Functional Failures (PWR)	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11	1Q/12	2Q/12	3Q/12
Safety System Functional Failures	0	0	0	0	1	0	0	0
<b>Indicator value</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>

Licensee Comments:

4Q/11: LER 2011-003-00

### 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/10	1Q/11	2Q/11	3Q/11	4Q/11	1Q/12	2Q/12	3Q/12
UAI (ΔCDF)	7.85E-08	7.51E-08	-3.38E-08	-1.22E-08	-8.64E-09	1.26E-08	3.62E-08	3.90E-08
URI (ΔCDF)	-1.17E-07	-1.17E-07	-1.69E-07	-3.76E-08	-3.63E-08	-3.67E-08	-3.53E-08	-3.37E-08
PLE	NO							
Indicator value	-3.90E-08	-4.20E-08	-2.00E-07	-5.00E-08	-4.50E-08	-2.40E-08	8.90E-10	5.20E-09

#### Licensee Comments:

1Q/12: 7-12-12: Hours revised for 7-2010 Unavailable hrs for 1A EDG due to error noted during data review. No color or threshold changes result from correction.

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)

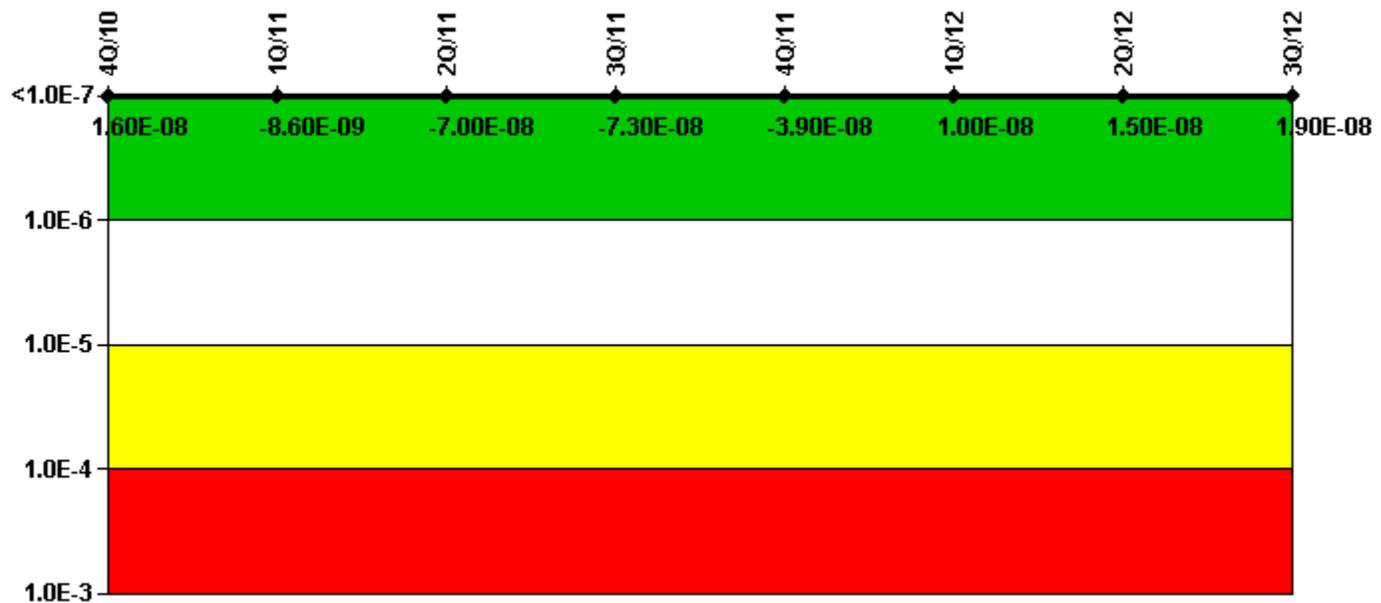
1Q/11: Revisions effective Q2 2011: PRA parameters due to model update and UA Base Lines due to change in maintenance strategy from work in outage to on-line.

1Q/11: 7-12-12: Hours revised for 7-2010 Unavailable hrs for 1A EDG due to error noted during data review. No color or threshold changes result from correction. Revisions effective Q2 2011: PRA parameters due to model

update and UA Base Lines due to change in maintenance strategy from work in outage to on-line.

4Q/10: 7-12-12: Hours revised for 7-2010 Unavailable hrs for 1A EDG due to error noted during data review. No color or threshold changes result from correction.

### 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/10	1Q/11	2Q/11	3Q/11	4Q/11	1Q/12	2Q/12	3Q/12
UAI (ΔCDF)	7.86E-08	4.45E-08	-3.60E-08	-3.96E-08	-4.45E-09	4.91E-08	5.22E-08	5.68E-08
URI (ΔCDF)	-6.27E-08	-5.31E-08	-3.43E-08	-3.35E-08	-3.42E-08	-3.86E-08	-3.73E-08	-3.73E-08
PLE	NO							
Indicator value	1.60E-08	-8.60E-09	-7.00E-08	-7.30E-08	-3.90E-08	1.00E-08	1.50E-08	1.90E-08

Licensee Comments:

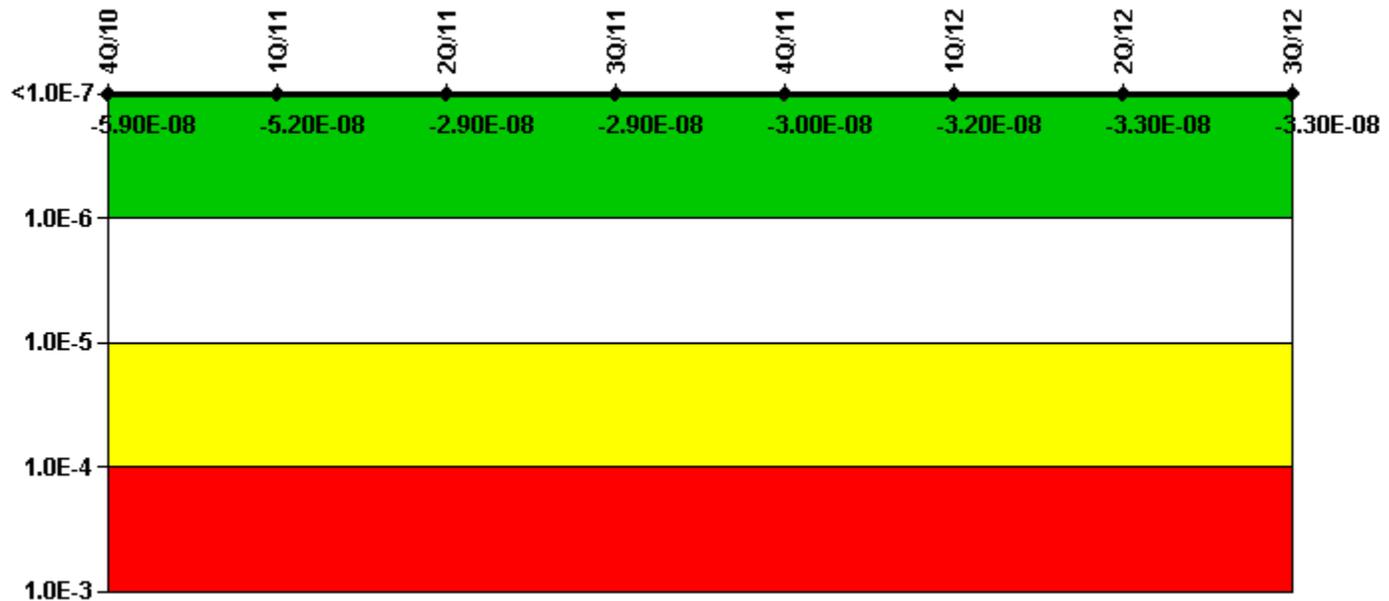
3Q/11: Correction to PRA and planned baseline unavailability data due to errors made when entering updated PRA model data in March 2011 (Ref: CR-2011-008850)

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)

1Q/11: Revisions effective Q2 2011: PRA parameters due to model update and UA Base Lines due to change in maintenance strategy from work in outage to on-line.

### 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/10	1Q/11	2Q/11	3Q/11	4Q/11	1Q/12	2Q/12	3Q/12
UAI ( $\Delta$ CDF)	1.39E-09	-1.91E-09	-7.61E-09	-7.61E-09	-7.61E-09	-7.59E-09	-7.59E-09	-7.58E-09
URI ( $\Delta$ CDF)	-6.08E-08	-5.02E-08	-2.13E-08	-2.19E-08	-2.22E-08	-2.46E-08	-2.58E-08	-2.58E-08
PLE	NO							
Indicator value	-5.90E-08	-5.20E-08	-2.90E-08	-2.90E-08	-3.00E-08	-3.20E-08	-3.30E-08	-3.30E-08

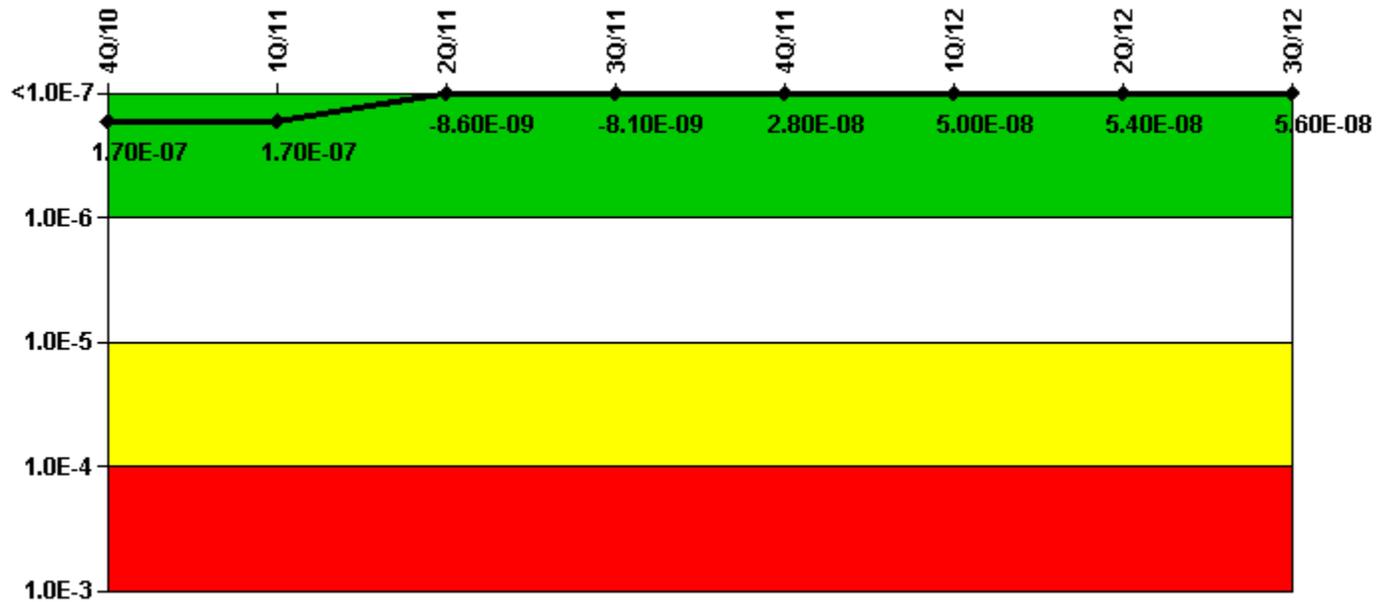
Licensee Comments:

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

1Q/11: Revisions effective Q2 2011: PRA parameters due to model update and UA Base Lines due to change in maintenance strategy from work in outage to on-line.

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

### Mitigating Systems Performance Index, Residual Heat Removal System



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

#### Notes

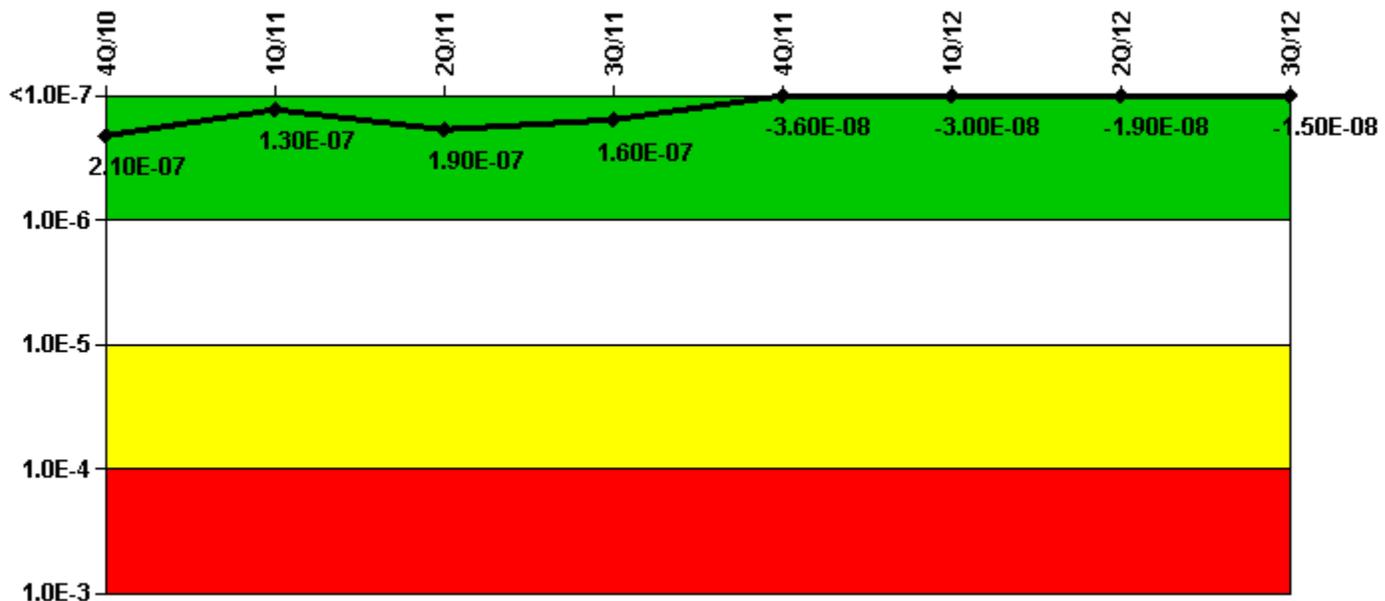
Mitigating Systems Performance Index, Residual Heat Removal System	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11	1Q/12	2Q/12	3Q/12
UAI ( $\Delta$ CDF)	1.76E-07	1.73E-07	-4.29E-09	-3.89E-09	3.23E-08	5.50E-08	5.98E-08	6.17E-08
URI ( $\Delta$ CDF)	-5.59E-09	-4.58E-09	-4.26E-09	-4.17E-09	-4.15E-09	-5.25E-09	-5.59E-09	-5.59E-09
PLE	NO							
Indicator value	1.70E-07	1.70E-07	-8.60E-09	-8.10E-09	2.80E-08	5.00E-08	5.40E-08	5.60E-08

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)

1Q/11: Revisions effective Q2 2011: PRA parameters due to model update and UA Base Lines due to change in maintenance strategy from work in outage to on-line.

### 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/10	1Q/11	2Q/11	3Q/11	4Q/11	1Q/12	2Q/12	3Q/12
UAI (ΔCDF)	1.25E-07	4.13E-08	1.61E-07	1.34E-07	1.91E-07	1.98E-07	2.09E-07	2.13E-07
URI (ΔCDF)	8.77E-08	8.78E-08	2.75E-08	2.54E-08	-2.27E-07	-2.27E-07	-2.27E-07	-2.27E-07
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	2.10E-07	1.30E-07	1.90E-07	1.60E-07	-3.60E-08	-3.00E-08	-1.90E-08	-1.50E-08

Licensee Comments:

4Q/11: Two CWS2 AOVs added due to current inability to validate their exclusion during the original MSPI scoping. CR-2011-008863

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)

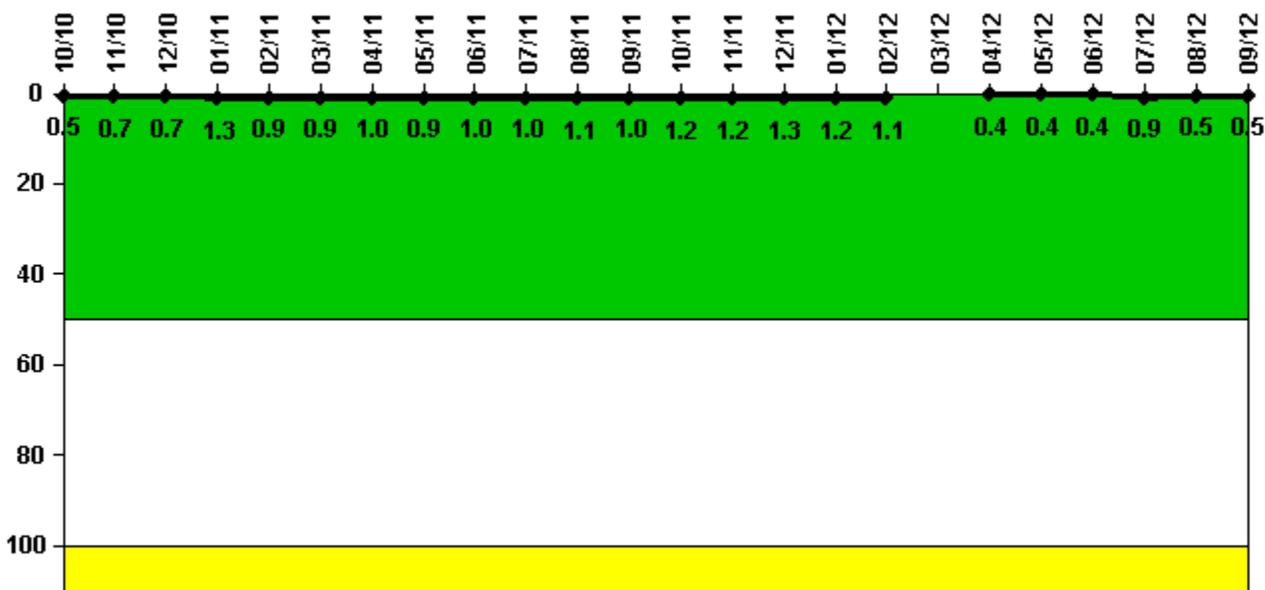
2Q/11: 10-11-11: Correction to PRA and planned baseline unavailability data due to errors made when entering updated PRA model data in March 2011 (Ref: CR-2011-008850)

1Q/11: Revisions effective Q2 2011: PRA parameters due to model update and UA Base Lines due to change in

maintenance strategy from work in outage to on-line and for preventive maintenance optimization.

1Q/11: Revisions effective Q2 2011: PRA parameters due to model update and UA Base Lines due to change in maintenance strategy from work in outage to on-line and for preventive maintenance optimization.

### Reactor Coolant System Activity



Thresholds: White > 50.0 Yellow > 100.0

### Notes

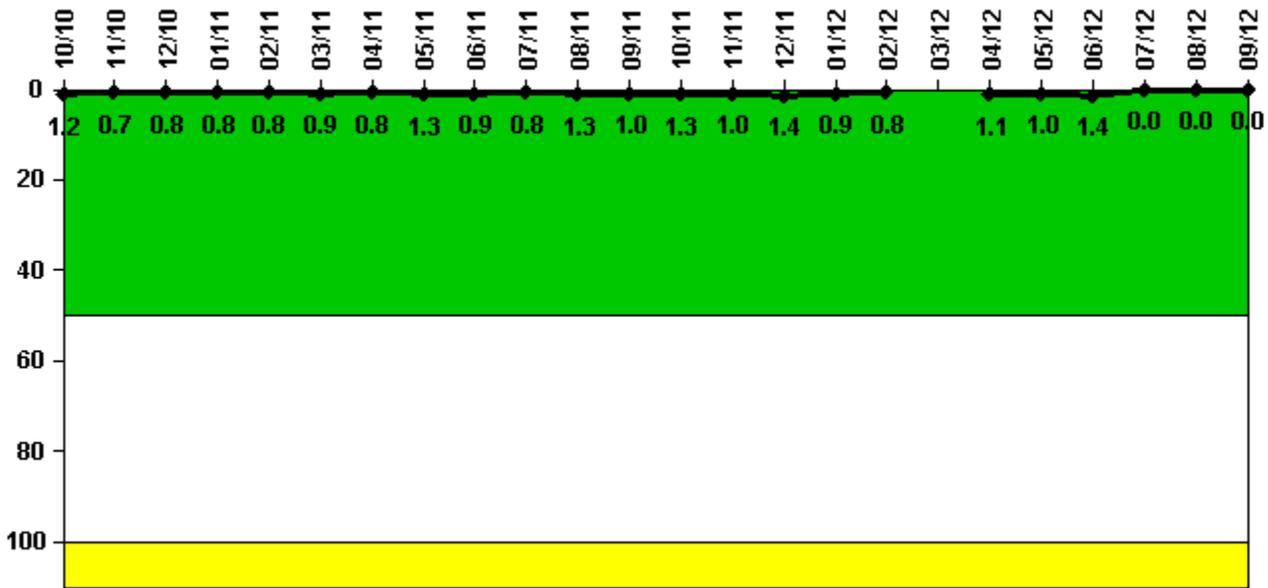
Reactor Coolant System Activity	10/10	11/10	12/10	1/11	2/11	3/11	4/11	5/11	6/11	7/11	8/11	9/11
Maximum activity	0.005480	0.006660	0.007140	0.006540	0.004740	0.004530	0.004750	0.004730	0.004790	0.005080	0.005420	0.004790
Technical specification limit	1.0	1.0	1.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Indicator 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
Reactor Coolant System Activity	10/11	11/11	12/11	1/12	2/12	3/12	4/12	5/12	6/12	7/12	8/12	9/12
Maximum activity	0.005870	0.005920	0.006670	0.006150	0.005650	N/A	0.002070	0.002160	0.002220	0.004310	0.002680	0.002720
Technical specification limit	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5

Indicator value	1.2	1.2	1.3	1.2	1.1	N/A	0.4	0.4	0.4	0.9	0.5	0.5
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Licensee Comments:

3/12: Per NEI 99-02 "If in the entire month, plant conditions do not require RCS activity to be calculated, the data field is left blank for that month." Calvert Cliffs Unit 1 was in a refueling outage and shutdown for the entire month of March, 2012.

### Reactor Coolant System Leakage



Thresholds: White > 50.0 Yellow > 100.0

Notes

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

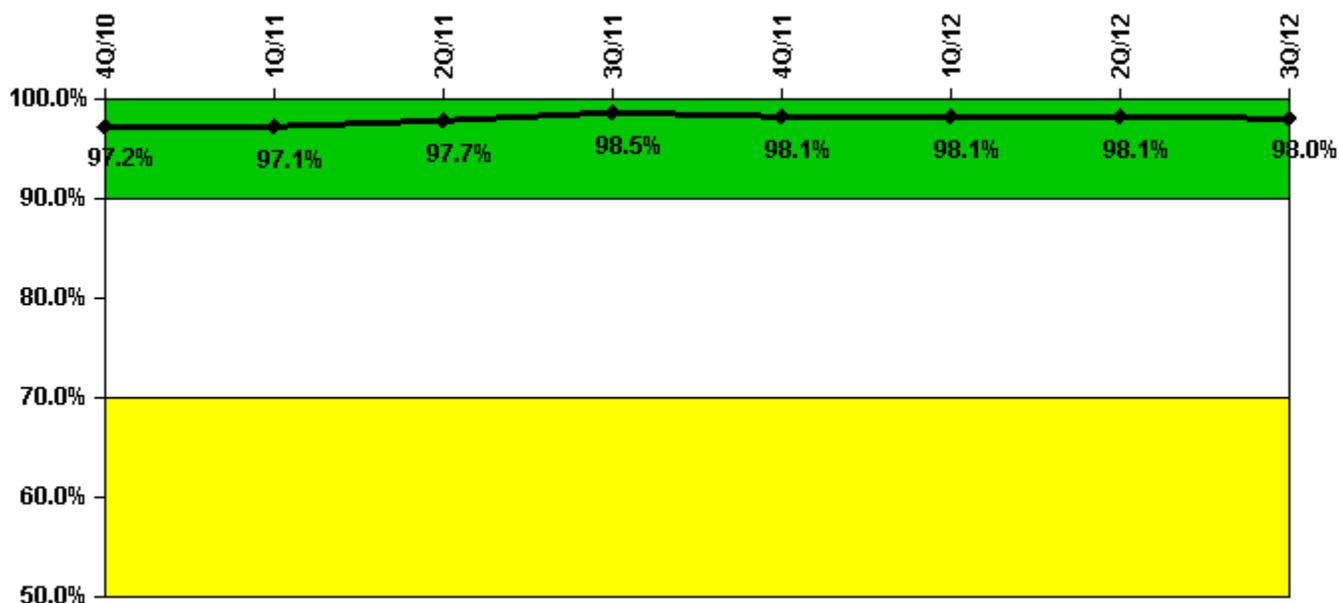
  

Reactor Coolant System Leakage	10/11	11/11	12/11	1/12	2/12	3/12	4/12	5/12	6/12	7/12	8/12	9/12
Maximum leakage	0.130	0.100	0.140	0.090	0.080	N/A	0.110	0.100	0.140	0	0	0
Technical specification limit	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Indicator value	1.3	1.0	1.4	0.9	0.8	N/A	1.1	1.0	1.4	0	0	0

Licensee Comments:

3/12: Per NEI 99-02 "If in the entire month, plant conditions do not require RCS activity to be calculated, the data field is left blank for that month." Calvert Cliffs Unit 1 was in a refueling outage and shutdown for the entire month of March, 2012.

**Drill/Exercise Performance**



Thresholds: White < 90.0% Yellow < 70.0%

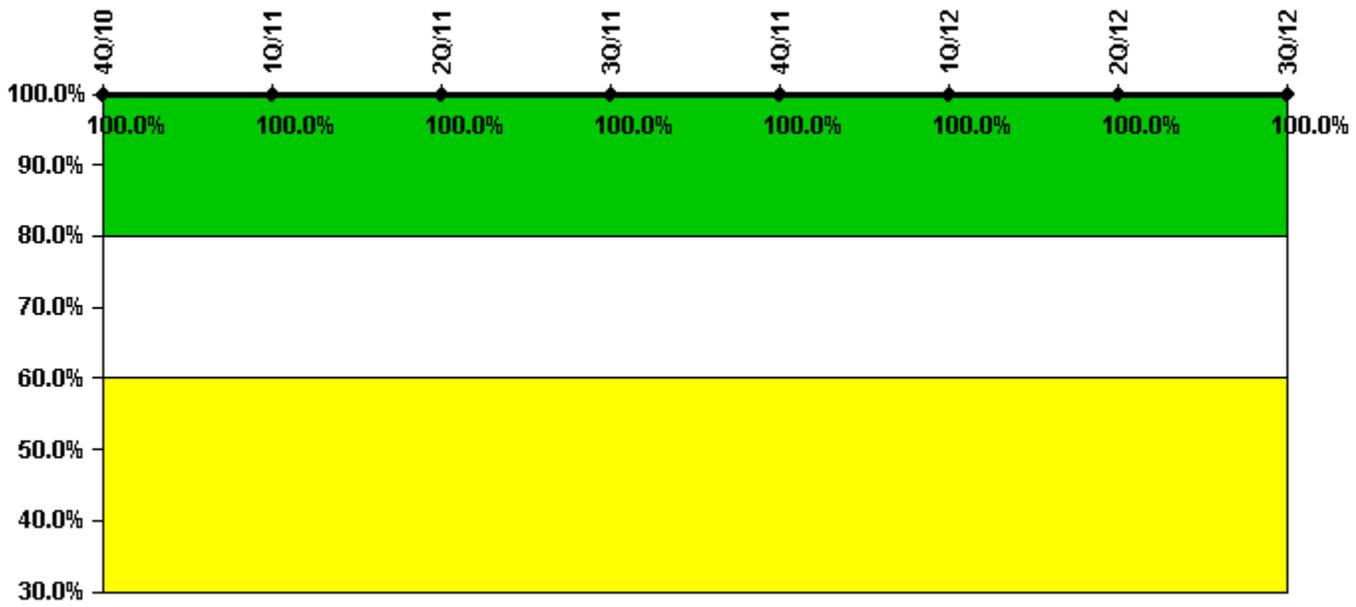
**Notes**

Drill/Exercise Performance	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11	1Q/12	2Q/12	3Q/12
Successful opportunities	53.0	4.0	58.0	30.0	55.0	5.0	25.0	12.0
Total opportunities	54.0	4.0	59.0	30.0	57.0	5.0	25.0	13.0
Indicator value	97.2%	97.1%	97.7%	98.5%	98.1%	98.1%	98.1%	98.0%

Licensee Comments:

4Q/11: CR-2012-007357: While reviewing the 10/04/2011 crew competency work sheet and initial notification form, EP found setps A.4 and A.7 were incorrect. EP removed the notification performance success from the statistics and corrected the 4Q2011 data record.

### ERO Drill Participation



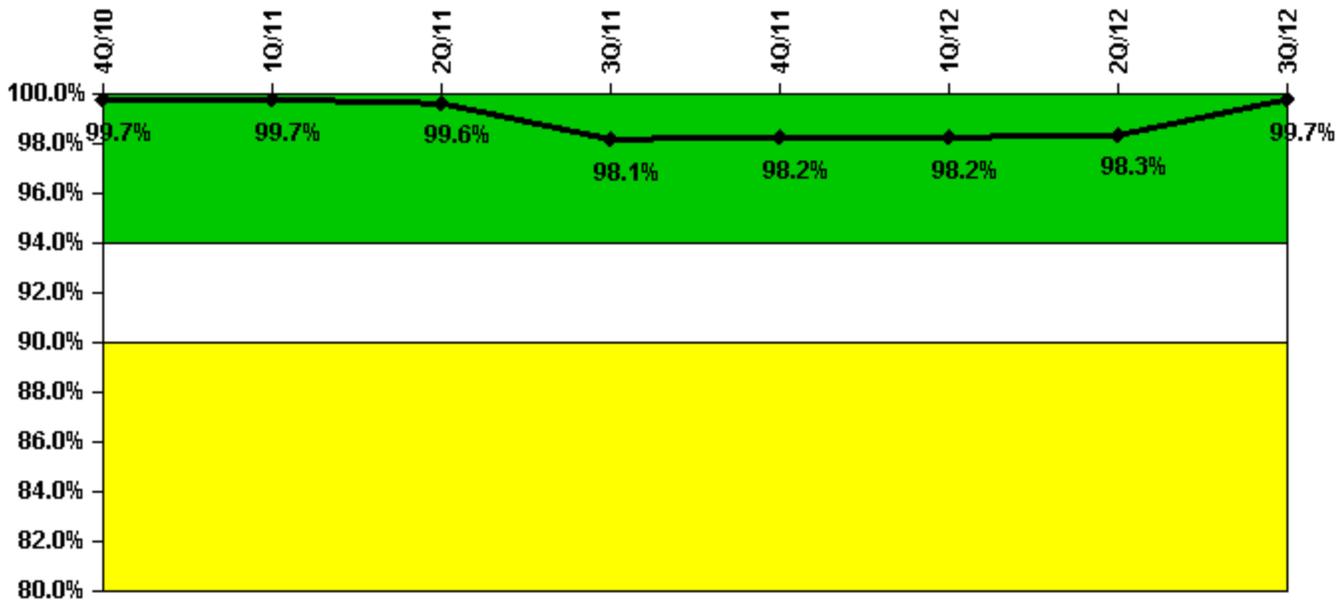
Thresholds: White < 80.0% Yellow < 60.0%

#### Notes

ERO Drill Participation	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11	1Q/12	2Q/12	3Q/12
Participating Key personnel	88.0	85.0	88.0	83.0	84.0	86.0	80.0	83.0
Total Key personnel	88.0	85.0	88.0	83.0	84.0	86.0	80.0	83.0
<b>Indicator value</b>	<b>100.0%</b>							

Licensee Comments: none

### Alert & Notification System



Thresholds: White < 94.0% Yellow < 90.0%

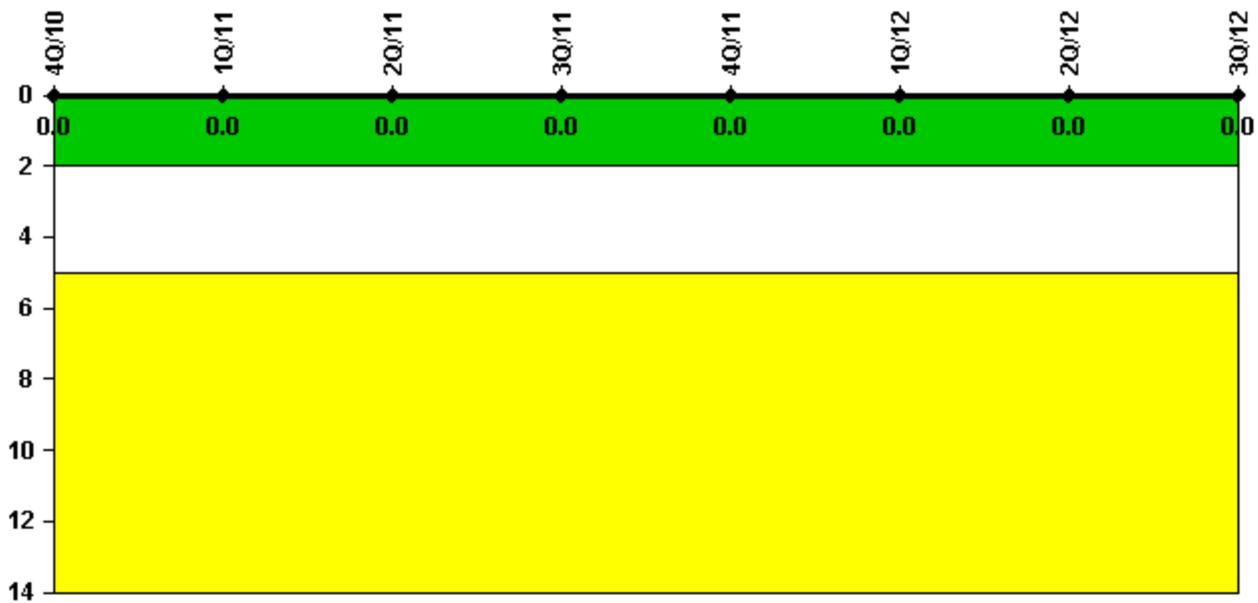
#### Notes

Alert & Notification System	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11	1Q/12	2Q/12	3Q/12
Successful siren-tests	940	949	945	889	946	947	948	945
Total sirens-tests	949	949	949	949	949	949	949	949
Indicator value	99.7%	99.7%	99.6%	98.1%	98.2%	98.2%	98.3%	99.7%

#### Licensee Comments:

3Q/11: ANS test was misinterpreted and incorrectly reported in 3Q2011. The system engineer caught the error and Licensing corrected in CDE in 1Q2012. CR-2012-000541.

### Occupational Exposure Control Effectiveness



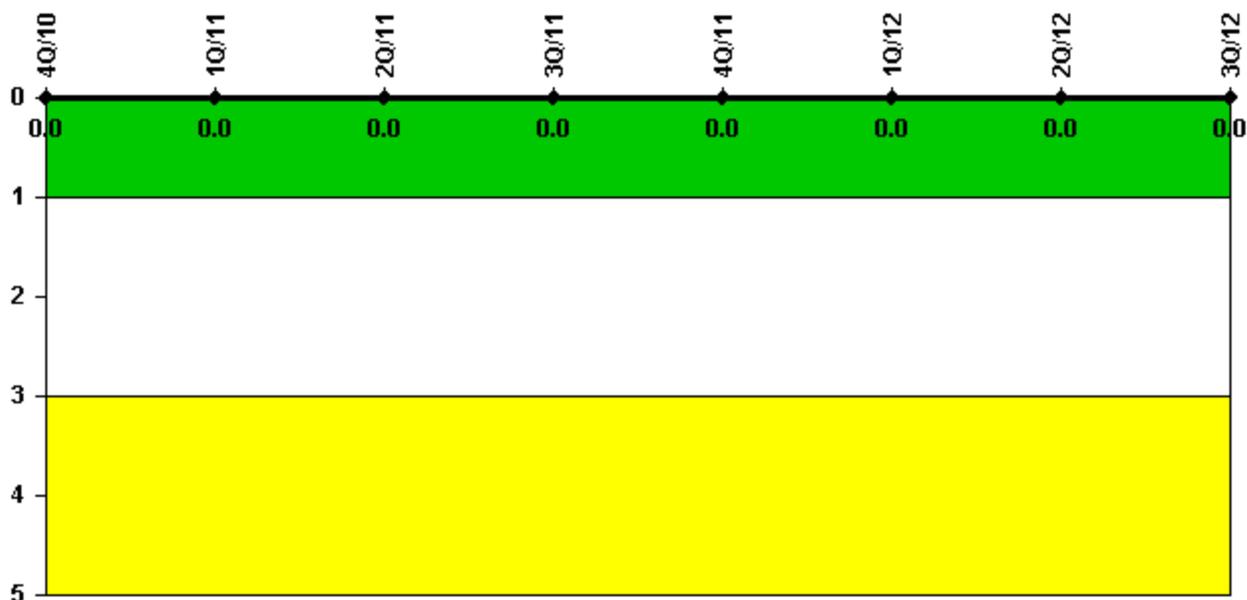
Thresholds: White > 2.0 Yellow > 5.0

#### Notes

Occupational Exposure Control Effectiveness	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11	1Q/12	2Q/12	3Q/12
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

### RETS/ODCM Radiological Effluent



Thresholds: White > 1.0 Yellow > 3.0

#### Notes

RETS/ODCM Radiological Effluent	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11	1Q/12	2Q/12	3Q/12
RETS/ODCM occurrences	0	0	0	0	0	0	0	0
Indicator value	0	0	0	0	0	0	0	0

Licensee Comments: none

Although the Security Cornerstone is included in the Reactor Oversight Process assessment program, the Commission has decided that specific information related to findings and performance indicators pertaining to the Security Cornerstone will not be publicly available to ensure that security information is not provided to a possible adversary. Other than the fact that a finding or performance indicator is Green or Greater-Than-Green, security related information will not be displayed on the public web page.

 [Action Matrix Summary](#) | [Inspection Findings Summary](#) | [PI Summary](#) | [Reactor Oversight Process](#)

*Last Modified: October 24, 2012*