

## Columbia Generating Station

### 1Q/2014 Performance Indicators

The solid trend line represents the current reporting period.

Licensee's General Comments: none

#### Unplanned Scrams per 7000 Critical Hrs



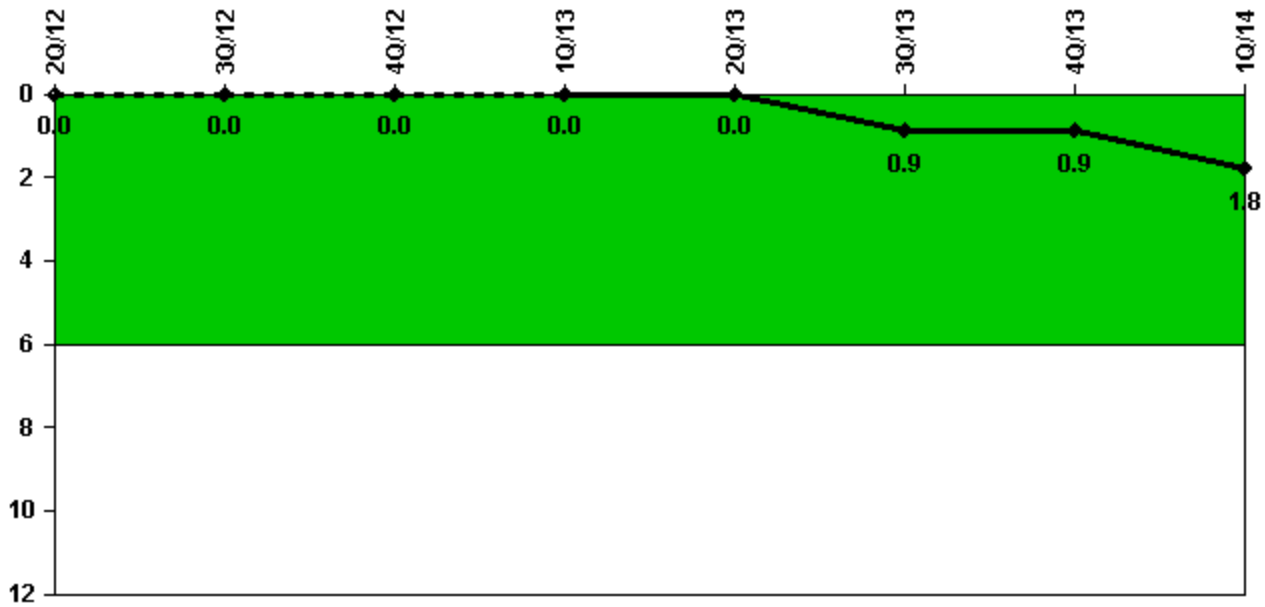
Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

#### Notes

Unplanned Scrams per 7000 Critical Hrs	2Q/12	3Q/12	4Q/12	1Q/13	2Q/13	3Q/13	4Q/13	1Q/14
Unplanned scrams	0	0	0	0	0	0	0	0
Critical hours	1977.3	2208.0	2209.0	2159.0	1163.8	2208.0	2209.0	2159.0
Indicator value	0	0	0	0	0	0	0	0

Licensee Comments: none

### Unplanned Power Changes per 7000 Critical Hrs



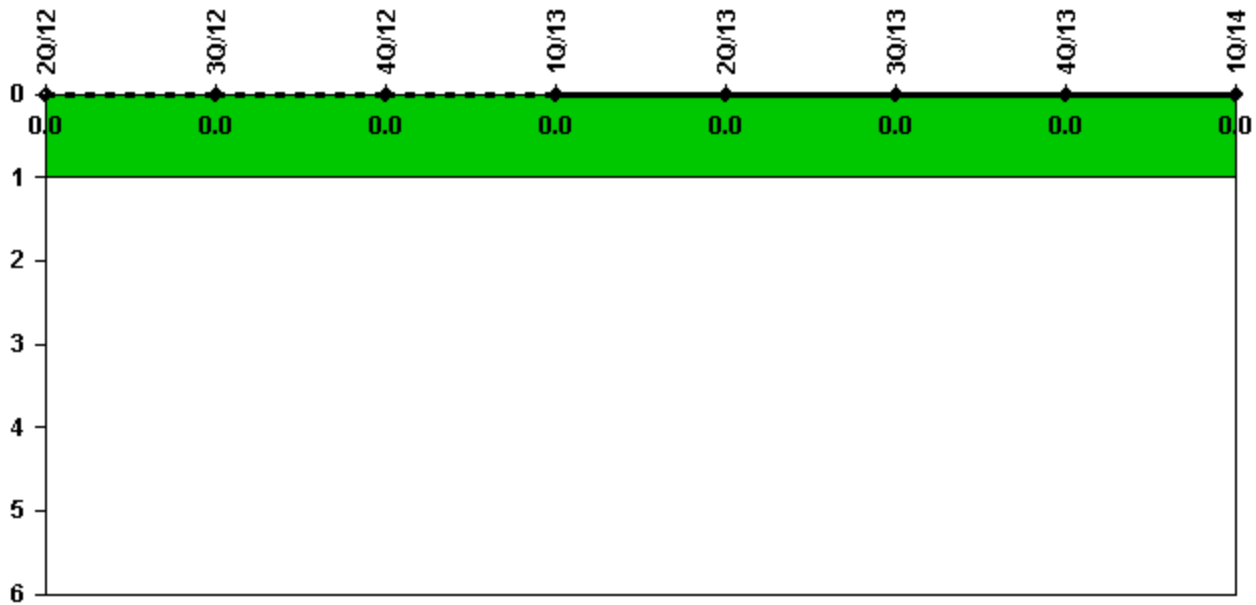
Thresholds: White > 6.0

#### Notes

Unplanned Power Changes per 7000 Critical Hrs	2Q/12	3Q/12	4Q/12	1Q/13	2Q/13	3Q/13	4Q/13	1Q/14
Unplanned power changes	0	0	0	0	0	1.0	0	1.0
Critical hours	1977.3	2208.0	2209.0	2159.0	1163.8	2208.0	2209.0	2159.0
<b>Indicator value</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.9</b>	<b>0.9</b>	<b>1.8</b>

Licensee Comments: none

### Unplanned Scrams with Complications



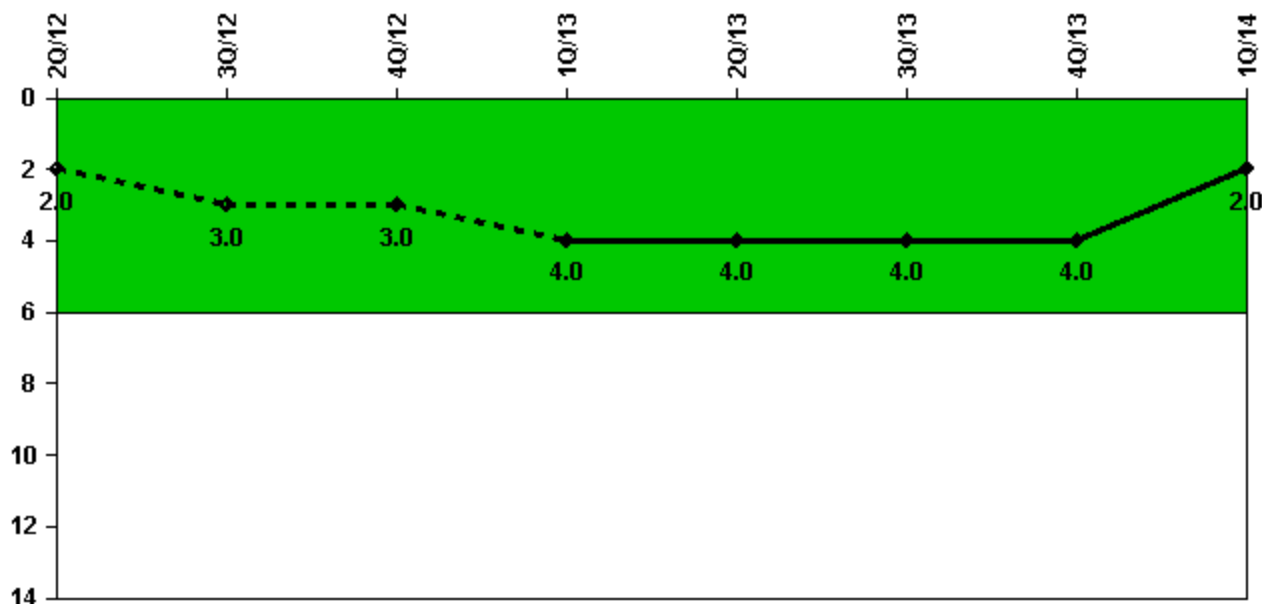
Thresholds: White > 1.0

#### Notes

Unplanned Scrams with Complications	2Q/12	3Q/12	4Q/12	1Q/13	2Q/13	3Q/13	4Q/13	1Q/14
Scrams with complications	0	0	0	0	0	0	0	0
<b>Indicator value</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>

Licensee Comments: none

### Safety System Functional Failures (BWR)



Thresholds: White > 6.0

#### Notes

Safety System Functional Failures (BWR)	2Q/12	3Q/12	4Q/12	1Q/13	2Q/13	3Q/13	4Q/13	1Q/14
Safety System Functional Failures	0	1	1	2	0	1	1	0
<b>Indicator value</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>2</b>

Licensee Comments:

4Q/13: LER 2013-007-00 -- Secondary Containment Pressure Exceeded During Severe Weather Conditions.

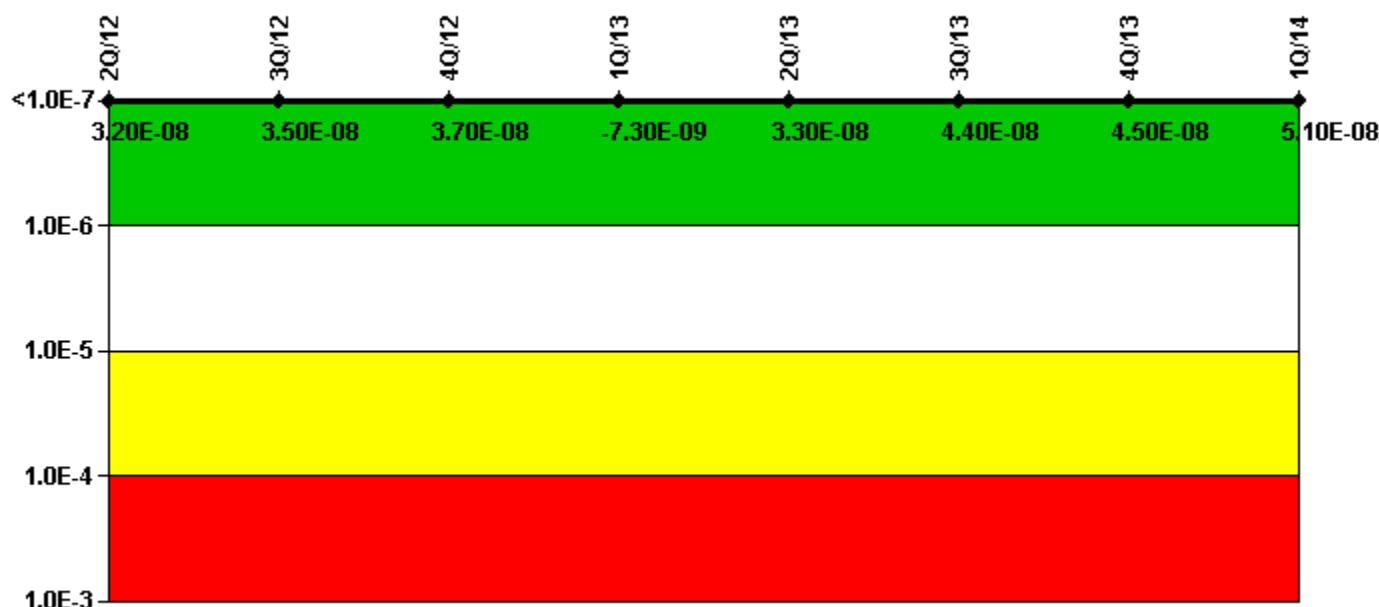
3Q/13: LER 2013-004-00 -- Jumper makes suppression pool spray valve remote transfer switch inoperable. LER 2013-004-01 removed the reporting criteria of 10 CFR 50.73(a)(2)(v)(D). Therefore, the reported condition was not considered a safety system functional failure. The color of the indicator does not change. DRJ.

1Q/13: Licensee Event Report No. 2012-007-00, Secondary Containment being inoperable due to both Airlock Doors being open. Reportable under 10 CFR 50.73 (a)(2)(v)(C) and (D). LER 2013-001-00 Secondary Containment Inoperable due to both Airlock Doors being Open

4Q/12: LER 2012-006-00 (Both Divisions of SDC Isolation Valves Made Inoperable). N. Apodaca 12/12/12

3Q/12: LER 2012-003-00 (Secondary Containment Pressure Exceeded During Plant Maintenance). D. Johnson 10/8/2012

### Mitigating Systems Performance Index, Emergency AC Power System



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

#### Notes

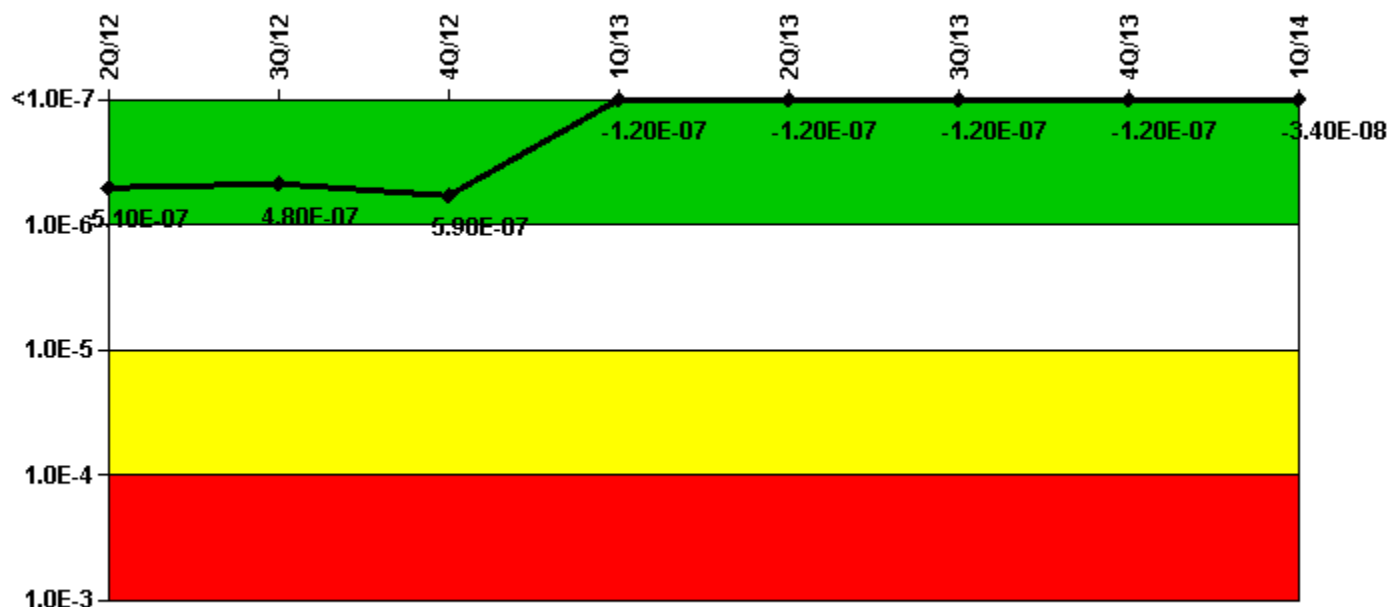
Mitigating Systems Performance Index, Emergency AC Power System	2Q/12	3Q/12	4Q/12	1Q/13	2Q/13	3Q/13	4Q/13	1Q/14
UAI ( $\Delta$ CDF)	1.05E-08	1.20E-08	1.20E-08	6.80E-09	6.12E-09	1.54E-08	1.53E-08	1.91E-08
URI ( $\Delta$ CDF)	2.19E-08	2.33E-08	2.47E-08	-1.41E-08	2.68E-08	2.83E-08	2.99E-08	3.15E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
<b>Indicator value</b>	<b>3.20E-08</b>	<b>3.50E-08</b>	<b>3.70E-08</b>	<b>-7.30E-09</b>	<b>3.30E-08</b>	<b>4.40E-08</b>	<b>4.50E-08</b>	<b>5.10E-08</b>

#### Licensee Comments:

1Q/13: Changed PRA Parameter(s). The planned unavailability baseline for the MSPI Emergency AC Power System Train A was decreased by 144 hours per 3 years as this represented a previous increase in the planned unavailability baseline that was a temporary change which has rolled off the 3 year window. The decrease in planned unavailability baseline was evaluated in the MSPI Basis Document Revision 14, dated 12/27/12. The initial change was made prior to issuance of FAQ 468 thus no PRA data was changed. The revised values were incorporated into CDE effective the 1st quarter 2013. Note the CDE should have been revised in the first quarter on 2012 but was not. The delay in changing the planned unavailability had no impact to the MPSI color for Emergency AC Power System.

4Q/12: MSPI Basis Document was revised on 12/2012, Revision 14.

### 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	2Q/12	3Q/12	4Q/12	1Q/13	2Q/13	3Q/13	4Q/13	1Q/14
UAI (ΔCDF)	4.51E-07	4.15E-07	5.20E-07	2.80E-07	2.96E-07	2.89E-07	2.86E-07	3.65E-07
URI (ΔCDF)	5.63E-08	6.48E-08	7.35E-08	-4.01E-07	-4.15E-07	-4.10E-07	-4.05E-07	-3.99E-07
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	5.10E-07	4.80E-07	5.90E-07	-1.20E-07	-1.20E-07	-1.20E-07	-1.20E-07	-3.40E-08

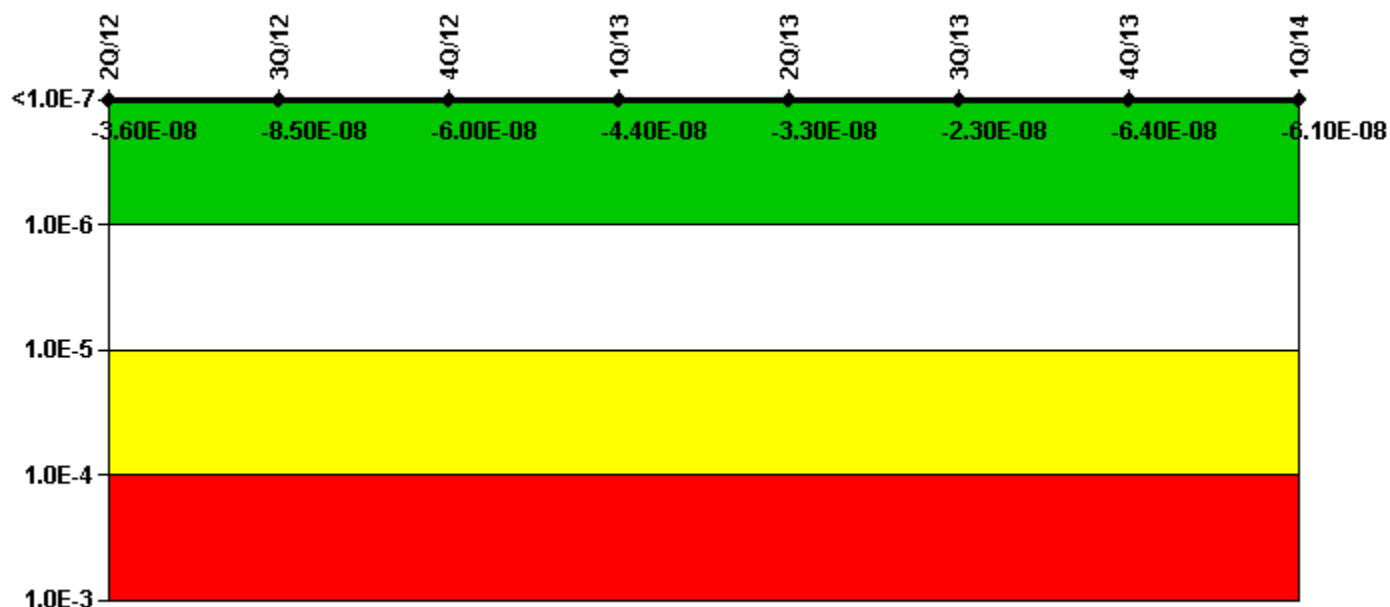
#### Licensee Comments:

1Q/13: The plant specific PRA was updated to increase the planned unavailability baseline for RHR-SYS-B due to the pump being replaced. This impacted several values (UA, BE FV, etc.) in the MSPI Basis Document tables associated with the MSPI systems. Basis document Revision 15.

4Q/12: MSPI Basis Document was revised on 12/2012, Revision 14.

2Q/12: The recharacterization of the DG3 failure that occurred on 2/28/2010 caused historical changes to HPCS but did not cause the PI to change color. The risk cap was invoked from 1Q2010 through 2Q2011. FAQ 12-01 involving this issue was withdrawn in 2Q2012.

### Mitigating Systems Performance Index, Heat Removal System



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

#### Notes

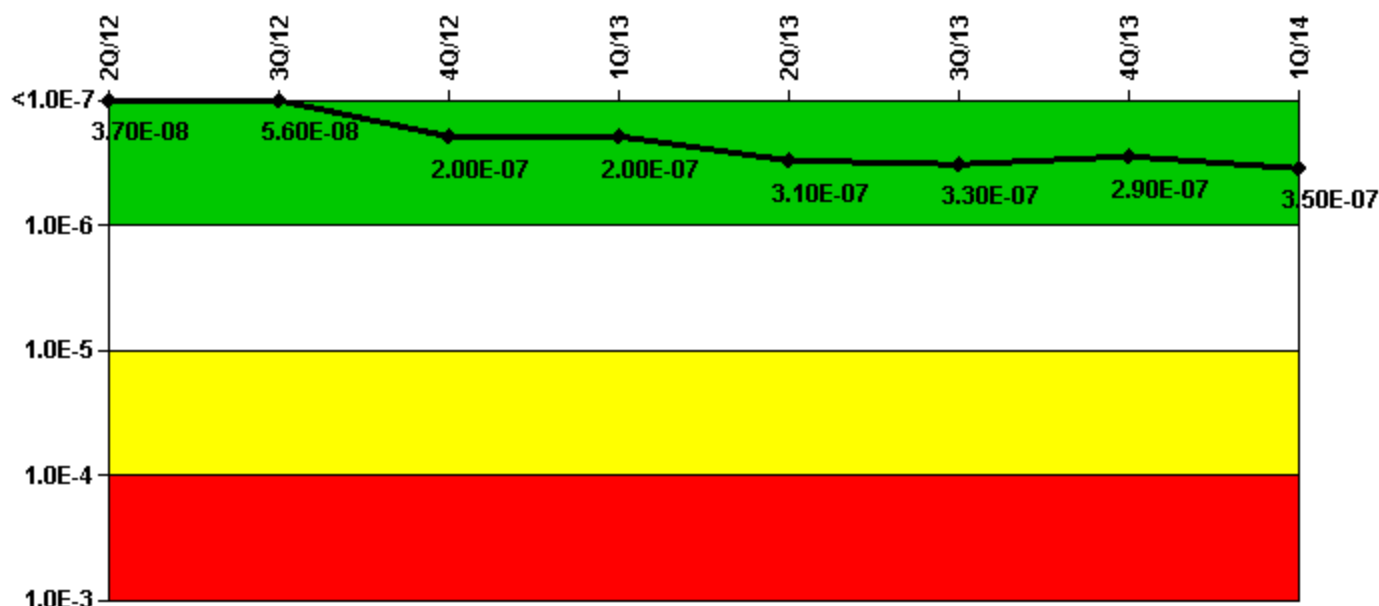
Mitigating Systems Performance Index, Heat Removal System	2Q/12	3Q/12	4Q/12	1Q/13	2Q/13	3Q/13	4Q/13	1Q/14
UAI ( $\Delta$ CDF)	1.02E-07	5.38E-08	7.83E-08	9.35E-08	1.04E-07	1.11E-07	6.92E-08	7.08E-08
URI ( $\Delta$ CDF)	-1.38E-07	-1.38E-07	-1.39E-07	-1.37E-07	-1.36E-07	-1.35E-07	-1.33E-07	-1.31E-07
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-3.60E-08	-8.50E-08	-6.00E-08	-4.40E-08	-3.30E-08	-2.30E-08	-6.40E-08	-6.10E-08

#### Licensee Comments:

1Q/13: The plant specific PRA was updated to increase the planned unavailability baseline for RHR-SYS-B due to the pump being replaced. This impacted several values (UA, BE FV, etc.) in the MSPI Basis Document tables associated with the MSPI systems. Basis document Revision 15.

4Q/12: MSPI Basis Document was revised on 12/2012, Revision 14.

### 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	2Q/12	3Q/12	4Q/12	1Q/13	2Q/13	3Q/13	4Q/13	1Q/14
UAI (ΔCDF)	2.37E-07	2.55E-07	3.97E-07	3.80E-07	4.81E-07	4.82E-07	4.16E-07	4.50E-07
URI (ΔCDF)	-1.99E-07	-1.99E-07	-1.99E-07	-1.83E-07	-1.70E-07	-1.49E-07	-1.26E-07	-1.00E-07
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	3.70E-08	5.60E-08	2.00E-07	2.00E-07	3.10E-07	3.30E-07	2.90E-07	3.50E-07

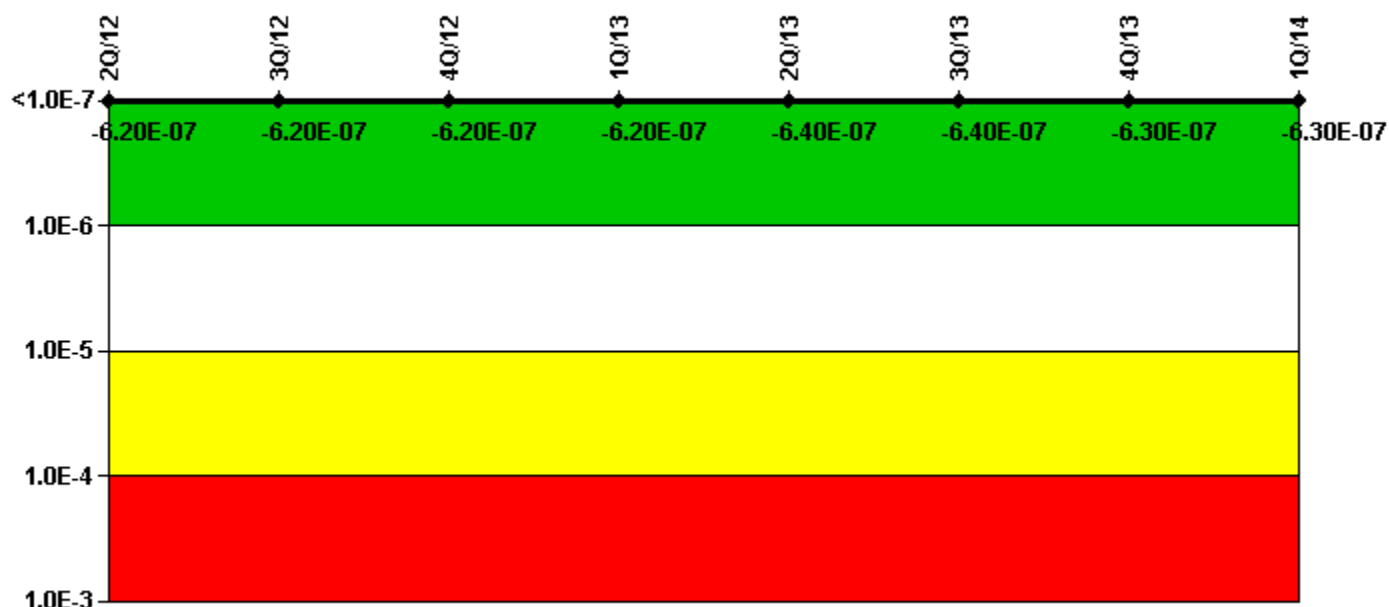
#### Licensee Comments:

1Q/13: The planned unavailability baseline for the Residual Heat Removal System Train B was increased by 130 hours per 3 years as a result of In-service Testing condition monitoring recommendation to replace the pump. The increase in planned unavailability baseline was evaluated in the MSPI Basis Document Revision 15, dated 3/27/13 and concluded that a temporary modification to the PRA model was required prior to implementing the change (i.e. >1.0E-08). An approved temporary modification to PRA model Revision 7.1 was made to reflect this change in planned unavailability and was approved on 3/19/13. The revised values were incorporated into CDE effective the 2nd quarter 2013. This change in the planned unavailability baseline is effective for 3 years and will be removed at the end of 3 years. Basis document revised to Rev 15.

4Q/12: MSPI Basis Document was revised on 12/2012, Revision 14.



### Mitigating Systems Performance Index, Cooling Water Systems



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

#### Notes

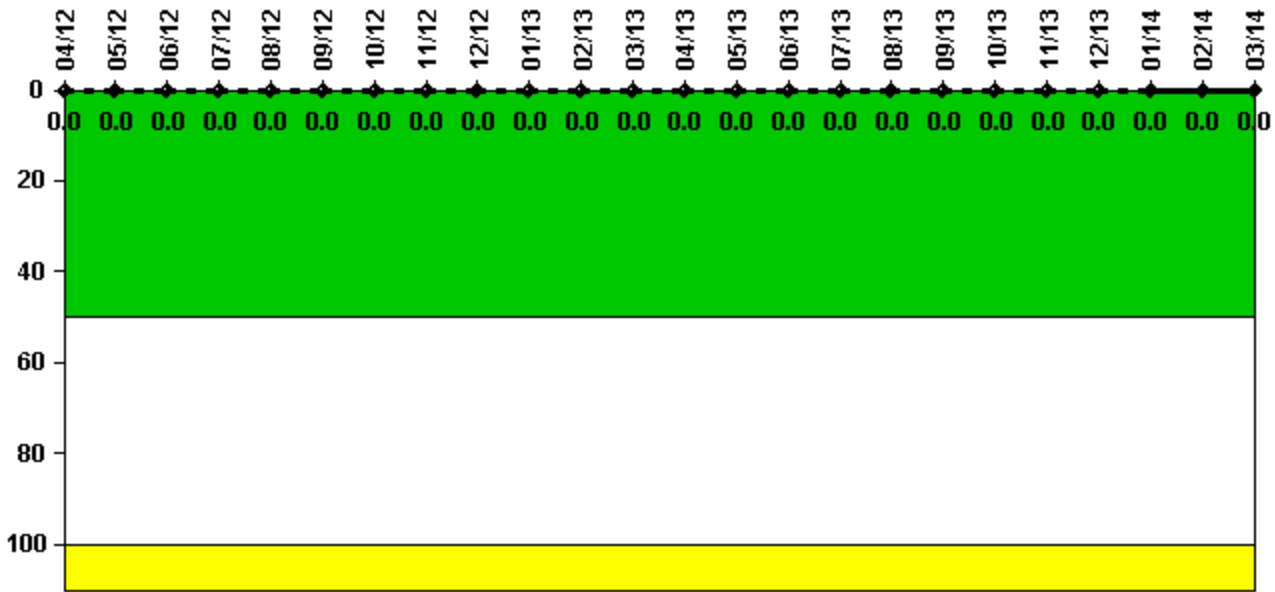
Mitigating Systems Performance Index, Cooling Water Systems	2Q/12	3Q/12	4Q/12	1Q/13	2Q/13	3Q/13	4Q/13	1Q/14
UAI ( $\Delta$ CDF)	-1.04E-07	-1.04E-07	-1.04E-07	-1.04E-07	-1.04E-07	-1.04E-07	-1.04E-07	-1.04E-07
URI ( $\Delta$ CDF)	-5.19E-07	-5.19E-07	-5.19E-07	-5.18E-07	-5.33E-07	-5.31E-07	-5.29E-07	-5.27E-07
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-6.20E-07	-6.20E-07	-6.20E-07	-6.20E-07	-6.40E-07	-6.40E-07	-6.30E-07	-6.30E-07

#### Licensee Comments:

1Q/13: The plant specific PRA was updated to increase the planned unavailability baseline for RHR-SYS-B due to the pump being replaced. This impacted several values (UA, BE FV, etc.) in the MSPI Basis Document tables associated with the MSPI systems. Basis document Rev 15.

4Q/12: MSPI Basis Document was revised on 12/2012, Revision 14.

### Reactor Coolant System Activity



Thresholds: White > 50.0 Yellow > 100.0

#### Notes

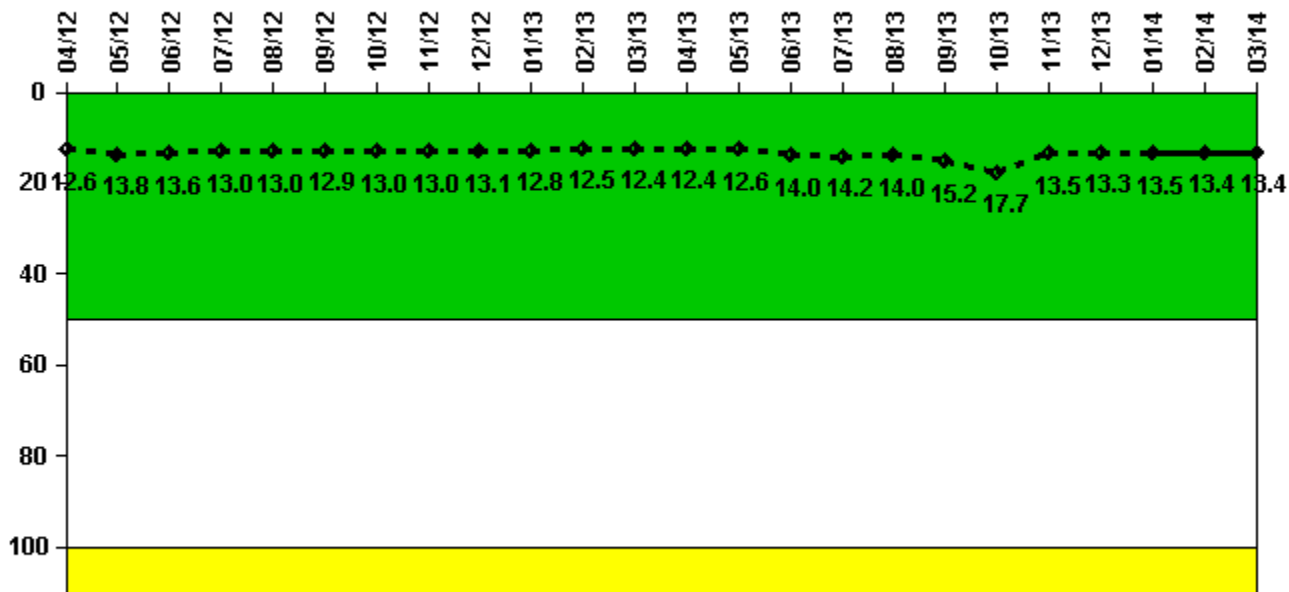
Reactor Coolant System Activity	4/12	5/12	6/12	7/12	8/12	9/12	10/12	11/12	12/12	1/13	2/13	3/13
Maximum activity	0.000001	0.000001	0.000003	0.000001	0.000001	0.000001	0.000001	0.000001	0.000001	0.000001	0.000001	0.000001
Technical specification limit	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Indicator value	0	0	0	0	0	0	0	0	0	0	0	0

Reactor Coolant System Activity	4/13	5/13	6/13	7/13	8/13	9/13	10/13	11/13	12/13	1/14	2/14	3/14
Maximum activity	0.000001	0.000001	0.000001	0.000001	0.000001	0.000001	0.000001	0.000001	0.000001	0.000001	0.000001	0.000001
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	0	0	0	0	0

Licensee Comments: none

### Reactor Coolant System Leakage



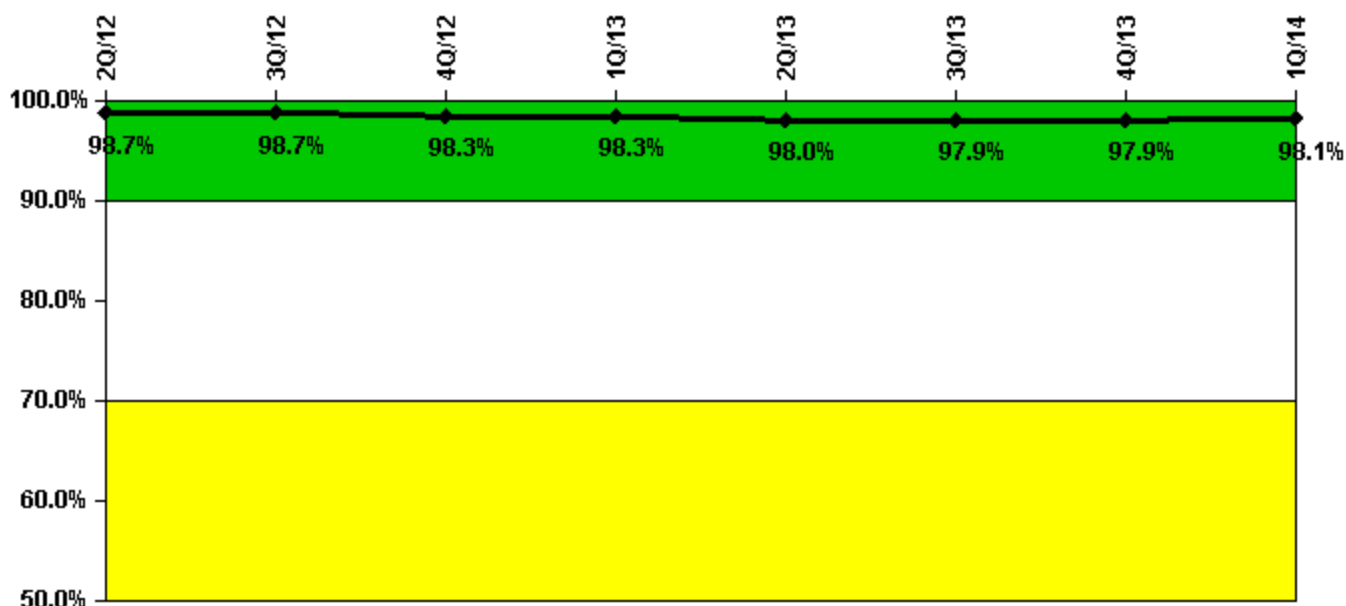
Thresholds: White > 50.0 Yellow > 100.0

#### Notes

Reactor Coolant System Leakage	4/12	5/12	6/12	7/12	8/12	9/12	10/12	11/12	12/12	1/13	2/13	3/13
Maximum leakage	3.160	3.440	3.410	3.250	3.250	3.220	3.240	3.260	3.270	3.200	3.130	3.100
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	12.6	13.8	13.6	13.0	13.0	12.9	13.0	13.0	13.1	12.8	12.5	12.4
Reactor Coolant System Leakage	4/13	5/13	6/13	7/13	8/13	9/13	10/13	11/13	12/13	1/14	2/14	3/14
Maximum leakage	3.110	3.150	3.490	3.540	3.490	3.800	4.420	3.370	3.330	3.380	3.350	3.340
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	12.4	12.6	14.0	14.2	14.0	15.2	17.7	13.5	13.3	13.5	13.4	13.4

Licensee Comments: none

### Drill/Exercise Performance



Thresholds: White < 90.0% Yellow < 70.0%

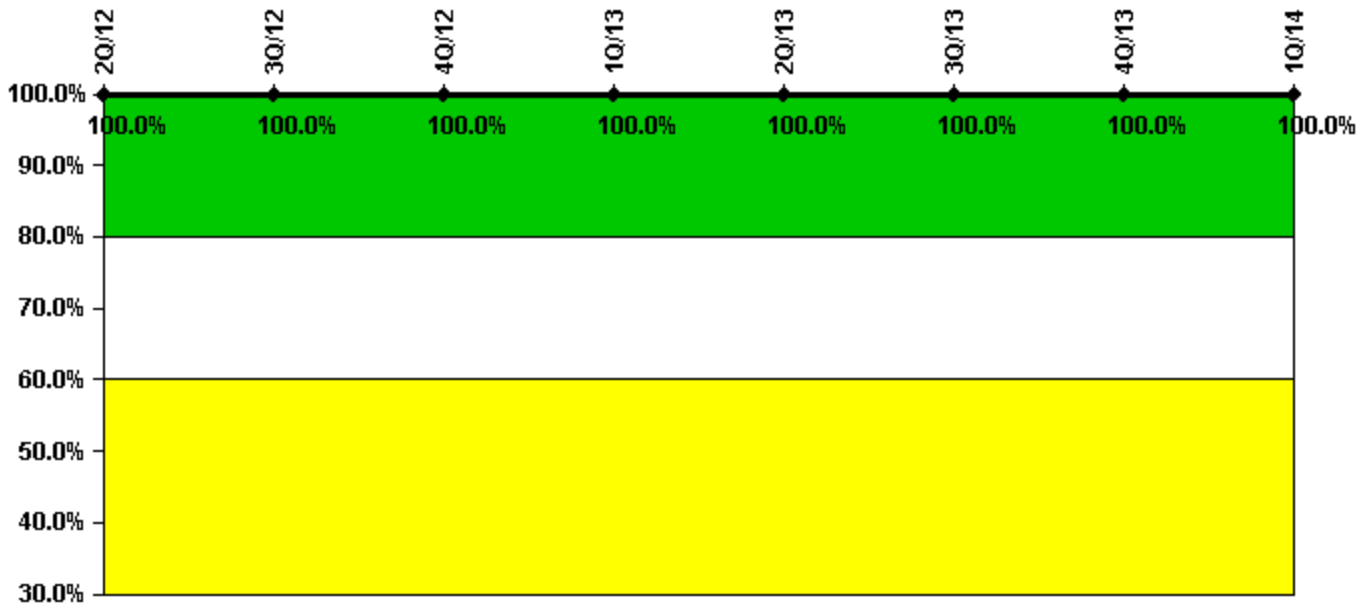
#### Notes

Drill/Exercise Performance	2Q/12	3Q/12	4Q/12	1Q/13	2Q/13	3Q/13	4Q/13	1Q/14
Successful opportunities	41.0	38.0	36.0	11.0	12.0	19.0	40.0	61.0
Total opportunities	42.0	39.0	37.0	11.0	13.0	19.0	41.0	61.0
Indicator value	98.7%	98.7%	98.3%	98.3%	98.0%	97.9%	97.9%	98.1%

#### Licensee Comments:

2Q/13: Upon further review of NEI 99-02 and CGS procedure guidance for the development of PARs, that PARs follow the GE classification, the PAR opportunity from 4-30-13 has been changed from a miss to a success which does not change the overall PI color.

### ERO Drill Participation



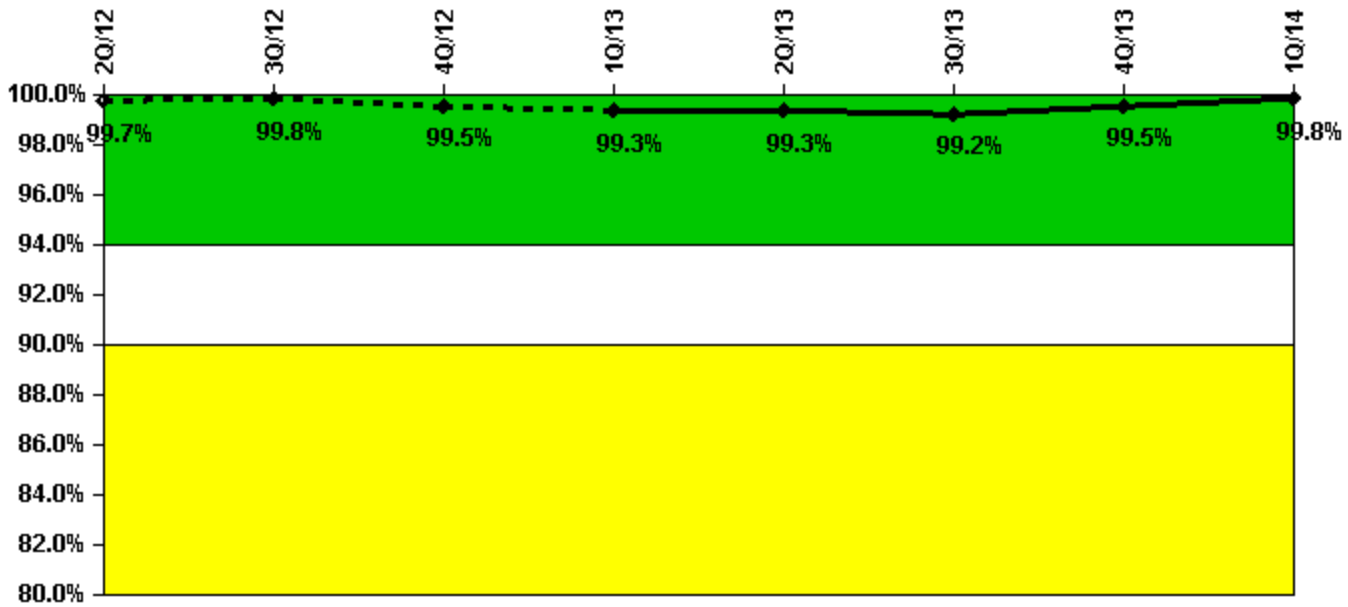
Thresholds: White < 80.0% Yellow < 60.0%

#### Notes

ERO Drill Participation	2Q/12	3Q/12	4Q/12	1Q/13	2Q/13	3Q/13	4Q/13	1Q/14
Participating Key personnel	62.0	56.0	56.0	57.0	56.0	41.0	41.0	40.0
Total Key personnel	62.0	56.0	56.0	57.0	56.0	41.0	41.0	40.0
Indicator value	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Licensee Comments: none

### Alert & Notification System



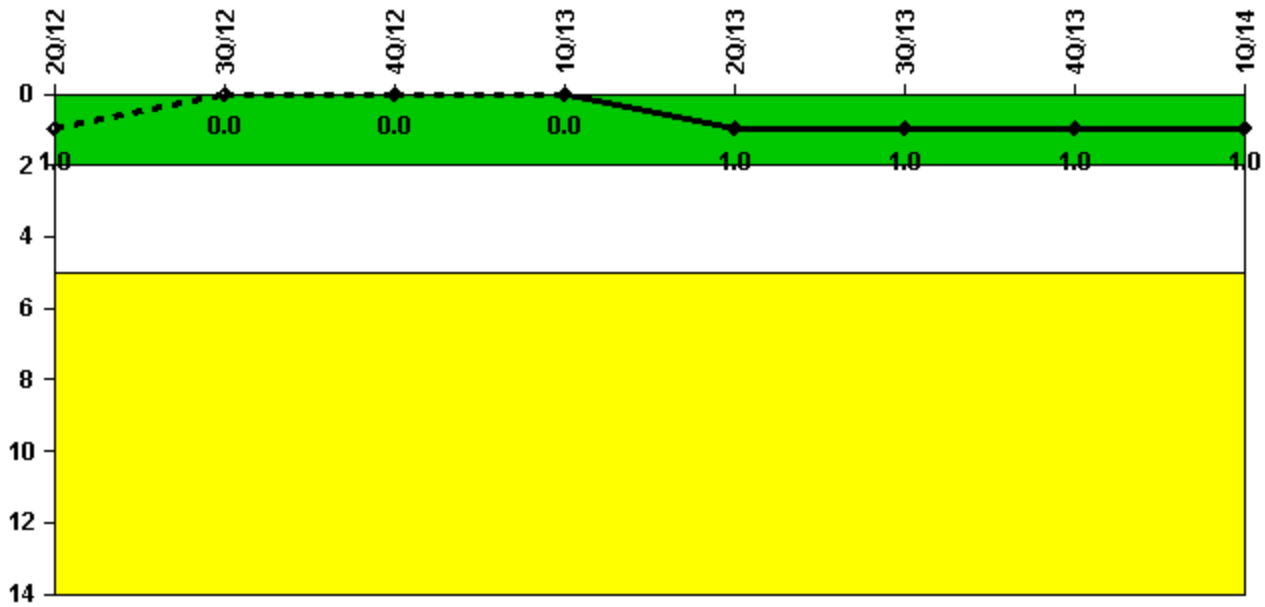
Thresholds: White < 94.0% Yellow < 90.0%

#### Notes

Alert & Notification System	2Q/12	3Q/12	4Q/12	1Q/13	2Q/13	3Q/13	4Q/13	1Q/14
Successful siren-tests	143	143	141	152	143	171	169	182
Total sirens-tests	143	143	143	154	143	172	169	182
Indicator value	99.7%	99.8%	99.5%	99.3%	99.3%	99.2%	99.5%	99.8%

Licensee Comments: none

### Occupational Exposure Control Effectiveness



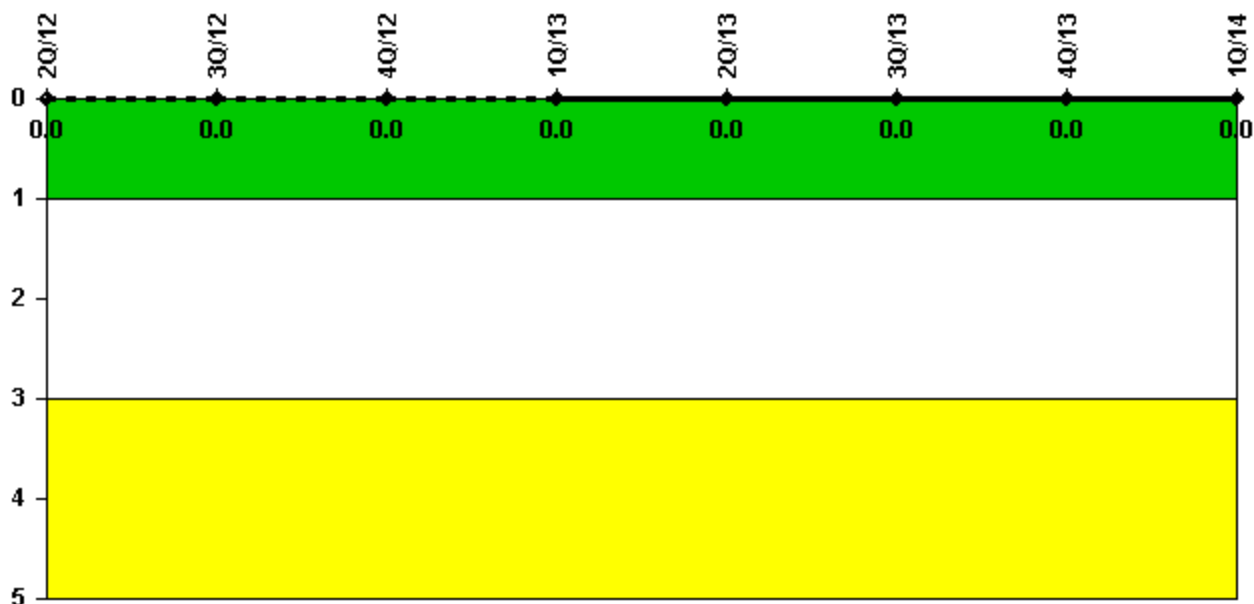
Thresholds: White > 2.0 Yellow > 5.0

#### Notes

Occupational Exposure Control Effectiveness	2Q/12	3Q/12	4Q/12	1Q/13	2Q/13	3Q/13	4Q/13	1Q/14
High radiation area occurrences	0	0	0	0	1	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>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>

Licensee Comments: none

### RETS/ODCM Radiological Effluent



Thresholds: White > 1.0 Yellow > 3.0

#### Notes

RETS/ODCM Radiological Effluent	2Q/12	3Q/12	4Q/12	1Q/13	2Q/13	3Q/13	4Q/13	1Q/14
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: April 23, 2014*