

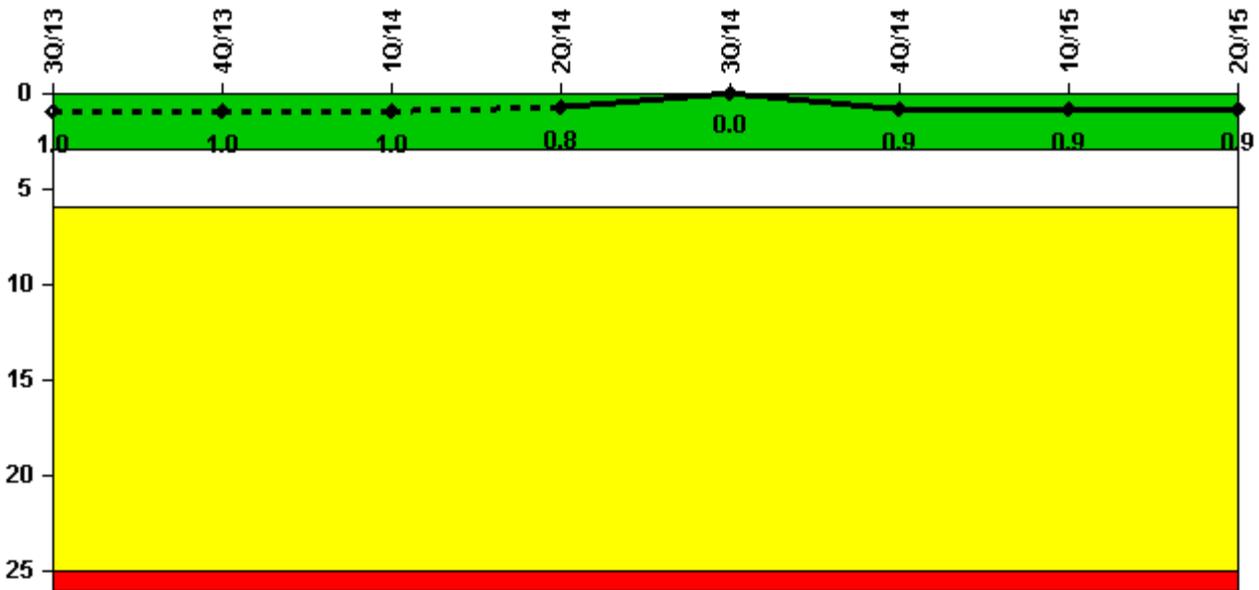
# Callaway

## 2Q/2015 Performance Indicators

The solid trend line represents the current reporting period.

Licensee's General Comments: none

### Unplanned Scrams per 7000 Critical Hrs



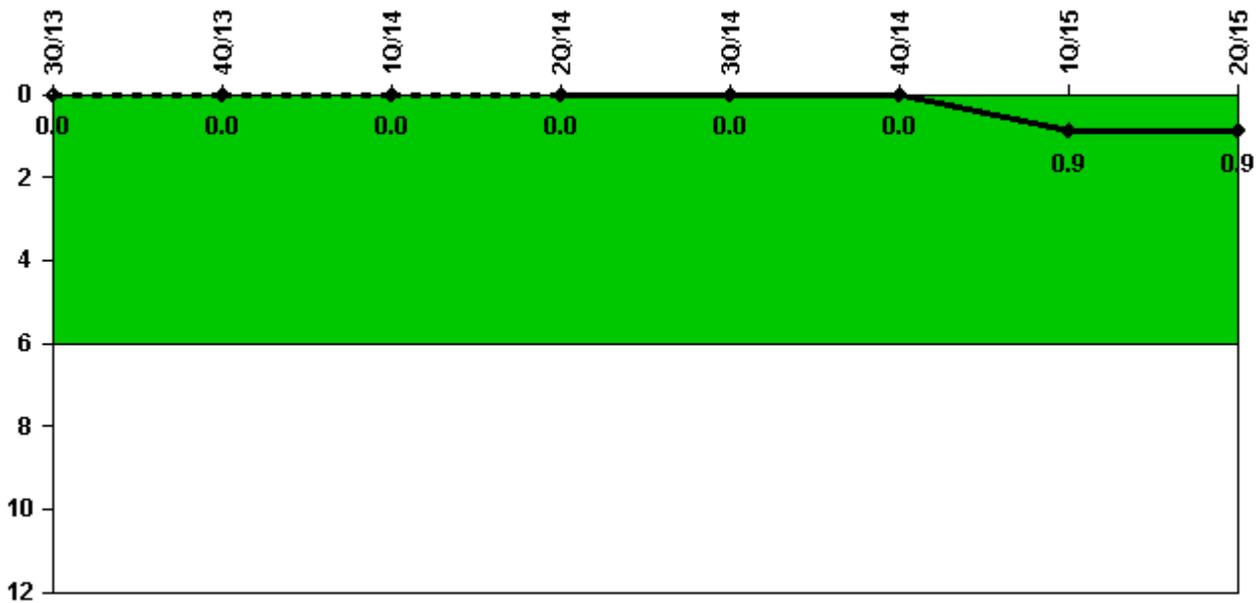
Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

### Notes

Unplanned Scrams per 7000 Critical Hrs	3Q/13	4Q/13	1Q/14	2Q/14	3Q/14	4Q/14	1Q/15	2Q/15
Unplanned scrams	1.0	0	0	0	0	1.0	0	0
Critical hours	1714.0	2209.0	2159.0	2184.0	2208.0	1159.6	2159.0	2184.0
Indicator value	1.0	1.0	1.0	0.8	0	0.9	0.9	0.9

Licensee Comments: none

### Unplanned Power Changes per 7000 Critical Hrs



Thresholds: White > 6.0

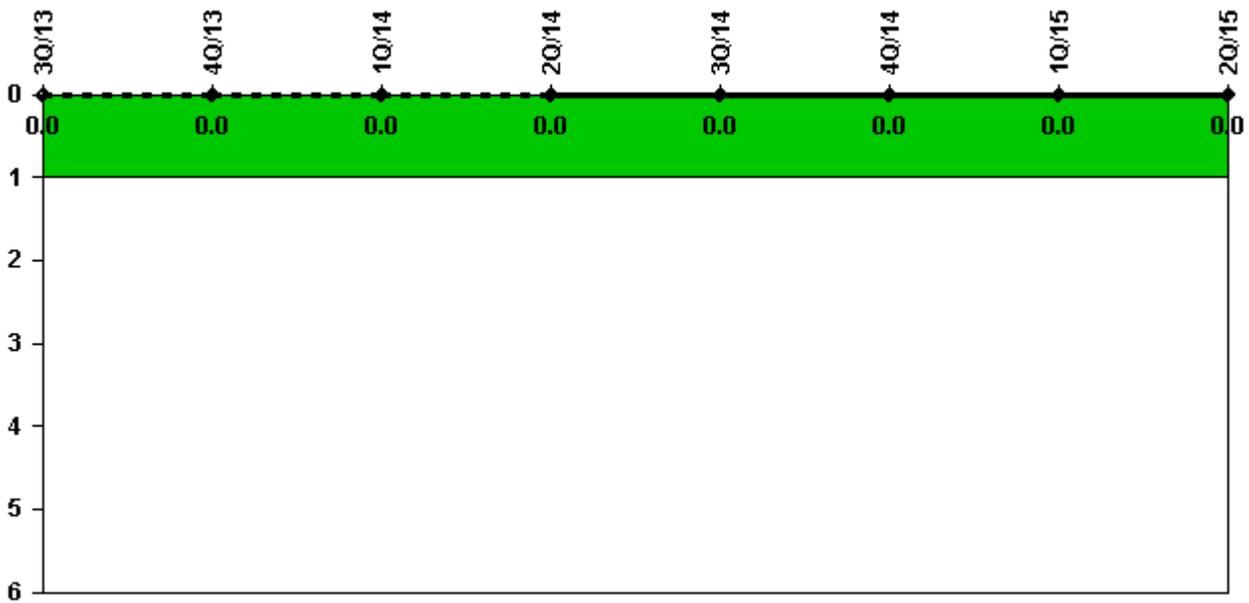
#### Notes

Unplanned Power Changes per 7000 Critical Hrs	3Q/13	4Q/13	1Q/14	2Q/14	3Q/14	4Q/14	1Q/15	2Q/15
Unplanned power changes	0	0	0	0	0	0	1.0	0
Critical hours	1714.0	2209.0	2159.0	2184.0	2208.0	1159.6	2159.0	2184.0
<b>Indicator value</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.9</b>	<b>0.9</b>

Licensee Comments:

1Q/15: The unplanned power change was due to an issue with the main turbine digital controls, which caused a load rejection from 99% power to 57% power at 0257 on 01/31/2015. Power was subsequently reduced to 46%, beginning at 1046 on 02/01/2015, for troubleshooting and repairs. Full power was restored at 0310 on 02/06/2015.

### Unplanned Scrams with Complications



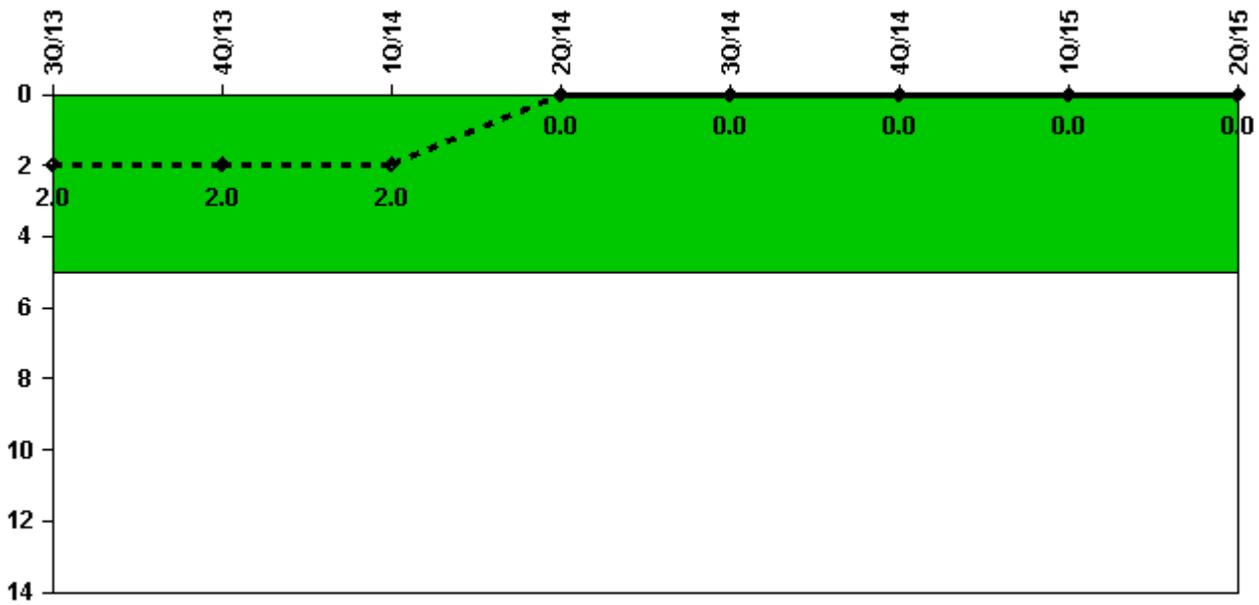
Thresholds: White > 1.0

#### Notes

Unplanned Scrams with Complications	3Q/13	4Q/13	1Q/14	2Q/14	3Q/14	4Q/14	1Q/15	2Q/15
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)



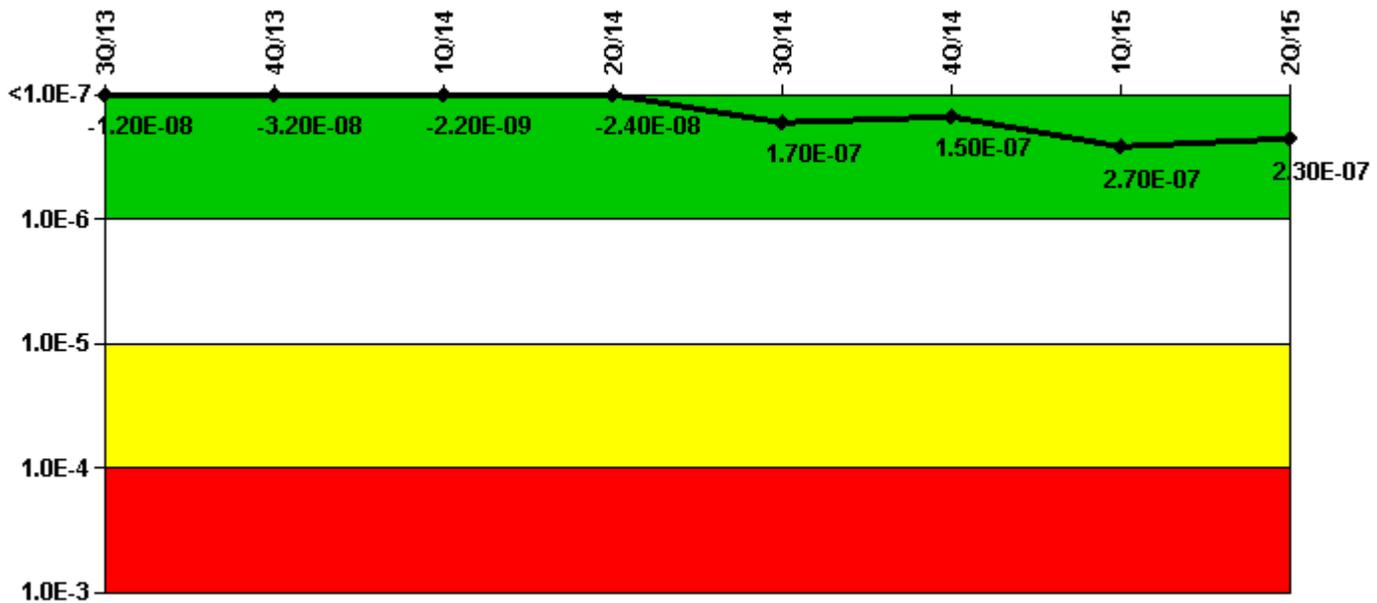
Thresholds: White > 5.0

#### Notes

Safety System Functional Failures (PWR)	3Q/13	4Q/13	1Q/14	2Q/14	3Q/14	4Q/14	1Q/15	2Q/15
Safety System Functional Failures	0	0	0	0	0	0	0	0
<b>Indicator value</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

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	3Q/13	4Q/13	1Q/14	2Q/14	3Q/14	4Q/14	1Q/15	2Q/15
UAI ( $\Delta$ CDF)	-1.15E-08	-3.16E-08	-2.42E-09	-2.53E-08	-2.53E-08	-4.55E-08	-3.10E-08	-7.01E-08
URI ( $\Delta$ CDF)	-1.98E-10	-4.31E-10	1.89E-10	8.34E-10	1.98E-07	1.98E-07	3.00E-07	3.00E-07
PLE	NO							
Indicator value	-1.20E-08	-3.20E-08	-2.20E-09	-2.40E-08	1.70E-07	1.50E-07	2.70E-07	2.30E-07

#### Licensee Comments:

1Q/15: Changed PRA Parameter(s). For all Mitigating Systems Performance Index (MSPI) Systems: MSPI Basis document has been updated to reflect changes in Probabilistic Risk Analysis (PRA) data effective 1st Quarter 2015.

4Q/14: Two engineering evaluations of degraded conditions were not completed at the time the 4th quarter 2014 data was submitted. Additionally, an evaluation for one other 4th quarter condition was identified in the 1st quarter of 2015. Evaluations were completed prior to submitting the 1st quarter 2015 data.

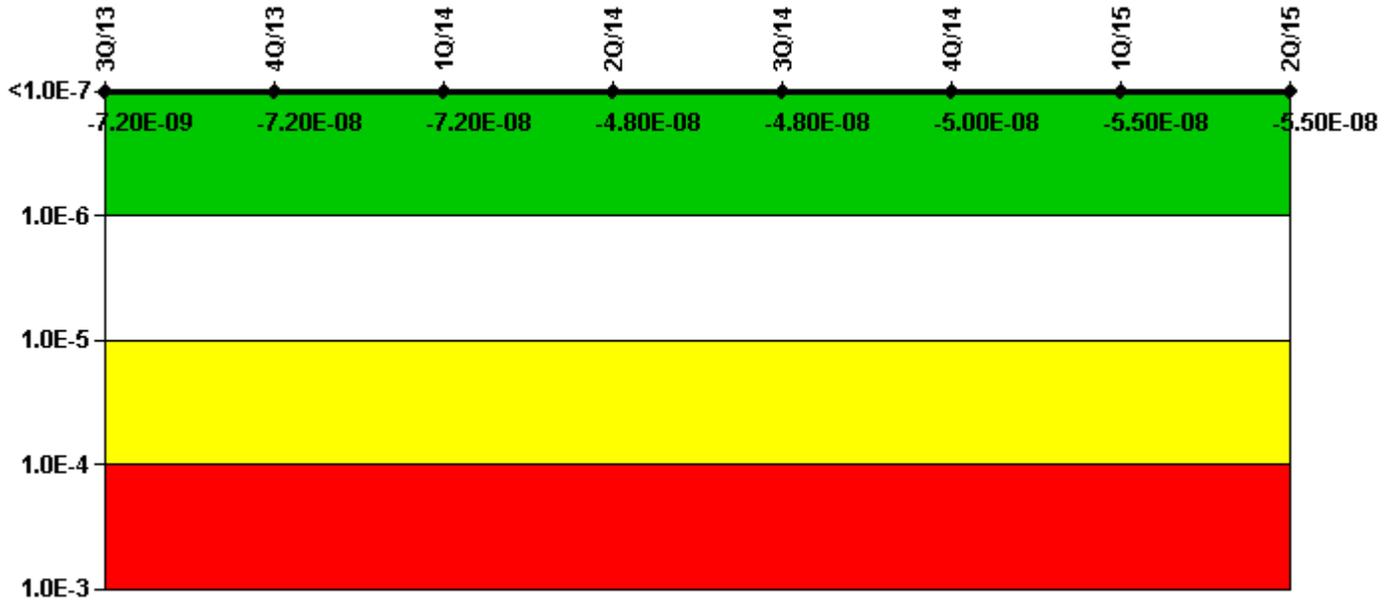
2Q/14: Changed PRA Parameter(s). PRA values were updated to reflect changes made to Callaway's PRA model #5C. Changes were made in accordance with Revision #13 of Callaway's MSPI Basis Document.

4Q/13: Changed PRA Parameter(s).

3Q/13: Changed PRA Parameter(s). PRA values were updated to reflect changes made to Callaway's PRA model

#5A. Changes were made in accordance with Revision #11 of Callaway's MSPI Basis Document.

### 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	3Q/13	4Q/13	1Q/14	2Q/14	3Q/14	4Q/14	1Q/15	2Q/15
UAI ( $\Delta$ CDF)	-2.17E-09	-1.84E-08	-1.84E-08	-1.12E-08	-1.12E-08	-1.27E-08	-1.34E-08	-1.34E-08
URI ( $\Delta$ CDF)	-5.03E-09	-5.34E-08	-5.34E-08	-3.71E-08	-3.71E-08	-3.71E-08	-4.14E-08	-4.14E-08
PLE	NO							
Indicator value	-7.20E-09	-7.20E-08	-7.20E-08	-4.80E-08	-4.80E-08	-5.00E-08	-5.50E-08	-5.50E-08

Licensee Comments:

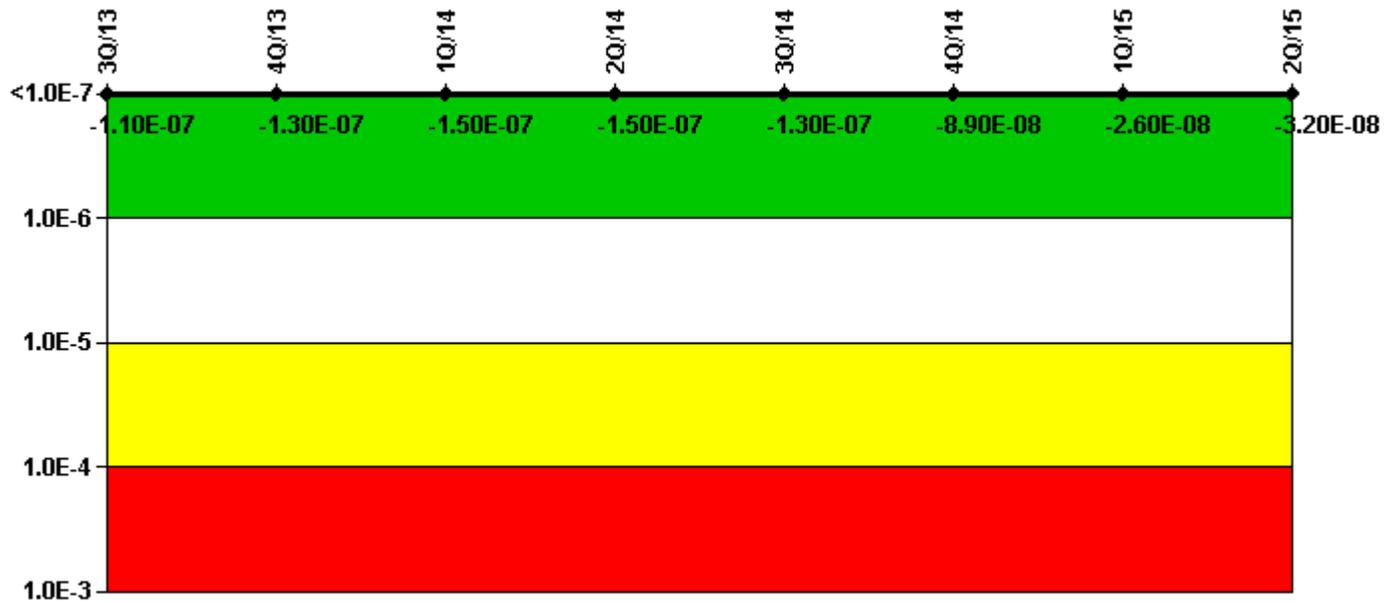
1Q/15: Changed PRA Parameter(s). For all Mitigating Systems Performance Index (MSPI) Systems: MSPI Basis document has been updated to reflect changes in Probabilistic Risk Analysis (PRA) data effective 1st Quarter 2015.

2Q/14: Changed PRA Parameter(s). PRA values were updated to reflect changes made to Callaway's PRA model #5C. Changes were made in accordance with Revision #13 of Callaway's MSPI Basis Document.

4Q/13: Changed PRA Parameter(s).

3Q/13: Changed PRA Parameter(s). PRA values were updated to reflect changes made to Callaway's PRA model #5A. Changes were made in accordance with Revision #11 of Callaway's MSPI Basis Document.

### 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	3Q/13	4Q/13	1Q/14	2Q/14	3Q/14	4Q/14	1Q/15	2Q/15
UAI (ΔCDF)	-1.21E-09	3.29E-08	6.31E-09	1.15E-08	2.64E-08	3.02E-08	3.65E-08	3.08E-08
URI (ΔCDF)	-1.07E-07	-1.59E-07	-1.59E-07	-1.60E-07	-1.60E-07	-1.19E-07	-6.24E-08	-6.24E-08
PLE	NO							
Indicator value	-1.10E-07	-1.30E-07	-1.50E-07	-1.50E-07	-1.30E-07	-8.90E-08	-2.60E-08	-3.20E-08

Licensee Comments:

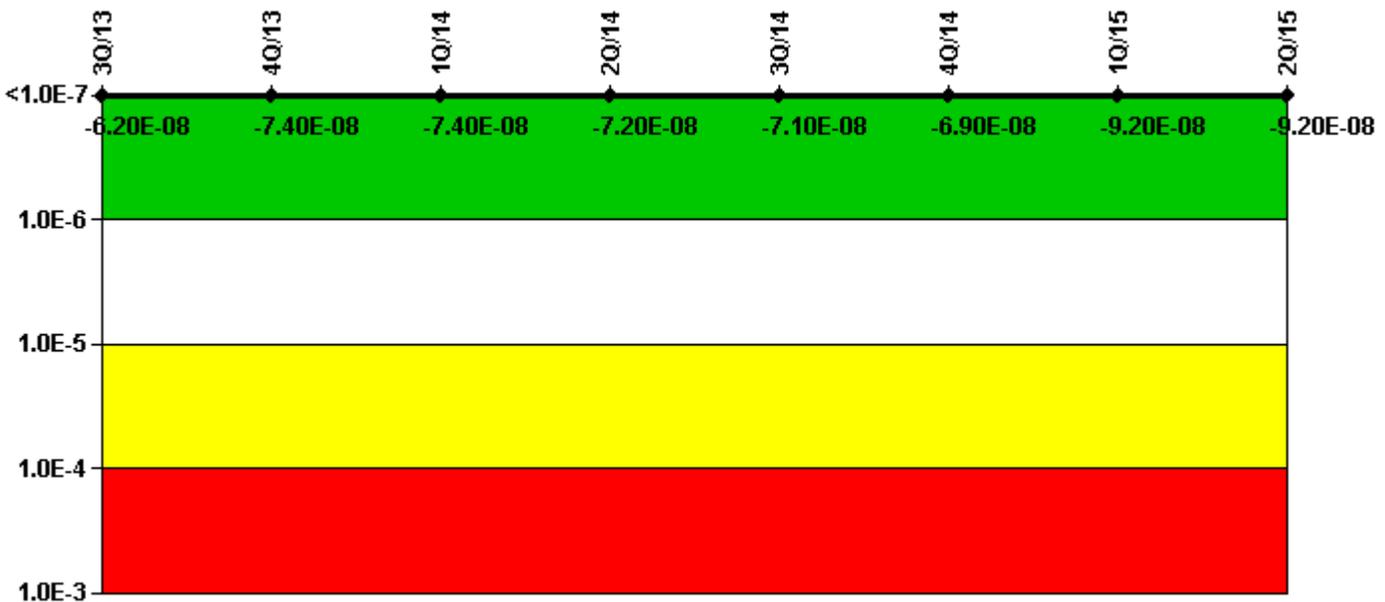
1Q/15: Changed PRA Parameter(s). For all Mitigating Systems Performance Index (MSPI) Systems: MSPI Basis document has been updated to reflect changes in Probabilistic Risk Analysis (PRA) data effective 1st Quarter 2015.

2Q/14: Changed PRA Parameter(s). PRA values were updated to reflect changes made to Callaway's PRA model #5C. Changes were made in accordance with Revision #13 of Callaway's MSPI Basis Document.

4Q/13: Changed PRA Parameter(s).

3Q/13: Changed PRA Parameter(s). PRA values were updated to reflect changes made to Callaway's PRA model #5A. Changes were made in accordance with Revision #11 of Callaway's MSPI Basis Document.

### 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	3Q/13	4Q/13	1Q/14	2Q/14	3Q/14	4Q/14	1Q/15	2Q/15
UAI (ΔCDF)	-5.50E-09	-6.60E-09	-7.49E-09	-7.60E-09	-5.81E-09	-4.31E-09	-1.11E-08	-1.11E-08
URI (ΔCDF)	-5.61E-08	-6.70E-08	-6.70E-08	-6.48E-08	-6.48E-08	-6.48E-08	-8.09E-08	-8.09E-08
PLE	NO							
Indicator value	-6.20E-08	-7.40E-08	-7.40E-08	-7.20E-08	-7.10E-08	-6.90E-08	-9.20E-08	-9.20E-08

Licensee Comments:

1Q/15: Changed PRA Parameter(s). For all Mitigating Systems Performance Index (MSPI) Systems: MSPI Basis

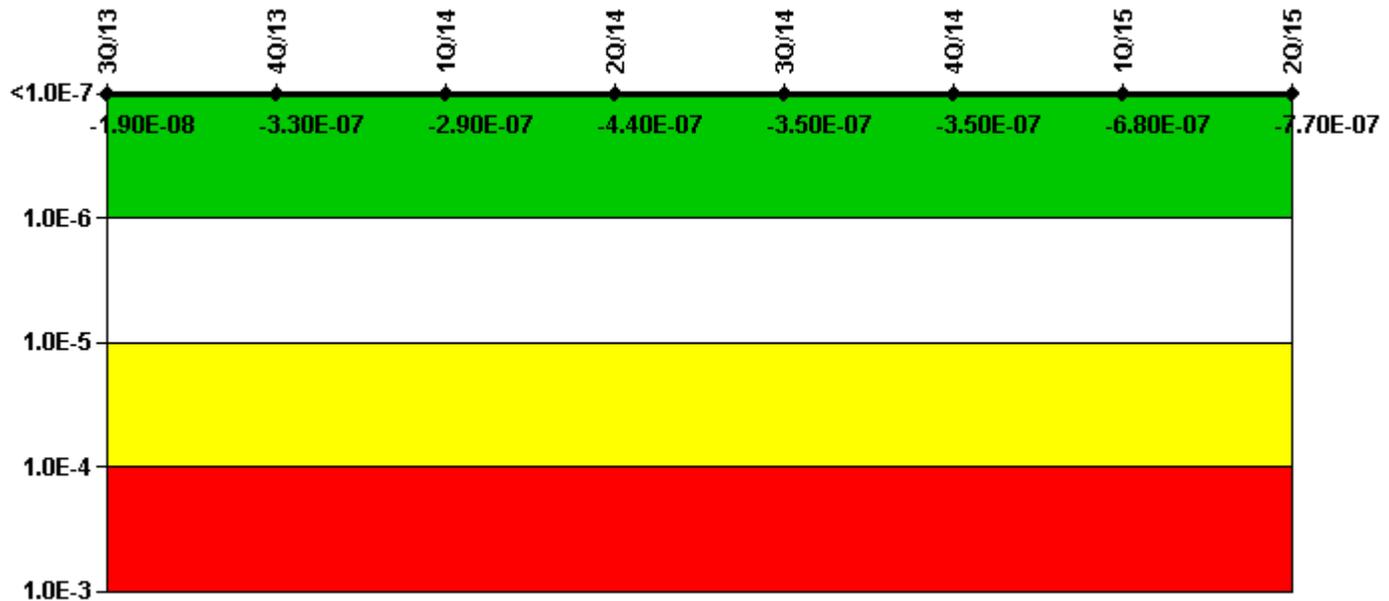
document has been updated to reflect changes in Probabilistic Risk Analysis (PRA) data effective 1st Quarter 2015.

2Q/14: Changed PRA Parameter(s). PRA values were updated to reflect changes made to Callaway's PRA model #5C. Changes were made in accordance with Revision #13 of Callaway's MSPI Basis Document.

4Q/13: Changed PRA Parameter(s).

3Q/13: Changed PRA Parameter(s). PRA values were updated to reflect changes made to Callaway's PRA model #5A. Changes were made in accordance with Revision #11 of Callaway's MSPI Basis Document.

### 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	3Q/13	4Q/13	1Q/14	2Q/14	3Q/14	4Q/14	1Q/15	2Q/15
UAI (ΔCDF)	3.45E-08	3.17E-07	3.59E-07	5.94E-08	1.52E-07	1.51E-07	4.35E-08	-4.11E-08
URI (ΔCDF)	-5.40E-08	-6.50E-07	-6.51E-07	-4.97E-07	-4.97E-07	-4.98E-07	-7.28E-07	-7.29E-07
PLE	NO							
Indicator value	-1.90E-08	-3.30E-07	-2.90E-07	-4.40E-07	-3.50E-07	-3.50E-07	-6.80E-07	-7.70E-07

Licensee Comments:

1Q/15: Changed PRA Parameter(s). For all Mitigating Systems Performance Index (MSPI) Systems: MSPI Basis document has been updated to reflect changes in Probabilistic Risk Analysis (PRA) data effective 1st Quarter 2015.

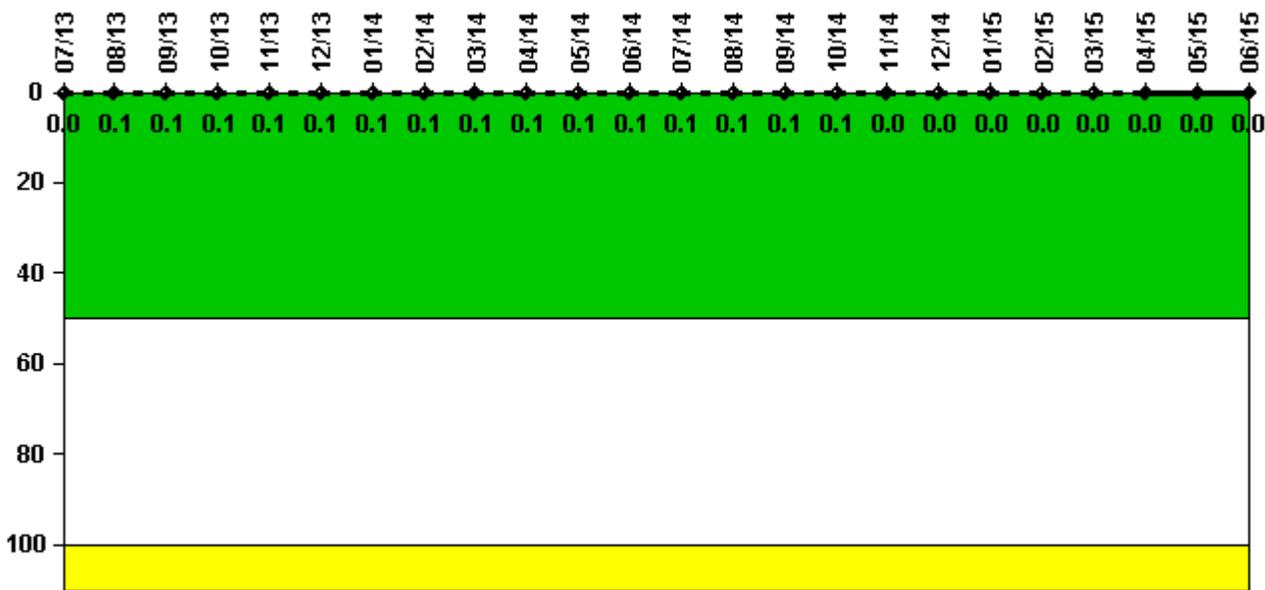
2Q/14: Changed PRA Parameter(s). PRA values were updated to reflect changes made to Callaway's PRA model #5C. Changes were made in accordance with Revision #13 of Callaway's MSPI Basis Document.

1Q/14: Risk Cap Invoked.

4Q/13: Risk Cap Invoked. Changed PRA Parameter(s).

3Q/13: Changed PRA Parameter(s). PRA values were updated to reflect changes made to Callaway's PRA model #5A. Changes were made in accordance with Revision #11 of Callaway's MSPI Basis Document.

### Reactor Coolant System Activity



Thresholds: White > 50.0 Yellow > 100.0

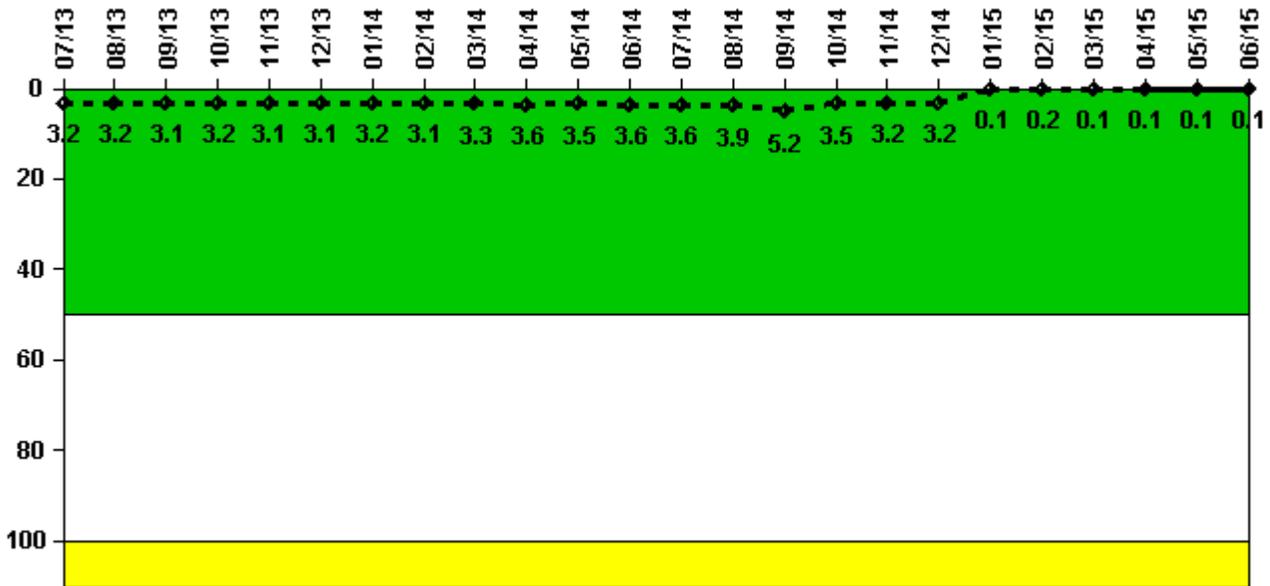
Notes

Reactor Coolant System Activity	7/13	8/13	9/13	10/13	11/13	12/13	1/14	2/14	3/14	4/14	5/14	6/14
Maximum activity	0.000393	0.000566	0.000633	0.000708	0.000610	0.000706	0.000727	0.000735	0.000804	0.000780	0.000837	0.000855
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
<b>Indicator value</b>	<b>0</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>
<b>Reactor Coolant System Activity</b>	<b>7/14</b>	<b>8/14</b>	<b>9/14</b>	<b>10/14</b>	<b>11/14</b>	<b>12/14</b>	<b>1/15</b>	<b>2/15</b>	<b>3/15</b>	<b>4/15</b>	<b>5/15</b>	<b>6/15</b>
Maximum activity	0.000887	0.000880	0.001060	0.000746	0.000171	0.000339	0.000246	0.000343	0.000376	0.000305	0.000351	0.000225
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
<b>Indicator value</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</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

### Reactor Coolant System Leakage



Thresholds: White > 50.0 Yellow > 100.0

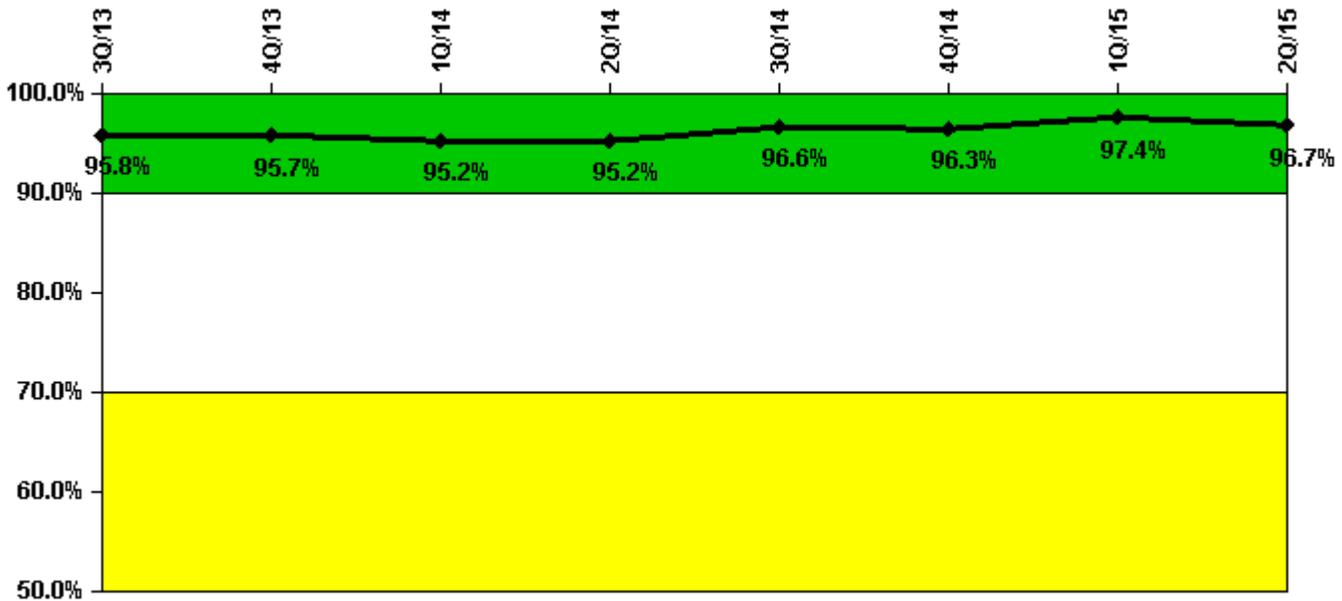
### Notes

Reactor Coolant System Leakage	7/13	8/13	9/13	10/13	11/13	12/13	1/14	2/14	3/14	4/14	5/14	6/14
Maximum leakage	0.324	0.315	0.313	0.323	0.305	0.312	0.320	0.311	0.329	0.362	0.349	0.363

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
<b>Indicator value</b>	<b>3.2</b>	<b>3.2</b>	<b>3.1</b>	<b>3.2</b>	<b>3.1</b>	<b>3.1</b>	<b>3.2</b>	<b>3.1</b>	<b>3.3</b>	<b>3.6</b>	<b>3.5</b>	<b>3.6</b>
<b>Reactor Coolant System Leakage</b>	<b>7/14</b>	<b>8/14</b>	<b>9/14</b>	<b>10/14</b>	<b>11/14</b>	<b>12/14</b>	<b>1/15</b>	<b>2/15</b>	<b>3/15</b>	<b>4/15</b>	<b>5/15</b>	<b>6/15</b>
Maximum leakage	0.363	0.390	0.518	0.346	0.321	0.317	0.006	0.017	0.007	0.012	0.008	0.009
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
<b>Indicator value</b>	<b>3.6</b>	<b>3.9</b>	<b>5.2</b>	<b>3.5</b>	<b>3.2</b>	<b>3.2</b>	<b>0.1</b>	<b>0.2</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>

Licensee Comments: none

### Drill/Exercise Performance



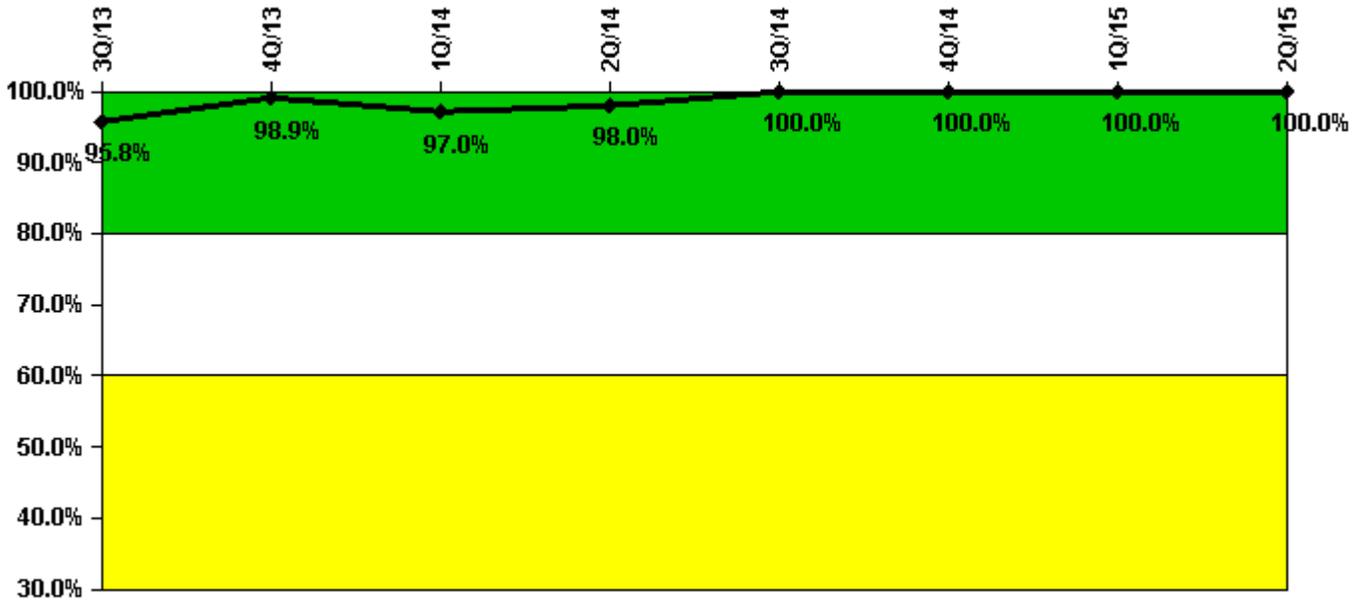
Thresholds: White < 90.0% Yellow < 70.0%

### Notes

Drill/Exercise Performance	3Q/13	4Q/13	1Q/14	2Q/14	3Q/14	4Q/14	1Q/15	2Q/15
Successful opportunities	21.0	26.0	45.0	8.0	68.0	0	61.0	6.0
Total opportunities	22.0	28.0	48.0	8.0	68.0	0	61.0	8.0
<b>Indicator value</b>	<b>95.8%</b>	<b>95.7%</b>	<b>95.2%</b>	<b>95.2%</b>	<b>96.6%</b>	<b>96.3%</b>	<b>97.4%</b>	<b>96.7%</b>

Licensee Comments: none

### ERO Drill Participation



Thresholds: White < 80.0% Yellow < 60.0%

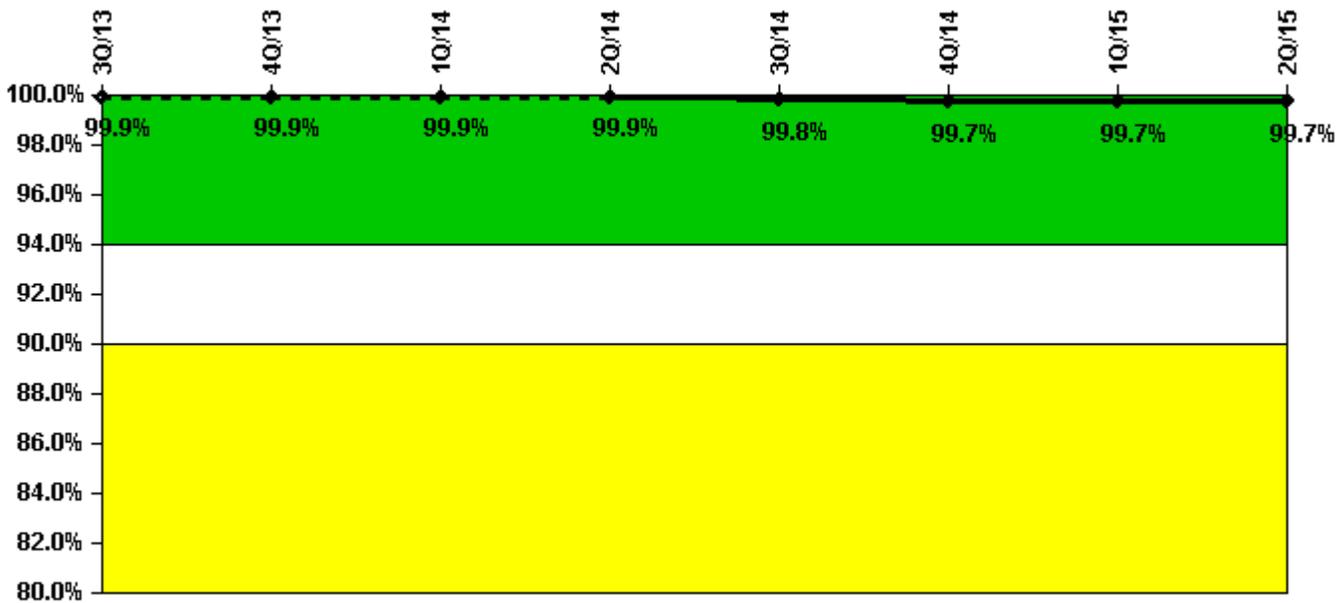
#### Notes

ERO Drill Participation	3Q/13	4Q/13	1Q/14	2Q/14	3Q/14	4Q/14	1Q/15	2Q/15
Participating Key personnel	92.0	93.0	96.0	98.0	106.0	107.0	105.0	97.0
Total Key personnel	96.0	94.0	99.0	100.0	106.0	107.0	105.0	97.0
Indicator value	95.8%	98.9%	97.0%	98.0%	100.0%	100.0%	100.0%	100.0%

#### Licensee Comments:

3Q/13: Changed Participating Key personnel values for 3Q2012, 4Q2012, 1Q2013 and 2Q2013 due to discovery (during an inspection) of an inputting error. The changes did not affect the color of the indicator. Comments added to each quarter that was adjusted.

### Alert & Notification System



Thresholds: White < 94.0% Yellow < 90.0%

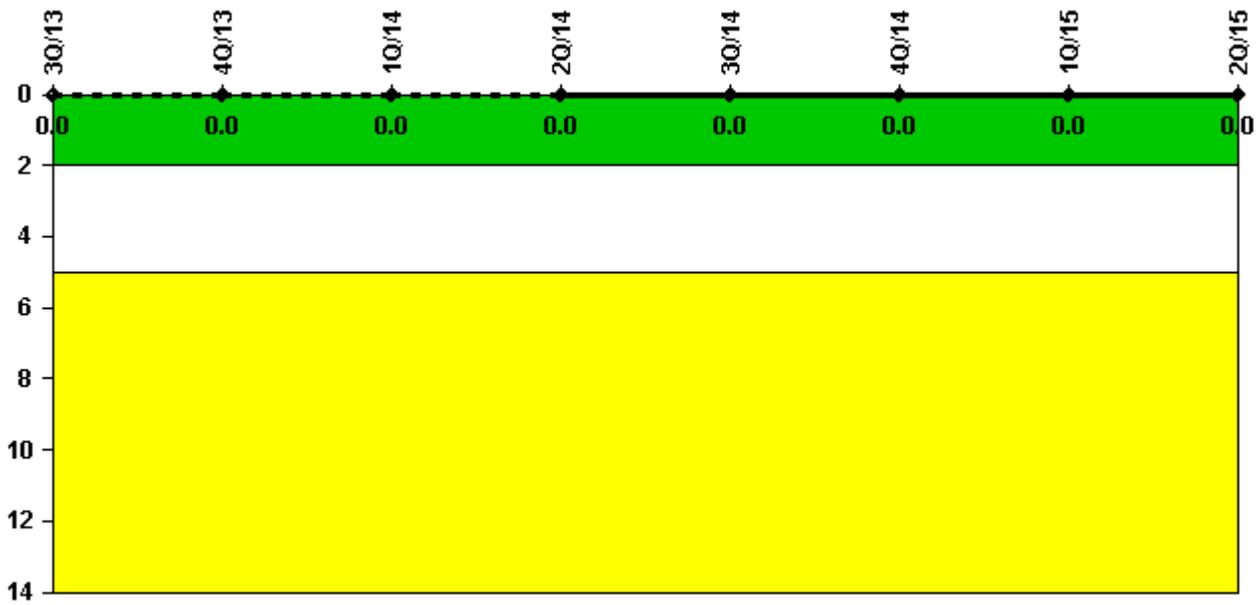
#### Notes

Alert & Notification System	3Q/13	4Q/13	1Q/14	2Q/14	3Q/14	4Q/14	1Q/15	2Q/15
Successful siren-tests	377	405	348	377	404	375	377	377
Total sirens-tests	377	406	348	377	406	377	377	377
Indicator value	99.9%	99.9%	99.9%	99.9%	99.8%	99.7%	99.7%	99.7%

Licensee Comments:

3Q/14: Two siren failures were not recorded correctly in a spreadsheet which resulted in reporting 406/406 in 3Q2014 instead of 404/406 being reported. This change does not affect the color of the PI.

### Occupational Exposure Control Effectiveness



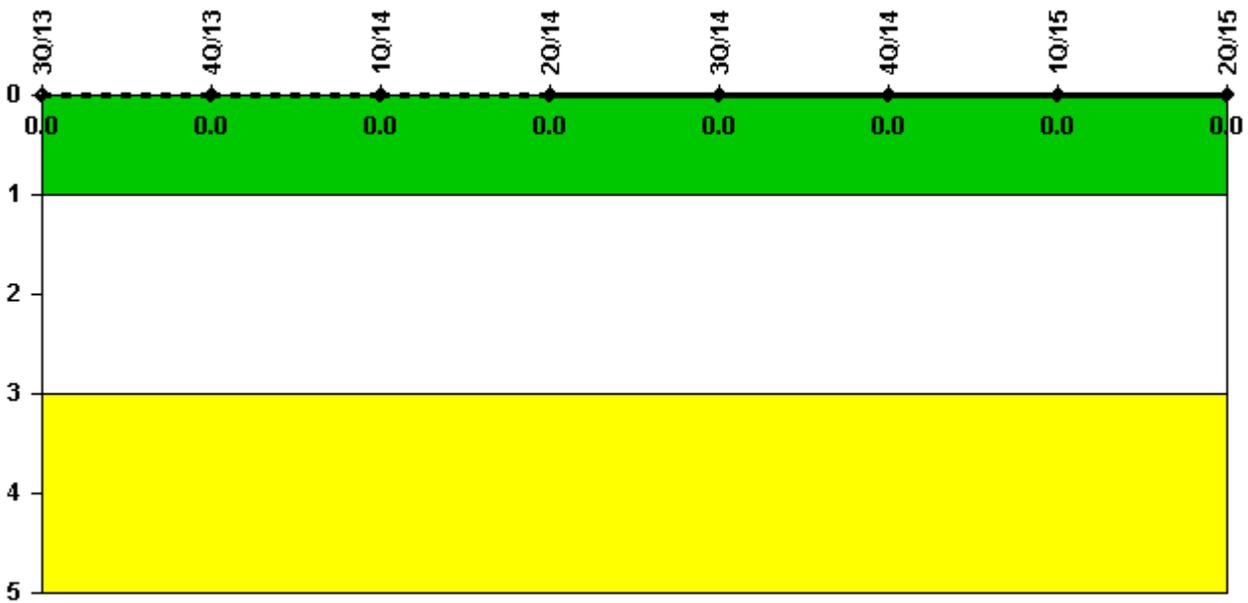
Thresholds: White > 2.0 Yellow > 5.0

#### Notes

Occupational Exposure Control Effectiveness	3Q/13	4Q/13	1Q/14	2Q/14	3Q/14	4Q/14	1Q/15	2Q/15
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	3Q/13	4Q/13	1Q/14	2Q/14	3Q/14	4Q/14	1Q/15	2Q/15
RETS/ODCM occurrences	0	0	0	0	0	0	0	0
<b>Indicator value</b>	<b>0</b>							

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: July 24, 2015*