

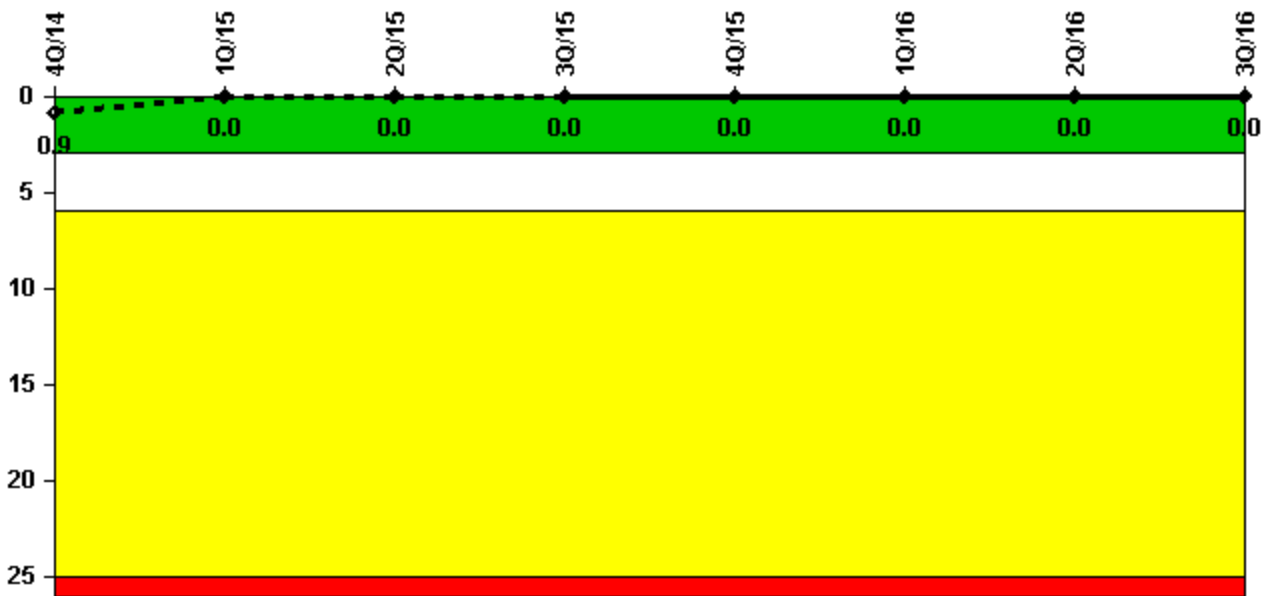
## Diablo Canyon 2

### 3Q/2016 Performance Indicators

The solid trend line represents the current reporting period.

Licensee's General Comments: none

#### Unplanned Scrams per 7000 Critical Hrs



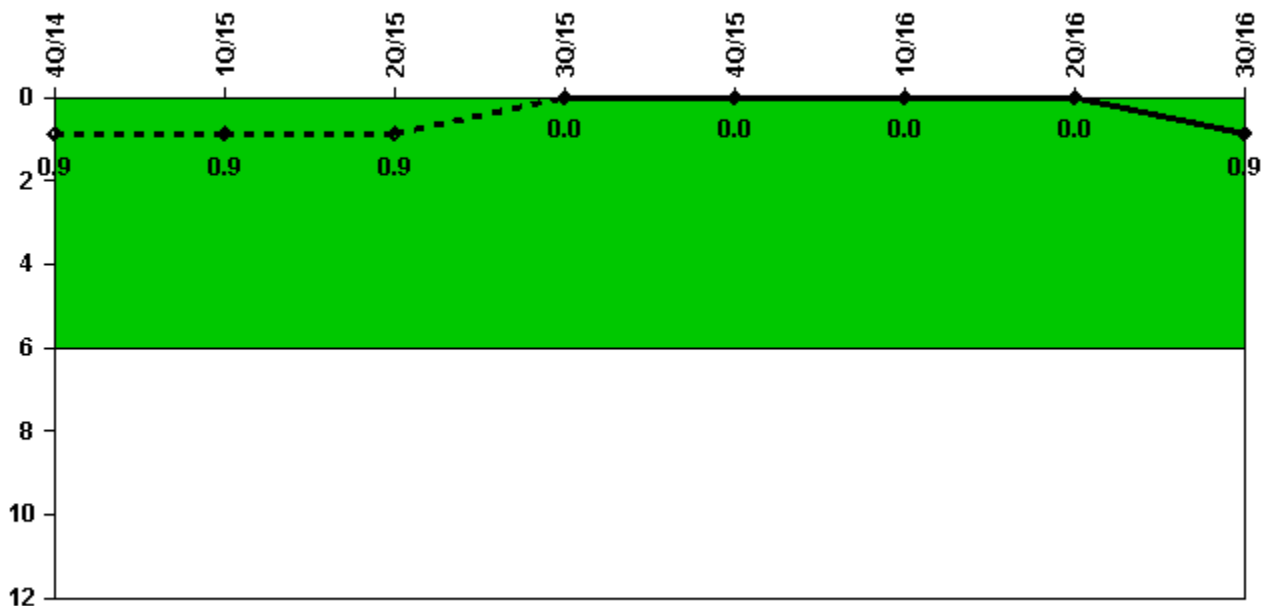
**Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0**

#### Notes

Unplanned Scrams per 7000 Critical Hrs	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16
Unplanned scrams	0	0	0	0	0	0	0	0
Critical hours	1453.4	2159.0	2184.0	2208.0	2209.0	2183.0	1436.5	2208.0
Indicator value	<b>0.9</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

### Unplanned Power Changes per 7000 Critical Hrs



Thresholds: White > 6.0

#### Notes

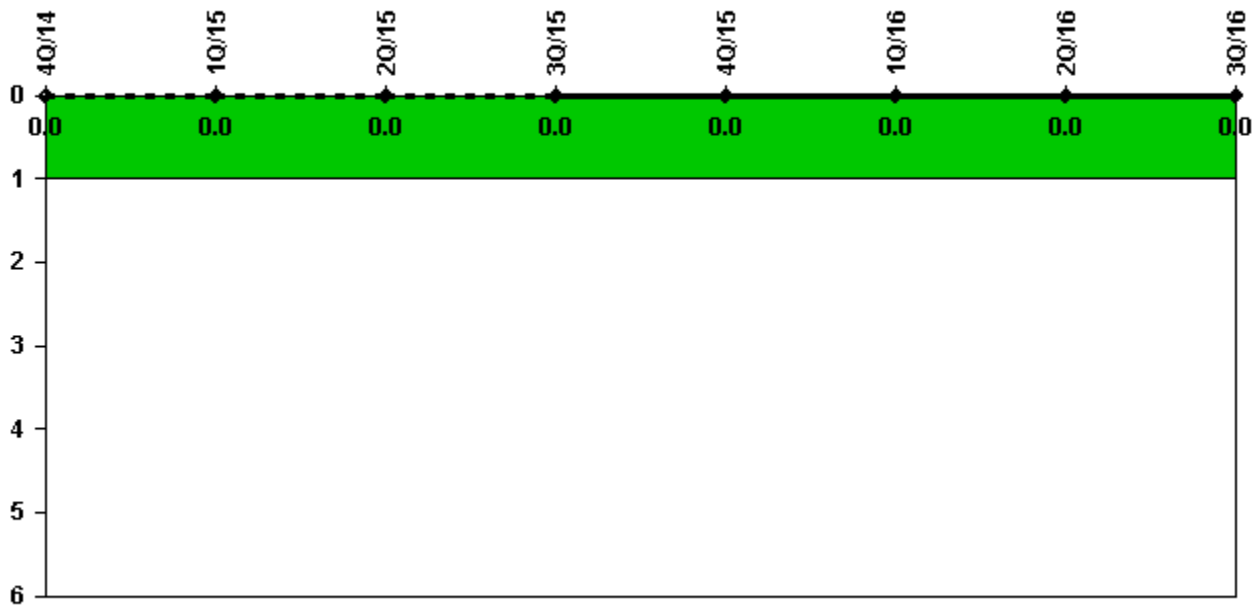
Unplanned Power Changes per 7000 Critical Hrs	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16
Unplanned power changes	0	0	0	0	0	0	0	1.0
Critical hours	1453.4	2159.0	2184.0	2208.0	2209.0	2183.0	1436.5	2208.0
<b>Indicator value</b>	<b>0.9</b>	<b>0.9</b>	<b>0.9</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.9</b>

#### Licensee Comments:

2Q/16: Diablo Canyon Unit 2 began planned refueling outage 2R19 on May 1, 2016. 2R19 was completed on June 2, 2016.

4Q/15: On December 11, 2015, Diablo Canyon Unit 2 was ramped to approximately 25 percent power due to ocean storm swells and biofouling of the condenser. The power change was made proactively in order to prevent a plant trip consistent with NEI 99-02, Revision 7, Appendix D FAQs for Diablo Canyon, and is therefore classified as unplanned, excluded per NEI 99-02. Reference SAPN 50828812.

### Unplanned Scrams with Complications



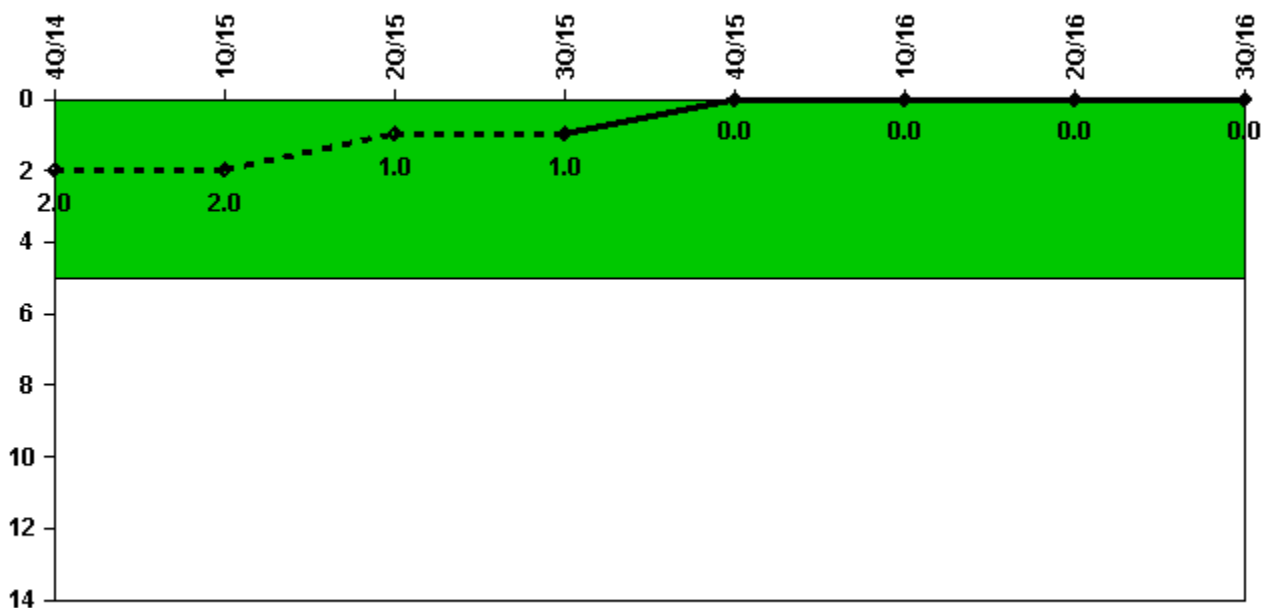
Thresholds: White > 1.0

#### Notes

Unplanned Scrams with Complications	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16
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 (PWR)



Thresholds: White > 5.0

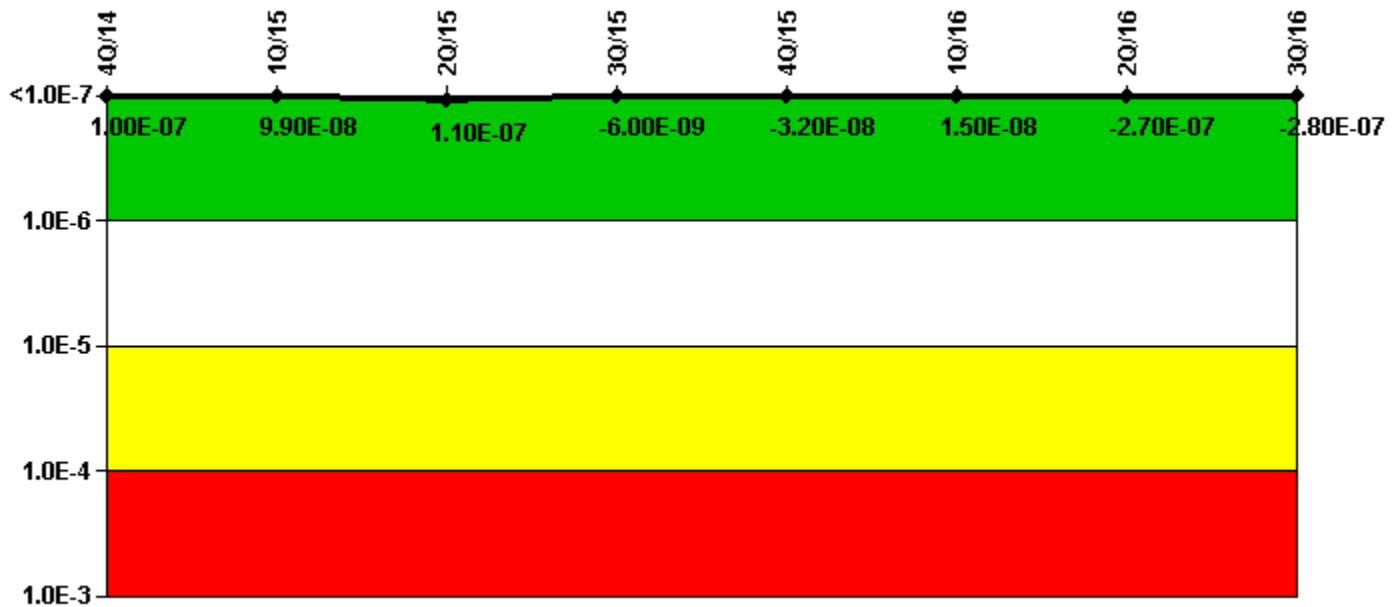
#### Notes

Safety System Functional Failures (PWR)	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16
Safety System Functional Failures	1	0	0	0	0	0	0	0
<b>Indicator value</b>	<b>2</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

Licensee Comments:

4Q/14: LER 2-2014-002-00 (PG&E Letter DCL-14-090) dated 10/14/2014 reports a SSFF for two diesel generators inoperable.

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



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

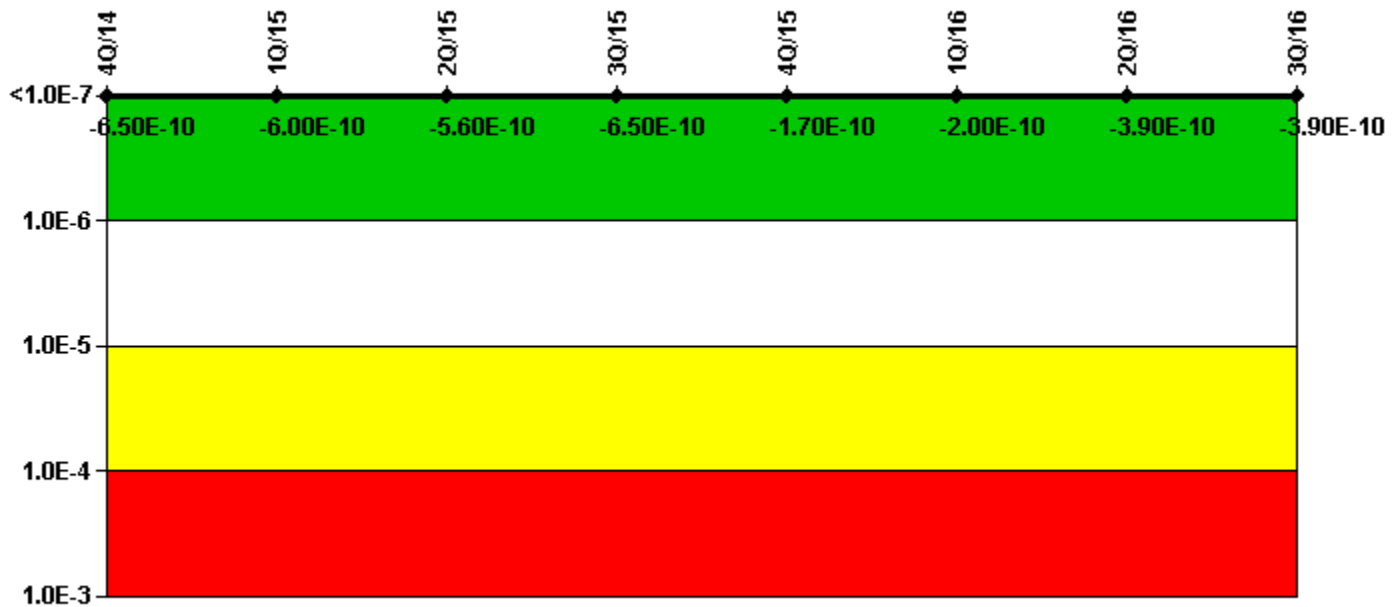
#### Notes

Mitigating Systems Performance Index, Emergency AC Power System	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16
UAI ( $\Delta$ CDF)	1.61E-08	1.03E-08	2.10E-08	1.99E-08	-5.17E-09	4.13E-08	4.54E-08	3.66E-08
URI ( $\Delta$ CDF)	8.86E-08	8.86E-08	8.86E-08	-2.59E-08	-2.68E-08	-2.68E-08	-3.19E-07	-3.18E-07
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	1.00E-07	9.90E-08	1.10E-07	-6.00E-09	-3.20E-08	1.50E-08	-2.70E-07	-2.80E-07

#### Licensee Comments:

4Q/15: Changed PRA Parameter(s). Diablo Canyon Probabilistic Risk Assessment (PRA) model revision DC03 was approved on 7/30/2015. The Mitigating System Performance Index (MSPI) basis document revision 8 was approved on 1/20/2016 and contains the updated PRA parameters. The DC03 model revision is a periodic update that incorporates new model data for initiating events, equipment failures probabilities, and Human Reliability Analysis (HRA) probabilities. As a result of this update, the Core Damage Frequency, Fussler-Vessely, and basic event probabilities for all monitored trains and components were revised.

### Mitigating Systems Performance Index, High Pressure Injection System



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

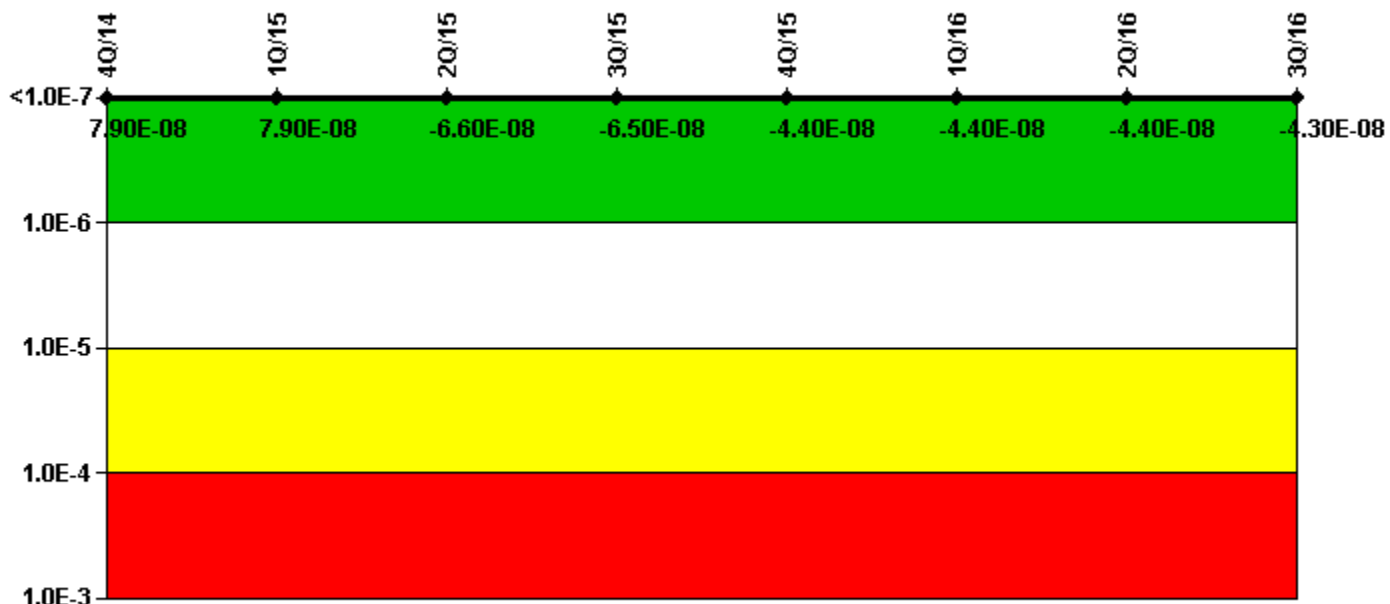
#### Notes

Mitigating Systems Performance Index, High Pressure Injection System	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16
UAI ( $\Delta$ CDF)	5.02E-10	5.59E-10	5.96E-10	5.10E-10	1.02E-10	6.96E-11	-1.21E-10	-1.21E-10
URI ( $\Delta$ CDF)	-1.16E-09	-1.16E-09	-1.16E-09	-1.16E-09	-2.68E-10	-2.68E-10	-2.68E-10	-2.68E-10
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-6.50E-10	-6.00E-10	-5.60E-10	-6.50E-10	-1.70E-10	-2.00E-10	-3.90E-10	-3.90E-10

#### Licensee Comments:

4Q/15: Changed PRA Parameter(s). Diablo Canyon Probabilistic Risk Assessment (PRA) model revision DC03 was approved on 7/30/2015. The Mitigating System Performance Index (MSPI) basis document revision 8 was approved on 1/20/2016 and contains the updated PRA parameters. The DC03 model revision is a periodic update that incorporates new model data for initiating events, equipment failures probabilities, and Human Reliability Analysis (HRA) probabilities. As a result of this update, the Core Damage Frequency, Fussler-Vessely, and basic event probabilities for all monitored trains and components were revised.

### Mitigating Systems Performance Index, Heat Removal System



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

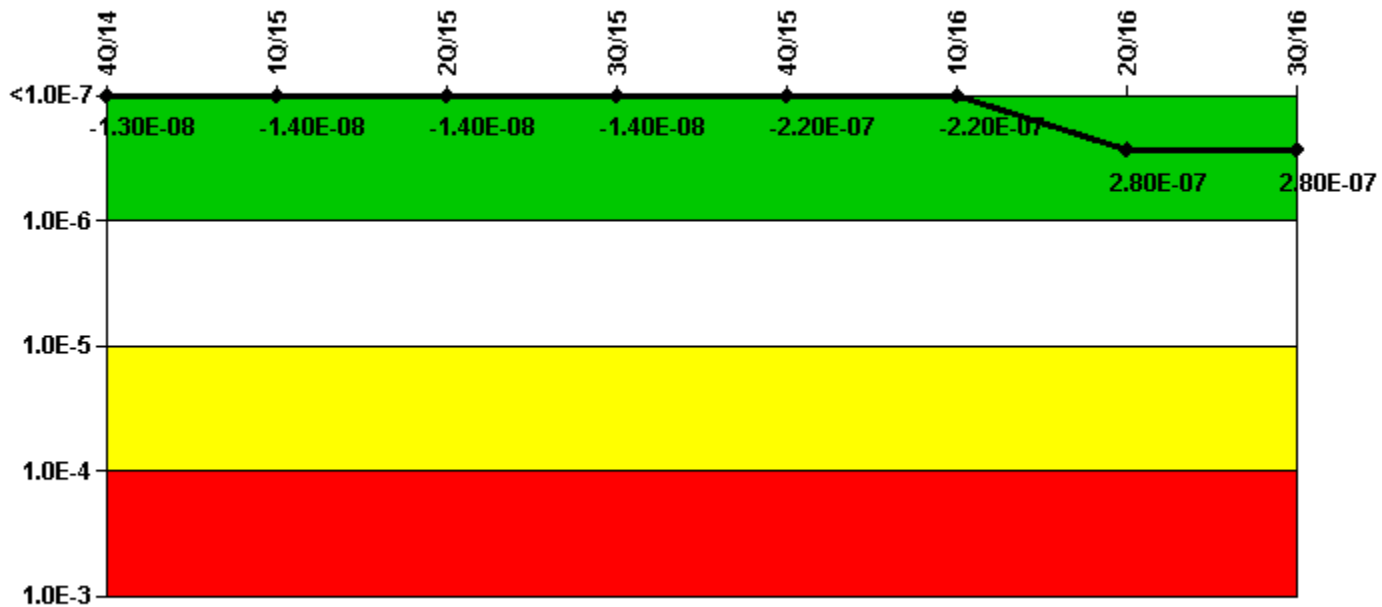
#### Notes

Mitigating Systems Performance Index, Heat Removal System	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16
UAI ( $\Delta$ CDF)	-1.19E-08	-1.19E-08	-1.25E-08	-1.19E-08	-1.78E-08	-1.78E-08	-1.78E-08	-1.78E-08
URI ( $\Delta$ CDF)	9.06E-08	9.06E-08	-5.33E-08	-5.33E-08	-2.62E-08	-2.62E-08	-2.62E-08	-2.55E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	7.90E-08	7.90E-08	-6.60E-08	-6.50E-08	-4.40E-08	-4.40E-08	-4.40E-08	-4.30E-08

#### Licensee Comments:

4Q/15: Changed PRA Parameter(s). Diablo Canyon Probabilistic Risk Assessment (PRA) model revision DC03 was approved on 7/30/2015. The Mitigating System Performance Index (MSPI) basis document revision 8 was approved on 1/20/2016 and contains the updated PRA parameters. The DC03 model revision is a periodic update that incorporates new model data for initiating events, equipment failures probabilities, and Human Reliability Analysis (HRA) probabilities. As a result of this update, the Core Damage Frequency, Fussel-Vessely, and basic event probabilities for all monitored trains and components were revised.

### 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/14	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16
UAI ( $\Delta$ CDF)	$-1.47E-09$	$-2.41E-09$	$-2.41E-09$	$-2.41E-09$	$-3.22E-08$	$-3.18E-08$	$-2.97E-08$	$-3.00E-08$
URI ( $\Delta$ CDF)	$-1.18E-08$	$-1.18E-08$	$-1.19E-08$	$-1.19E-08$	$-1.90E-07$	$-1.90E-07$	$3.10E-07$	$3.10E-07$
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	$-1.30E-08$	$-1.40E-08$	$-1.40E-08$	$-1.40E-08$	$-2.20E-07$	$-2.20E-07$	$2.80E-07$	$2.80E-07$

Licensee Comments:

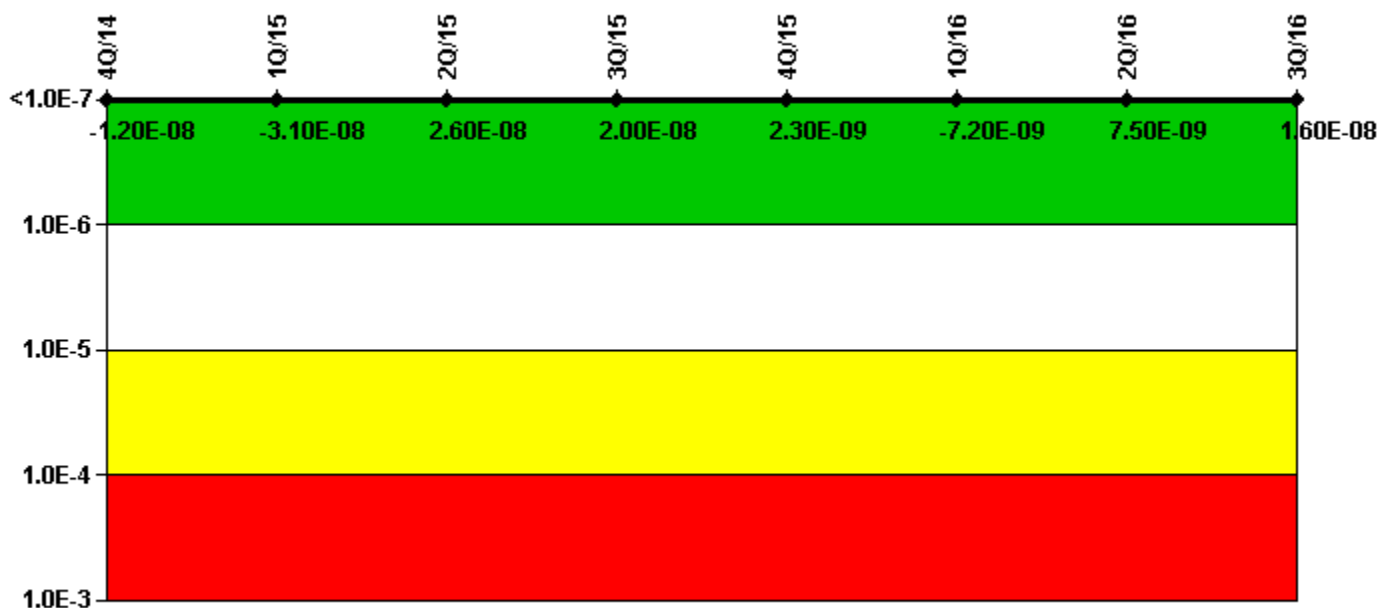
3Q/16: Risk Cap Invoked.

2Q/16: Risk Cap Invoked.

4Q/15: Changed PRA Parameter(s). Diablo Canyon Probabilistic Risk Assessment (PRA) model revision DC03 was approved on 7/30/2015. The Mitigating System Performance Index (MSPI) basis document revision 8 was approved on 1/20/2016 and contains the updated PRA parameters. The DC03 model revision is a periodic update that incorporates new model data for initiating events, equipment failures probabilities, and Human Reliability Analysis (HRA) probabilities. As a result of this update, the Core Damage Frequency, Fussler-Vessely, and basic event probabilities for all monitored trains and components were revised.



### Mitigating Systems Performance Index, Cooling Water Systems



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

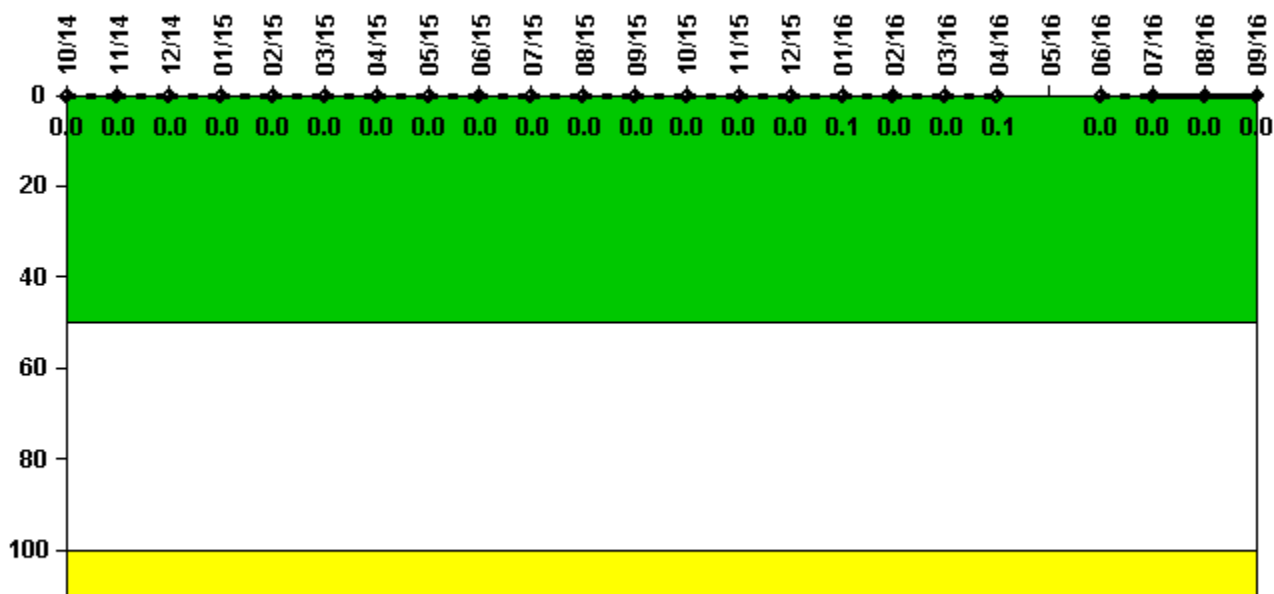
#### Notes

Mitigating Systems Performance Index, Cooling Water Systems	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16
UAI ( $\Delta$ CDF)	3.45E-08	1.54E-08	7.24E-08	6.66E-08	1.94E-08	9.90E-09	2.46E-08	3.32E-08
URI ( $\Delta$ CDF)	-4.68E-08	-4.68E-08	-4.68E-08	-4.68E-08	-1.71E-08	-1.71E-08	-1.71E-08	-1.71E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-1.20E-08	-3.10E-08	2.60E-08	2.00E-08	2.30E-09	-7.20E-09	7.50E-09	1.60E-08

#### Licensee Comments:

4Q/15: Changed PRA Parameter(s). Diablo Canyon Probabilistic Risk Assessment (PRA) model revision DC03 was approved on 7/30/2015. The Mitigating System Performance Index (MSPI) basis document revision 8 was approved on 1/20/2016 and contains the updated PRA parameters. The DC03 model revision is a periodic update that incorporates new model data for initiating events, equipment failures probabilities, and Human Reliability Analysis (HRA) probabilities. As a result of this update, the Core Damage Frequency, Fussel-Vessely, and basic event probabilities for all monitored trains and components were revised.

### Reactor Coolant System Activity



Thresholds: White > 50.0 Yellow > 100.0

#### Notes

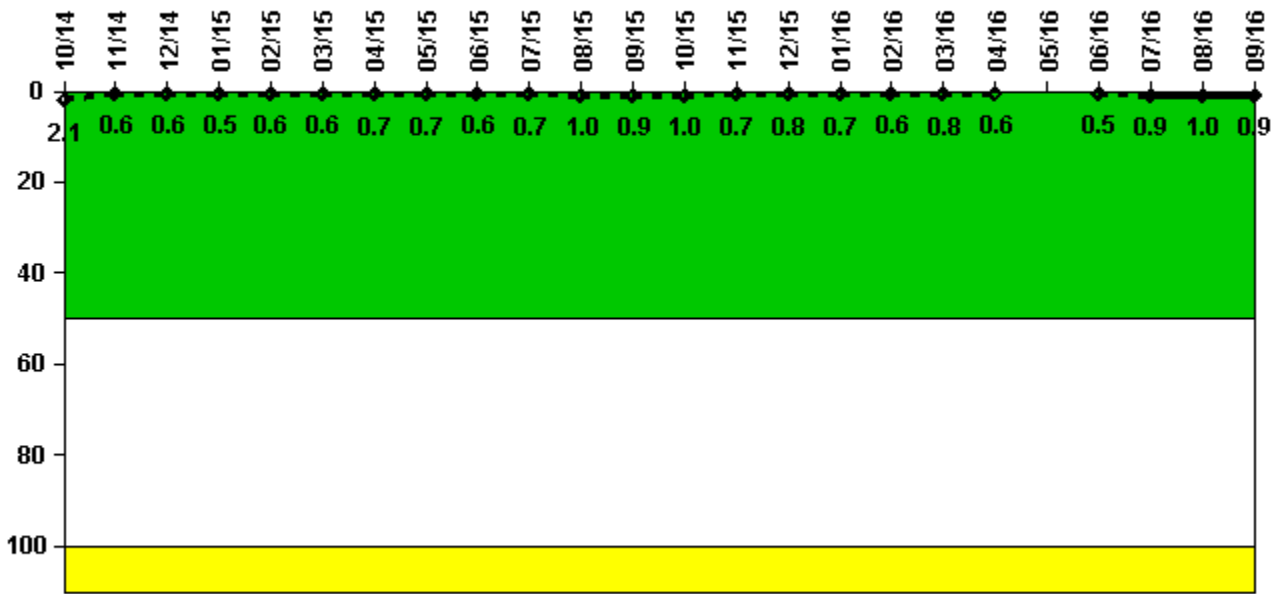
Reactor Coolant System Activity	10/14	11/14	12/14	1/15	2/15	3/15	4/15	5/15	6/15	7/15	8/15	9/15
Maximum activity	0.000097	0.000128	0.000141	0.000164	0.000172	0.000195	0.000212	0.000218	0.000323	0.000265	0.000269	0.000273
Technical specification limit	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Indicator value	0	0	0	0	0	0	0	0	0	0	0	0

Reactor Coolant System Activity	10/15	11/15	12/15	1/16	2/16	3/16	4/16	5/16	6/16	7/16	8/16	9/16
Maximum activity	0.000286	0.000290	0.000313	0.000611	0.000352	0.000352	0.000530	N/A	0.000146	0.000143	0.000149	0.000157
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	0	0	0	0.1	0	0	0.1	N/A	0	0	0	0

Licensee Comments: none

### Reactor Coolant System Leakage



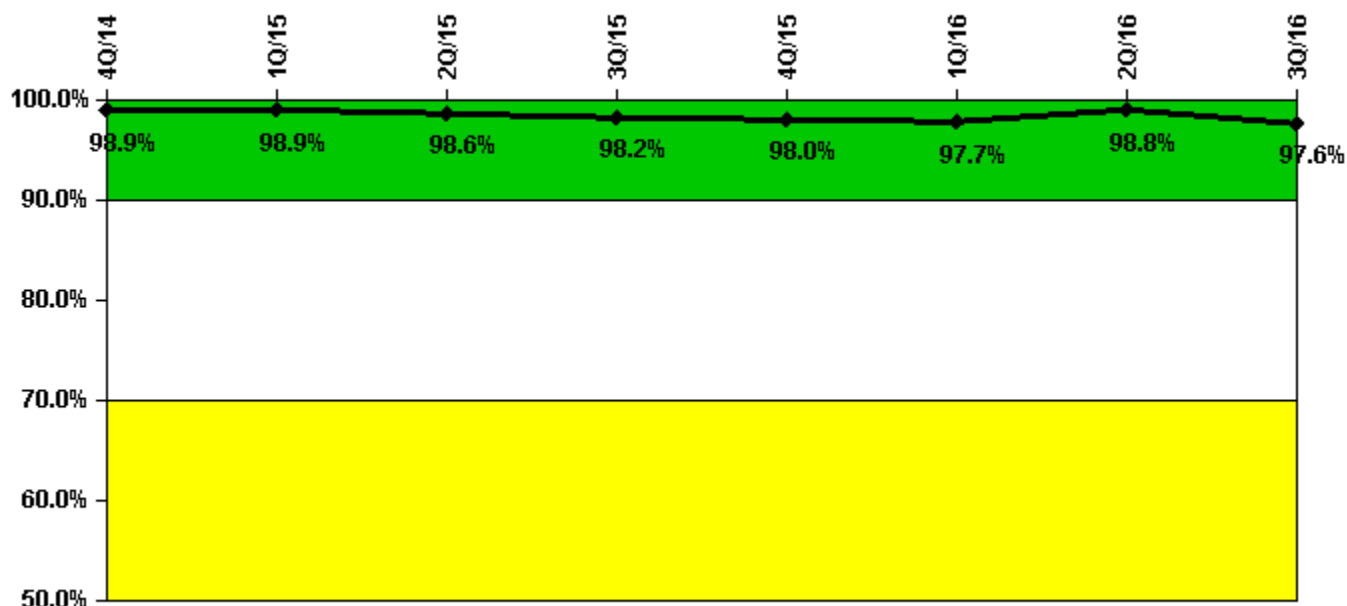
Thresholds: White > 50.0 Yellow > 100.0

#### Notes

Reactor Coolant System Leakage	10/14	11/14	12/14	1/15	2/15	3/15	4/15	5/15	6/15	7/15	8/15	9/15
Maximum leakage	0.212	0.062	0.057	0.052	0.056	0.059	0.074	0.071	0.061	0.074	0.097	0.091
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>2.1</b>	<b>0.6</b>	<b>0.6</b>	<b>0.5</b>	<b>0.6</b>	<b>0.6</b>	<b>0.7</b>	<b>0.7</b>	<b>0.6</b>	<b>0.7</b>	<b>1.0</b>	<b>0.9</b>
Reactor Coolant System Leakage	10/15	11/15	12/15	1/16	2/16	3/16	4/16	5/16	6/16	7/16	8/16	9/16
Maximum leakage	0.099	0.069	0.082	0.073	0.064	0.080	0.064	N/A	0.052	0.092	0.101	0.085
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>1.0</b>	<b>0.7</b>	<b>0.8</b>	<b>0.7</b>	<b>0.6</b>	<b>0.8</b>	<b>0.6</b>	<b>N/A</b>	<b>0.5</b>	<b>0.9</b>	<b>1.0</b>	<b>0.9</b>

Licensee Comments: none

### Drill/Exercise Performance



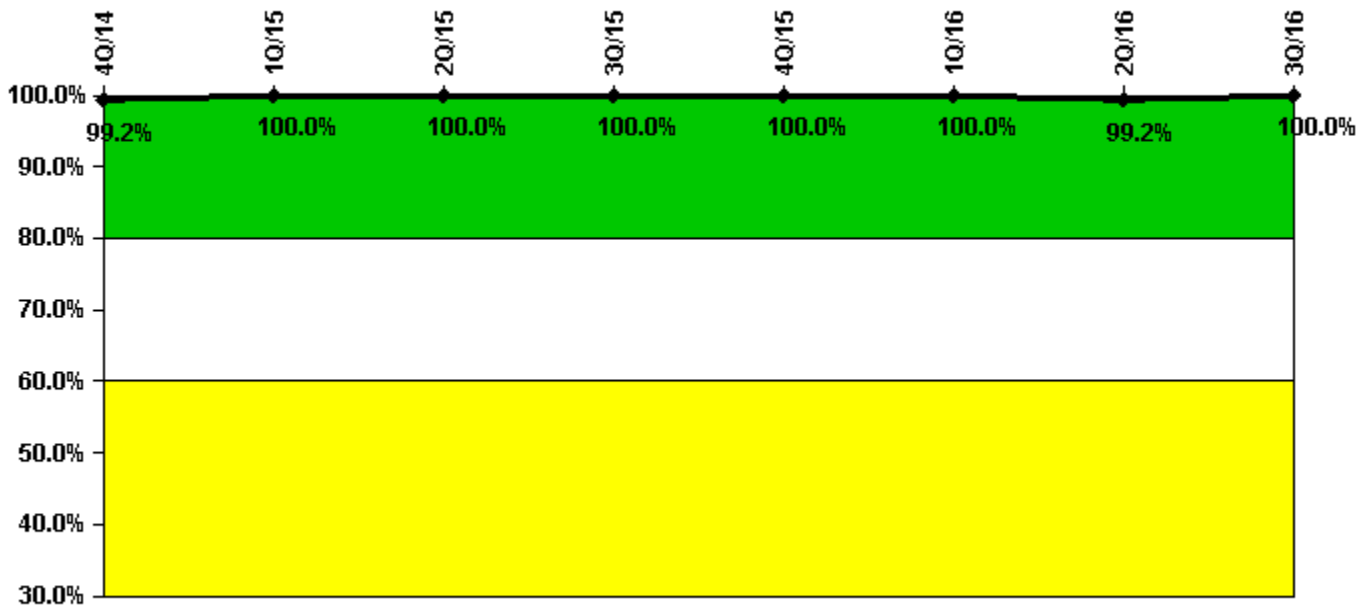
Thresholds: White < 90.0% Yellow < 70.0%

#### Notes

Drill/Exercise Performance	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16
Successful opportunities	26.0	30.0	43.0	22.0	4.0	37.0	48.0	33.0
Total opportunities	26.0	30.0	44.0	23.0	4.0	38.0	48.0	36.0
Indicator value	98.9%	98.9%	98.6%	98.2%	98.0%	97.7%	98.8%	97.6%

Licensee Comments: none

### ERO Drill Participation



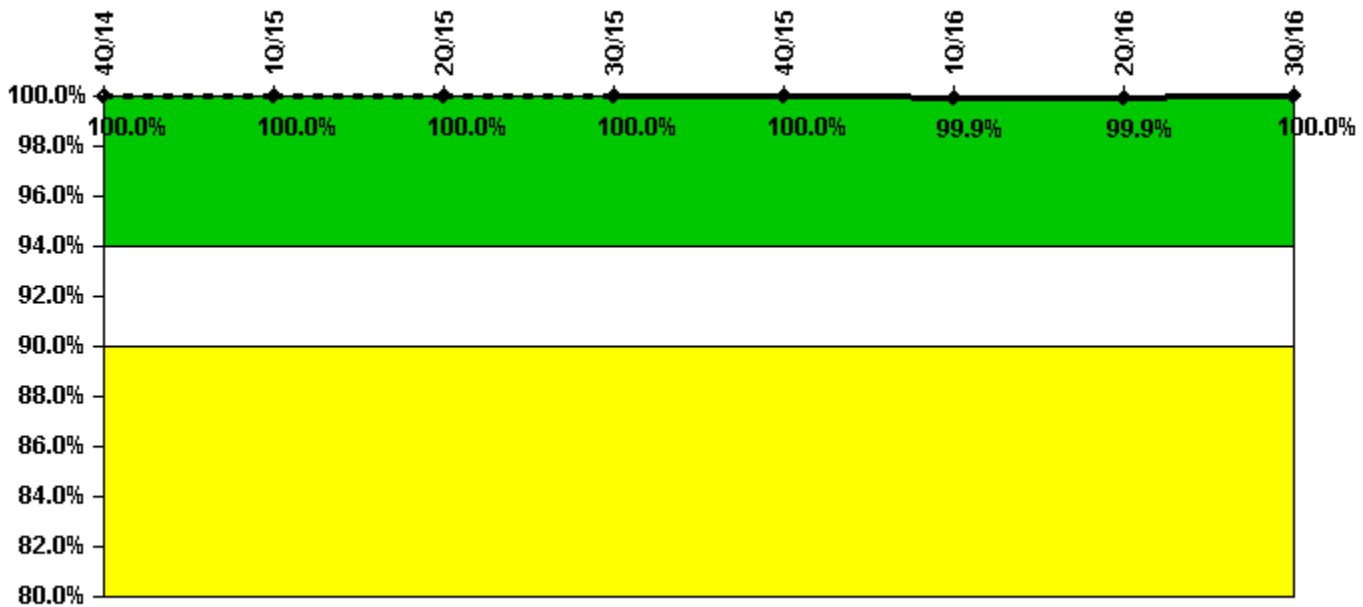
Thresholds: White < 80.0% Yellow < 60.0%

#### Notes

ERO Drill Participation	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16
Participating Key personnel	118.0	120.0	117.0	121.0	119.0	121.0	122.0	127.0
Total Key personnel	119.0	120.0	117.0	121.0	119.0	121.0	123.0	127.0
Indicator value	99.2%	100.0%	100.0%	100.0%	100.0%	100.0%	99.2%	100.0%

Licensee Comments: none

### Alert & Notification System



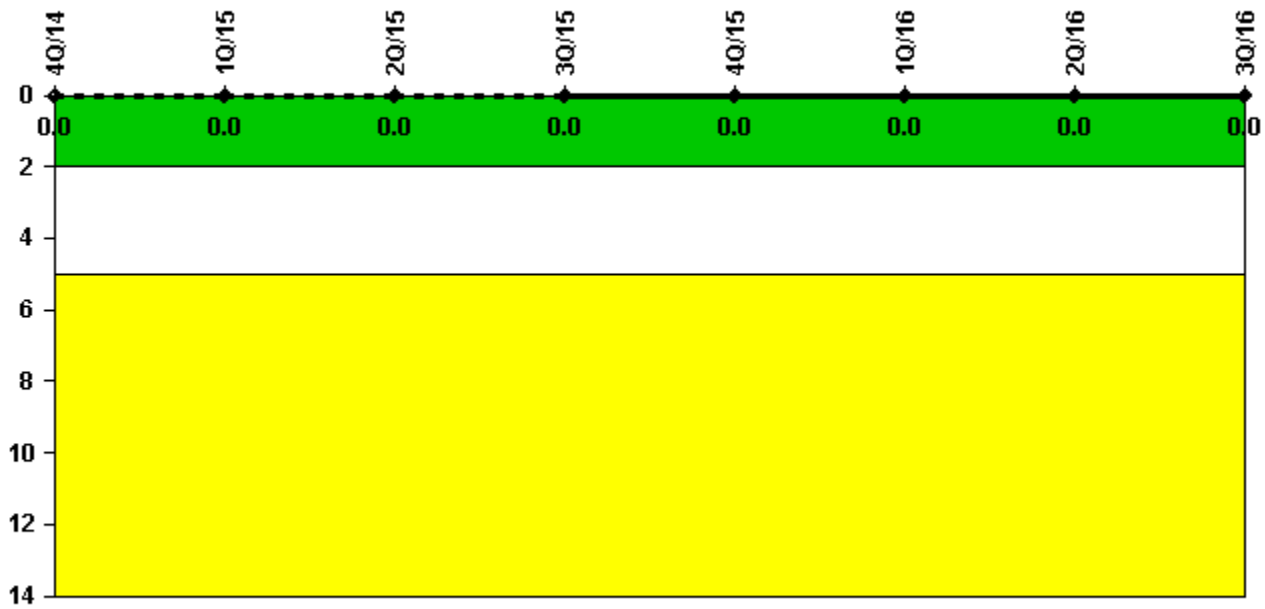
Thresholds: White < 94.0% Yellow < 90.0%

#### Notes

Alert & Notification System	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16
Successful siren-tests	1048	917	1047	1178	1048	916	1047	1179
Total sirens-tests	1048	917	1048	1179	1048	917	1048	1179
Indicator value	100.0%	100.0%	100.0%	100.0%	100.0%	99.9%	99.9%	100.0%

Licensee Comments: none

### Occupational Exposure Control Effectiveness



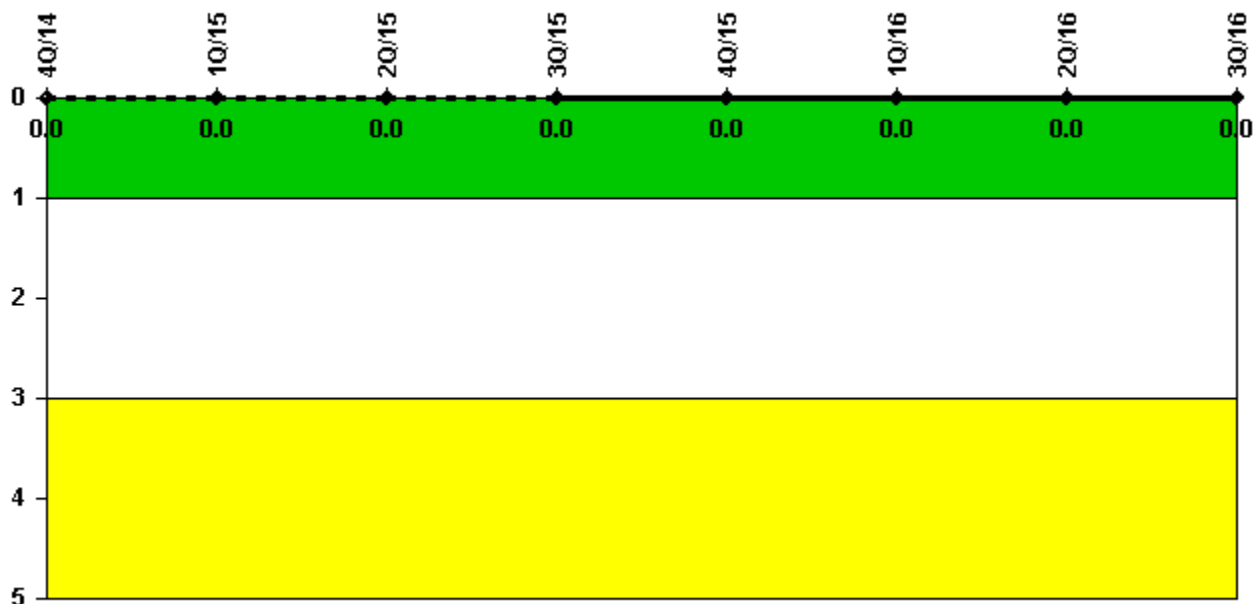
Thresholds: White > 2.0 Yellow > 5.0

#### Notes

Occupational Exposure Control Effectiveness	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16
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

### RETS/ODCM Radiological Effluent



Thresholds: White > 1.0 Yellow > 3.0

#### Notes

RETS/ODCM Radiological Effluent	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16
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 23, 2016*