

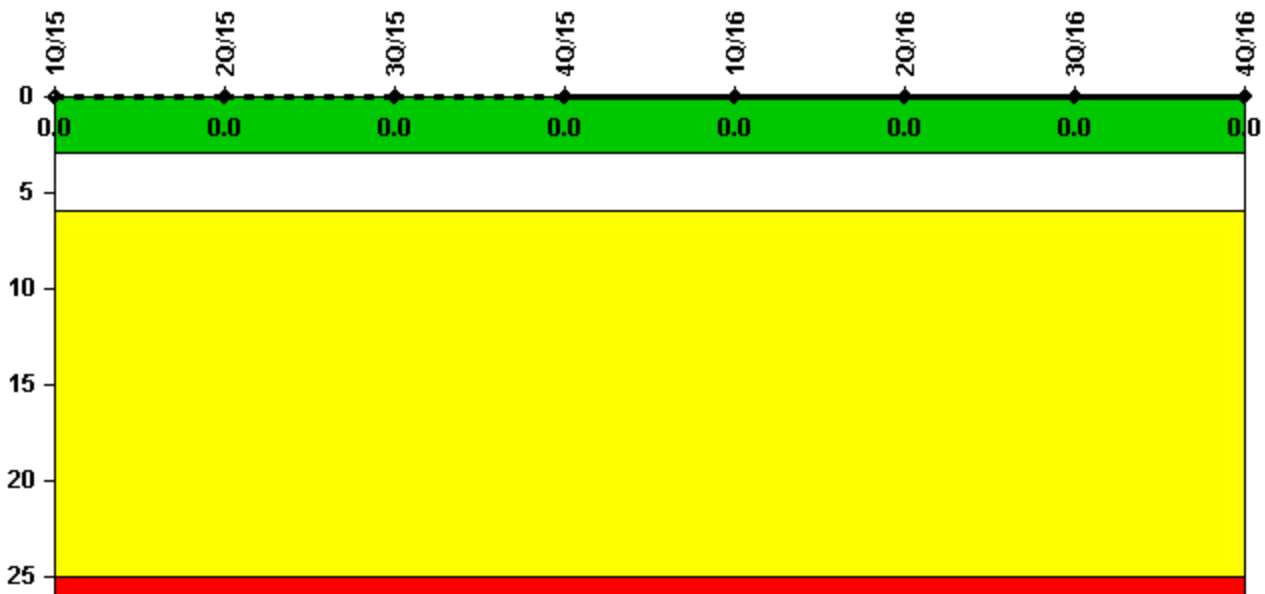
Diablo Canyon 1

4Q/2016 Performance Indicators

The solid trend line represents the current reporting period.

Licensee's General Comments: none

Unplanned Scrams per 7000 Critical Hrs



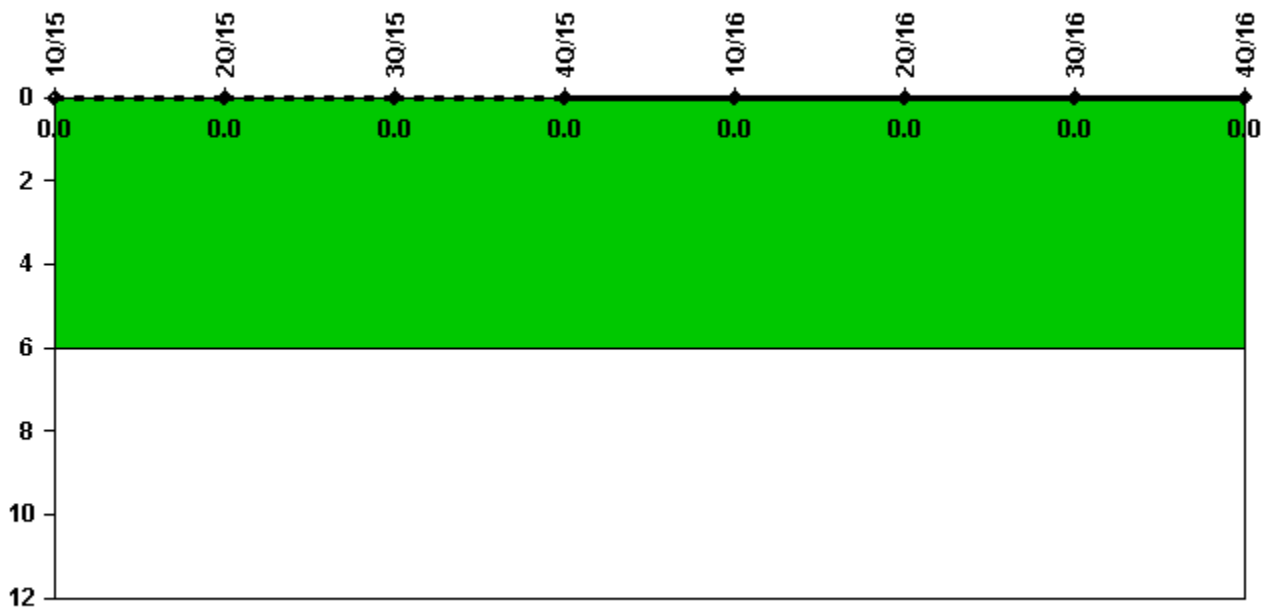
Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

Notes

Unplanned Scrams per 7000 Critical Hrs	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16
Unplanned scrams	0	0	0	0	0	0	0	0
Critical hours	2081.4	2184.0	2208.0	1400.5	2183.0	2184.0	2208.0	2209.0
Indicator value	0	0	0	0	0	0	0	0

Licensee Comments: none

Unplanned Power Changes per 7000 Critical Hrs



Thresholds: White > 6.0

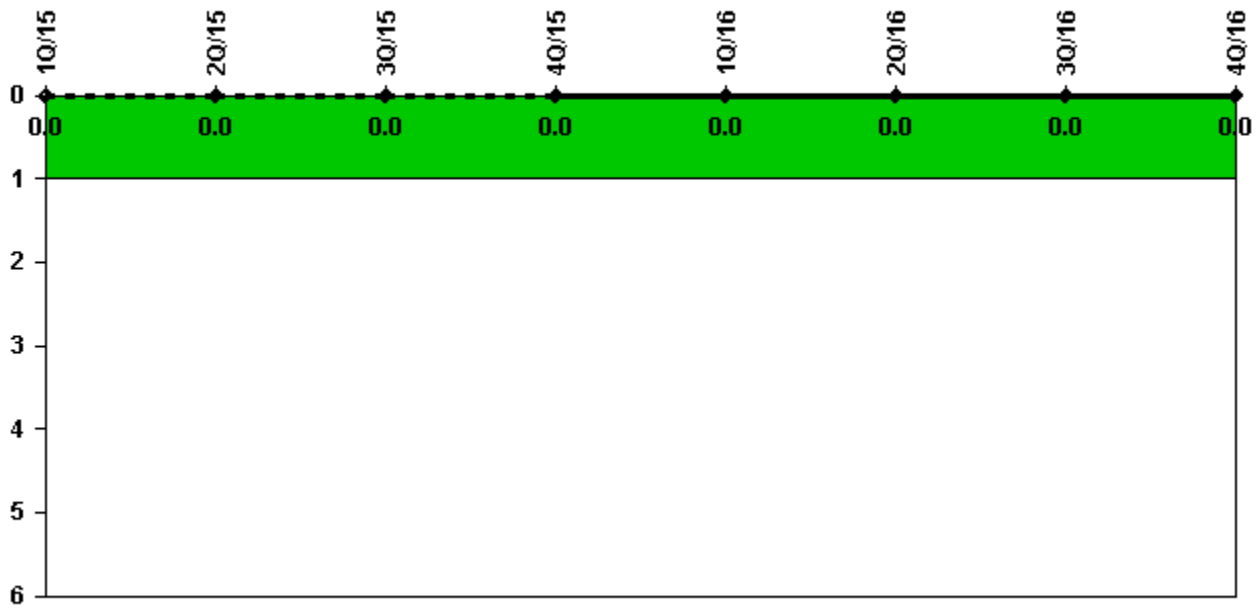
Notes

Unplanned Power Changes per 7000 Critical Hrs	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16
Unplanned power changes	0	0	0	0	0	0	0	0
Critical hours	2081.4	2184.0	2208.0	1400.5	2183.0	2184.0	2208.0	2209.0
Indicator value	0	0	0	0	0	0	0	0

Licensee Comments:

4Q/15: On December 11, 2015, Diablo Canyon Unit 1 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



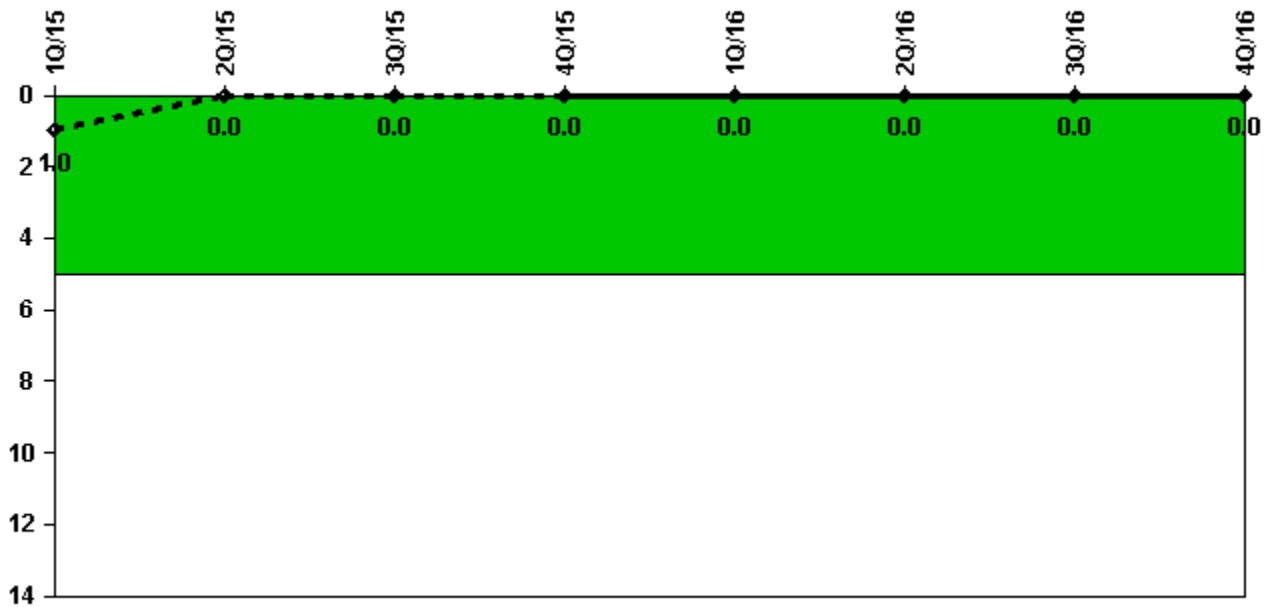
Thresholds: White > 1.0

Notes

Unplanned Scrams with Complications	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16
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

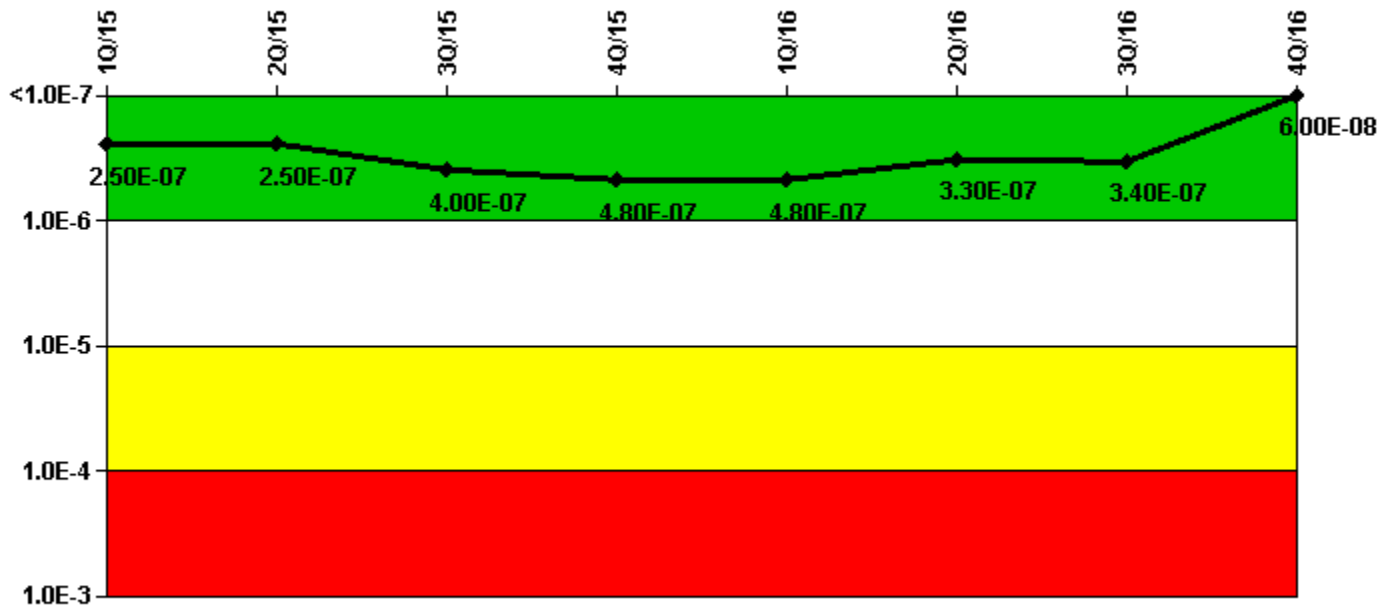
Notes

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

Licensee Comments:

1Q/15: LER 1-2015-001-00 was submitted on 3/2/2015 per 50.73(a)(2)(v). An engineering evaluation determined that the RHR system would perform its specified safety function if a design basis event had occurred. Therefore, this is not a SSFF. (Ref 50680750-31)

Mitigating Systems Performance Index, Emergency AC Power System



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

Notes

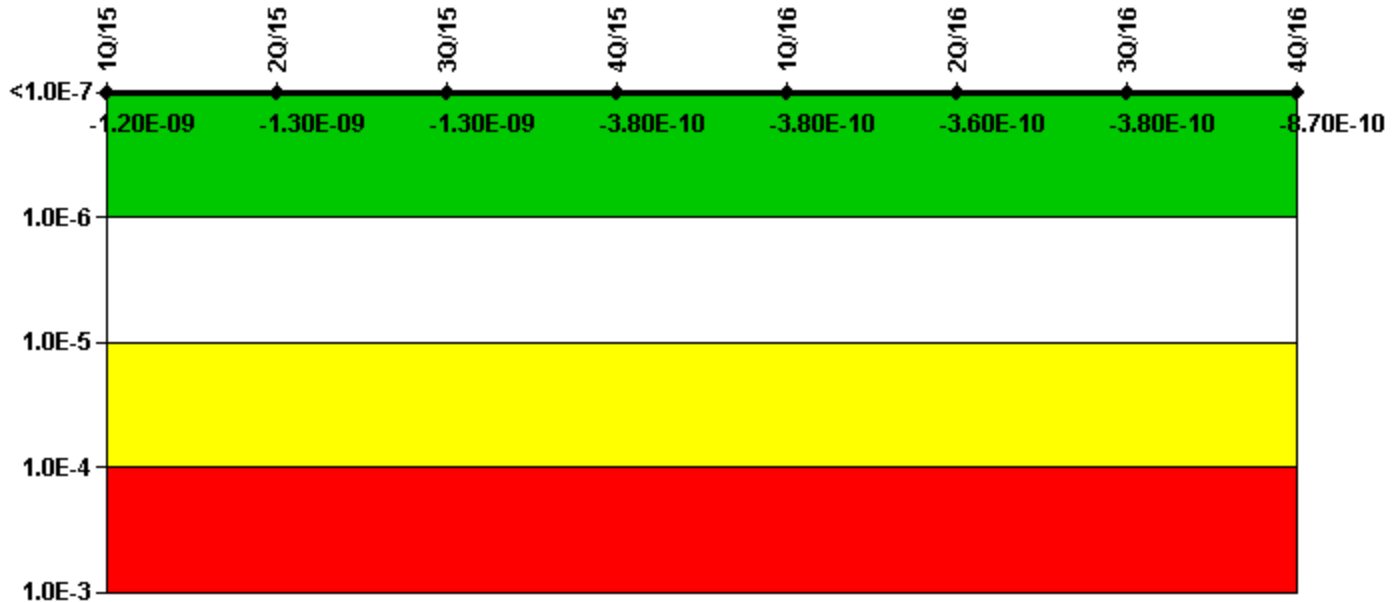
Mitigating Systems Performance Index, Emergency AC Power System	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16
UAI (Δ CDF)	5.45E-09	4.42E-09	3.38E-08	5.96E-08	6.00E-08	4.10E-08	4.91E-08	3.34E-09
URI (Δ CDF)	2.41E-07	2.41E-07	3.66E-07	4.22E-07	4.22E-07	2.84E-07	2.91E-07	5.64E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	2.50E-07	2.50E-07	4.00E-07	4.80E-07	4.80E-07	3.30E-07	3.40E-07	6.00E-08

Licensee Comments:

4Q/16: Changed PRA Parameter(s). Diablo Canyon Probabilistic Risk Assessment (PRA) model revision DC03A was approved on 9/30/2016. The Mitigating System Performance Index (MSPI) basis document revision 10 was approved on 10/6/2016 and contains the updated PRA parameters. The DC03A model revision is an update that incorporates the new Reactor Coolant Pump (RCP) shutdown seals and other minor system updates. As a result of this update, the Core Damage Frequency and Fussel-Vessely importance for all monitored trains and components were revised.

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, 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	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16
UAI (ΔCDF)	-4.03E-11	-1.68E-10	-1.52E-10	-1.19E-10	-1.19E-10	-1.01E-10	-1.21E-10	-1.13E-10
URI (ΔCDF)	-1.13E-09	-1.13E-09	-1.13E-09	-2.60E-10	-2.60E-10	-2.60E-10	-2.60E-10	-7.59E-10
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-1.20E-09	-1.30E-09	-1.30E-09	-3.80E-10	-3.80E-10	-3.60E-10	-3.80E-10	-8.70E-10

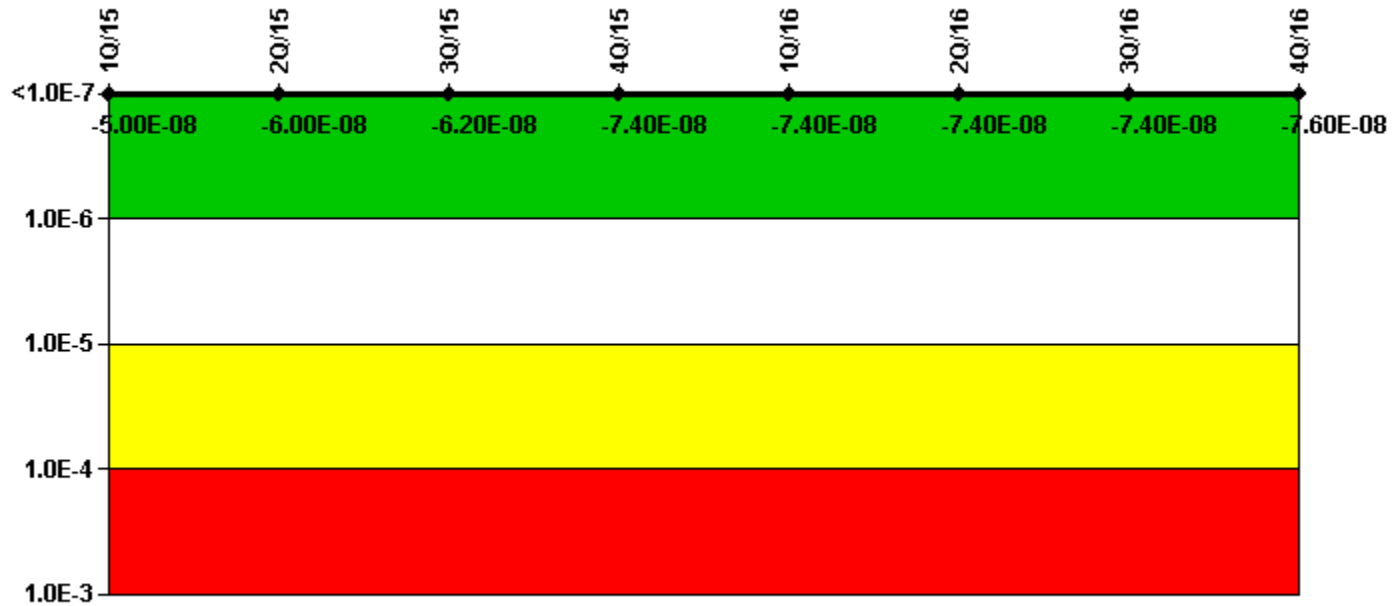
Licensee Comments:

4Q/16: Changed PRA Parameter(s). Diablo Canyon Probabilistic Risk Assessment (PRA) model revision DC03A was approved on 9/30/2016. The Mitigating System Performance Index (MSPI) basis document revision 10 was approved on 10/6/2016 and contains the updated PRA parameters. The DC03A model revision is an update that incorporates the new Reactor Coolant Pump (RCP) shutdown seals and other minor system updates. As a result of this update, the Core Damage Frequency and Fussel-Vessely importance for all monitored trains and components were revised.

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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, Heat Removal System



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

Notes

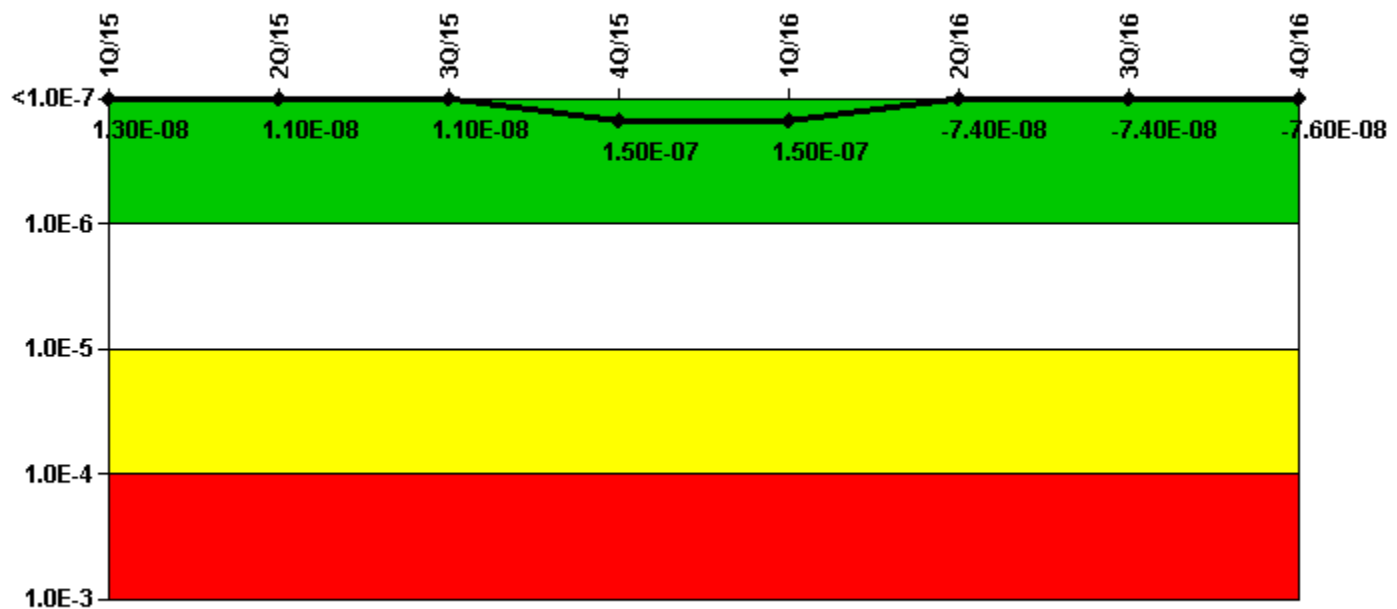
Mitigating Systems Performance Index, Heat Removal System	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16
UAI (Δ CDF)	-2.28E-10	-9.88E-09	-1.25E-08	-1.78E-08	-1.78E-08	-1.78E-08	-1.78E-08	-1.85E-08
URI (Δ CDF)	-4.97E-08	-4.97E-08	-4.97E-08	-5.62E-08	-5.62E-08	-5.62E-08	-5.62E-08	-5.79E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-5.00E-08	-6.00E-08	-6.20E-08	-7.40E-08	-7.40E-08	-7.40E-08	-7.40E-08	-7.60E-08

Licensee Comments:

4Q/16: Changed PRA Parameter(s). Diablo Canyon Probabilistic Risk Assessment (PRA) model revision DC03A was approved on 9/30/2016. The Mitigating System Performance Index (MSPI) basis document revision 10 was approved on 10/6/2016 and contains the updated PRA parameters. The DC03A model revision is an update that incorporates the new Reactor Coolant Pump (RCP) shutdown seals and other minor system updates. As a result of this update, the Core Damage Frequency and Fussel-Vessely importance for all monitored trains and components were revised.

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	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16
UAI (ΔCDF)	2.95E-08	2.79E-08	2.79E-08	3.87E-07	3.86E-07	1.63E-07	1.63E-07	1.01E-07
URI (ΔCDF)	-1.69E-08	-1.69E-08	-1.70E-08	-2.37E-07	-2.37E-07	-2.37E-07	-2.37E-07	-1.77E-07
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	1.30E-08	1.10E-08	1.10E-08	1.50E-07	1.50E-07	-7.40E-08	-7.40E-08	-7.60E-08

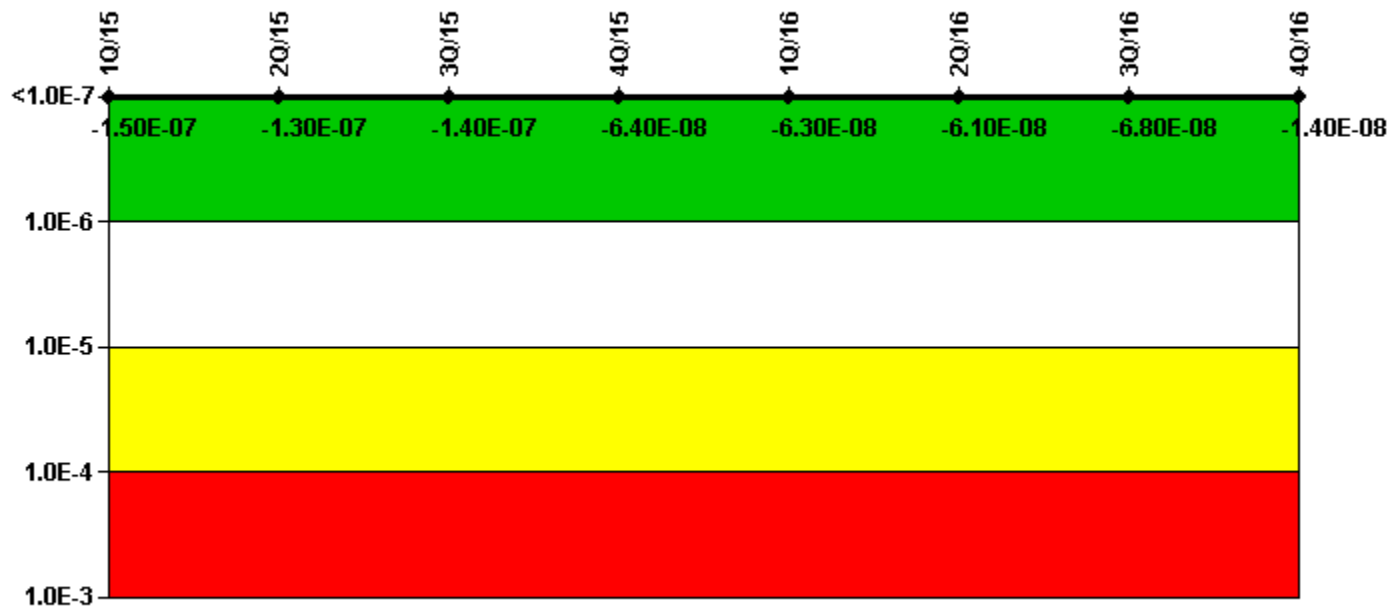
Licensee Comments:

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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	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16
UAI (ΔCDF)	-1.02E-07	-7.37E-08	-8.49E-08	-4.19E-08	-4.10E-08	-3.93E-08	-4.57E-08	-8.78E-09
URI (ΔCDF)	-5.20E-08	-5.20E-08	-5.20E-08	-2.20E-08	-2.20E-08	-2.20E-08	-2.20E-08	-4.90E-09
PLE	NO	NO	NO	NO	NO	NO	NO	NO
	-1.50E-	-1.30E-	-1.40E-	-6.40E-	-6.30E-	-6.10E-	-6.80E-	-1.40E-

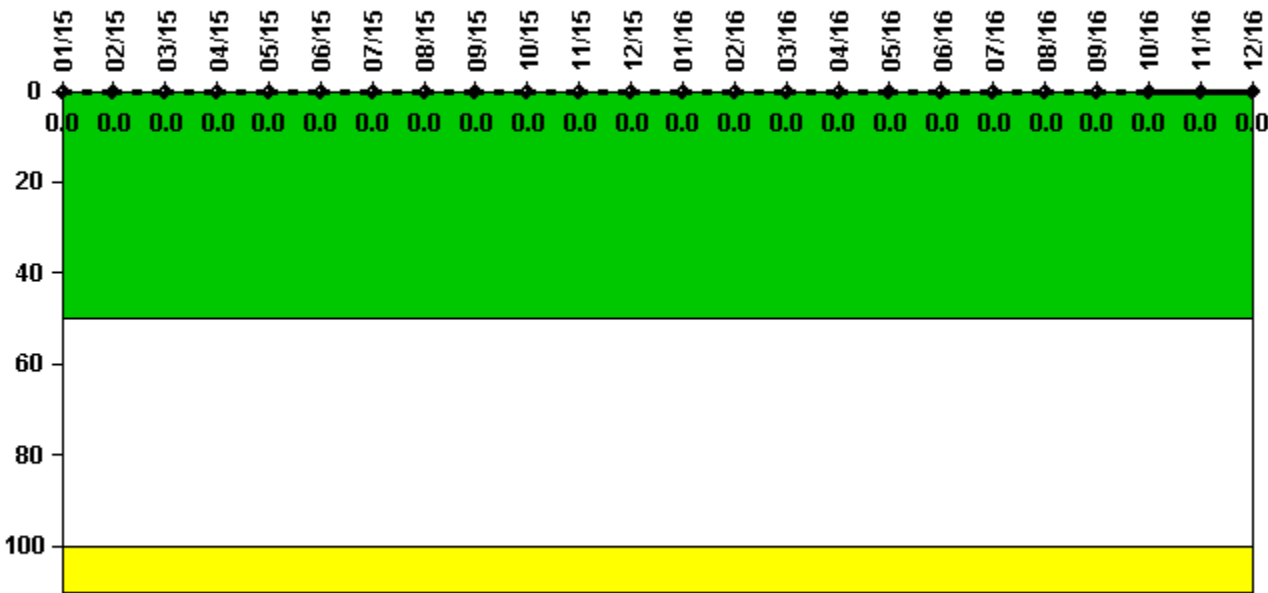
Indicator value	07	07	07	08	08	08	08	08
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Licensee Comments:

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Reactor Coolant System Activity



Thresholds: White > 50.0 Yellow > 100.0

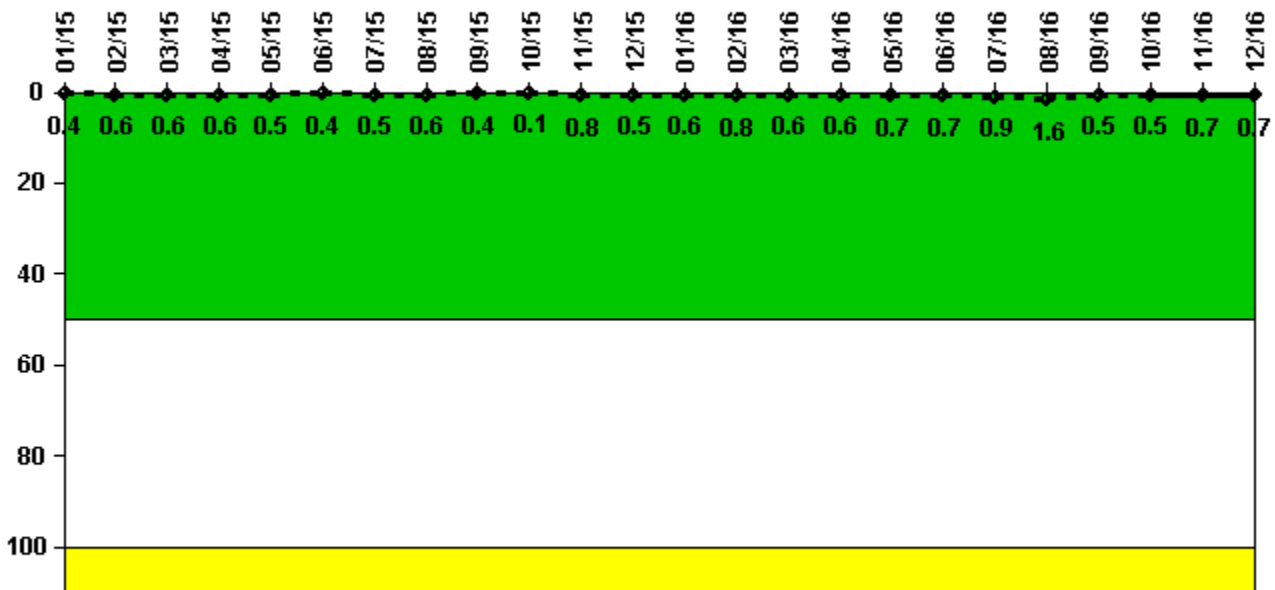
Notes

Reactor Coolant System Activity	1/15	2/15	3/15	4/15	5/15	6/15	7/15	8/15	9/15	10/15	11/15	12/15
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Maximum activity	0.000048	0.000047	0.000062	0.000056	0.000056	0.000064	0.000067	0.000067	0.000071	0.000065	0.000048	0.000041
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	1/16	2/16	3/16	4/16	5/16	6/16	7/16	8/16	9/16	10/16	11/16	12/16
Maximum activity	0.000044	0.000050	0.000046	0.000062	0.000053	0.000054	0.000057	0.000055	0.000067	0.000050	0.000047	0.000053
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

Licensee Comments: none

Reactor Coolant System Leakage



Thresholds: White > 50.0 Yellow > 100.0

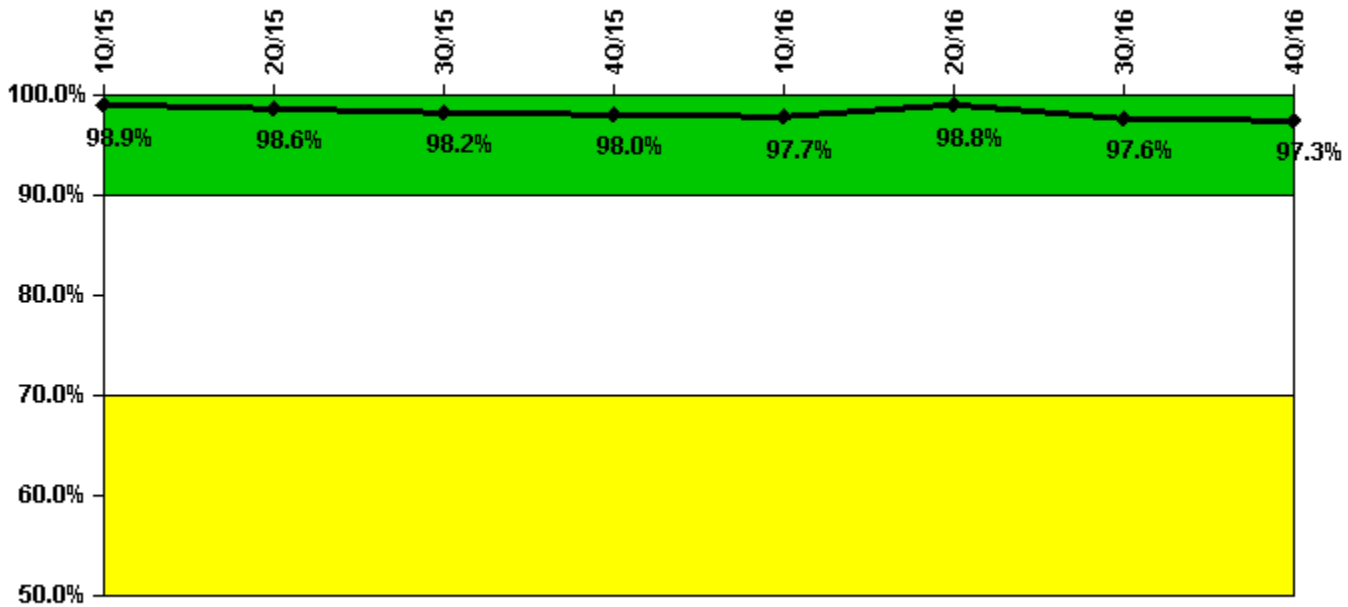
Notes

Reactor Coolant System Leakage	1/15	2/15	3/15	4/15	5/15	6/15	7/15	8/15	9/15	10/15	11/15	12/15
Maximum leakage	0.041	0.064	0.057	0.060	0.053	0.042	0.051	0.061	0.044	0.005	0.075	0.051
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	0.4	0.6	0.6	0.6	0.5	0.4	0.5	0.6	0.4	0.1	0.8	0.5

Reactor Coolant System Leakage	1/16	2/16	3/16	4/16	5/16	6/16	7/16	8/16	9/16	10/16	11/16	12/16
Maximum leakage	0.061	0.081	0.058	0.059	0.067	0.072	0.086	0.158	0.046	0.053	0.074	0.071
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	0.6	0.8	0.6	0.6	0.7	0.7	0.9	1.6	0.5	0.5	0.7	0.7

Licensee Comments: none

Drill/Exercise Performance



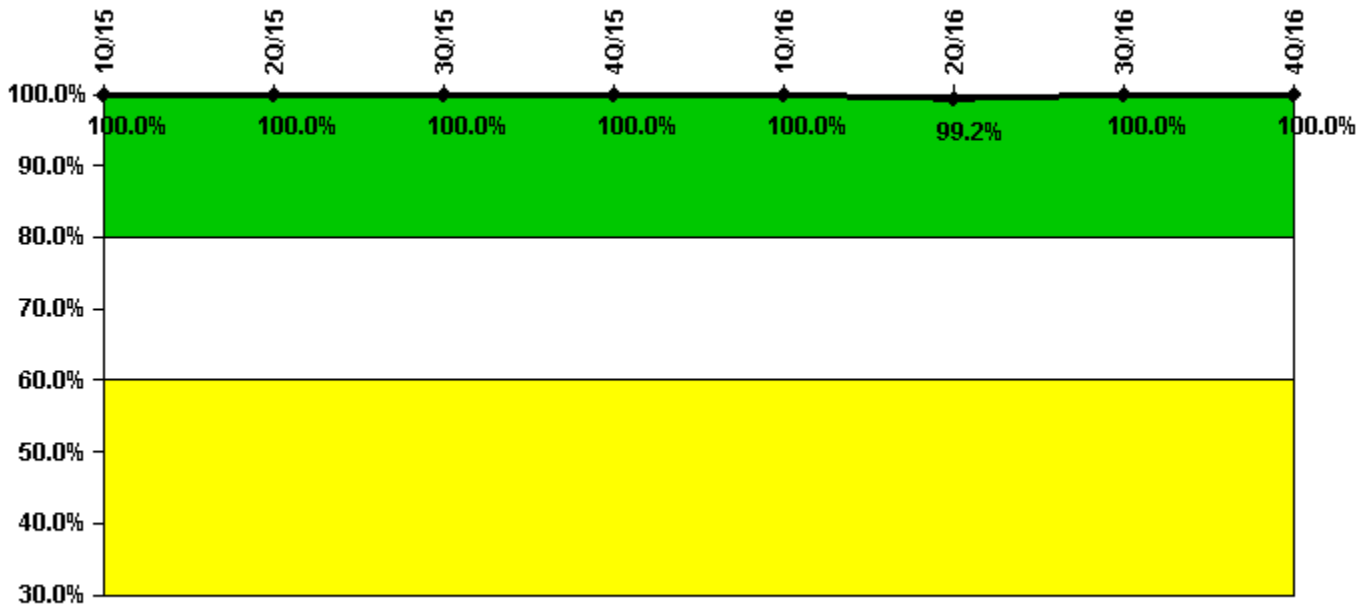
Thresholds: White < 90.0% Yellow < 70.0%

Notes

Drill/Exercise Performance	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16
Successful opportunities	30.0	43.0	22.0	4.0	37.0	48.0	33.0	37.0
Total opportunities	30.0	44.0	23.0	4.0	38.0	48.0	36.0	38.0
Indicator value	98.9%	98.6%	98.2%	98.0%	97.7%	98.8%	97.6%	97.3%

Licensee Comments: none

ERO Drill Participation



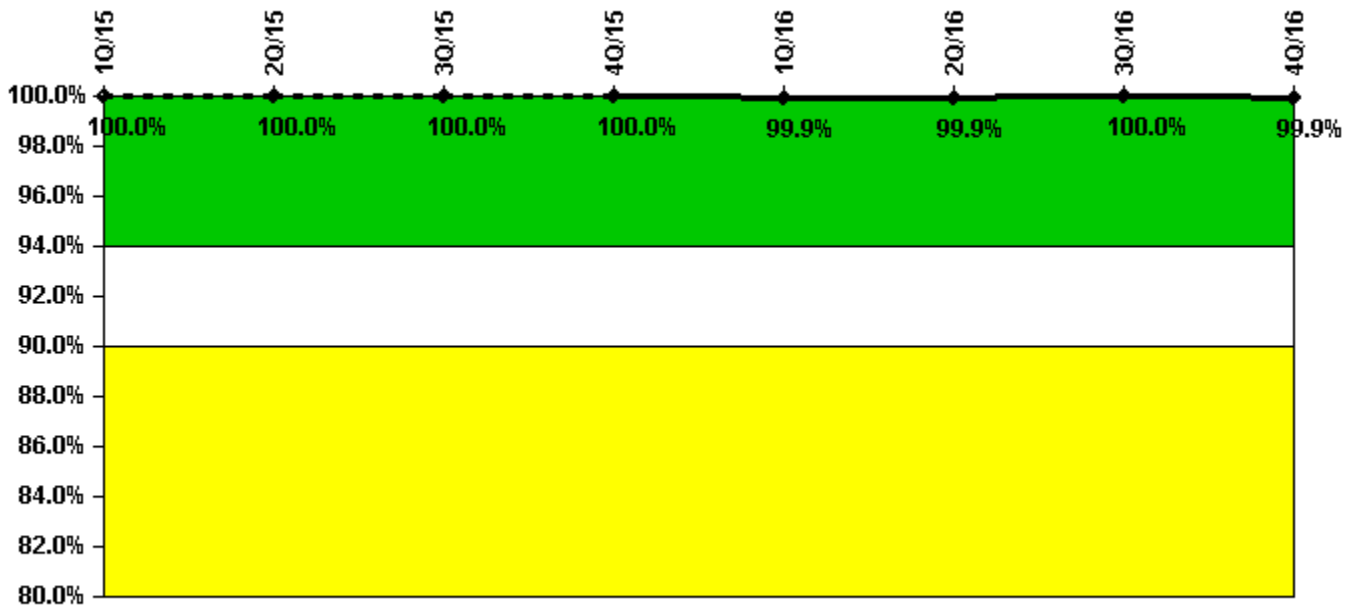
Thresholds: White < 80.0% Yellow < 60.0%

Notes

ERO Drill Participation	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16
Participating Key personnel	120.0	117.0	121.0	119.0	121.0	122.0	127.0	124.0
Total Key personnel	120.0	117.0	121.0	119.0	121.0	123.0	127.0	124.0
Indicator value	100.0%	100.0%	100.0%	100.0%	100.0%	99.2%	100.0%	100.0%

Licensee Comments: none

Alert & Notification System



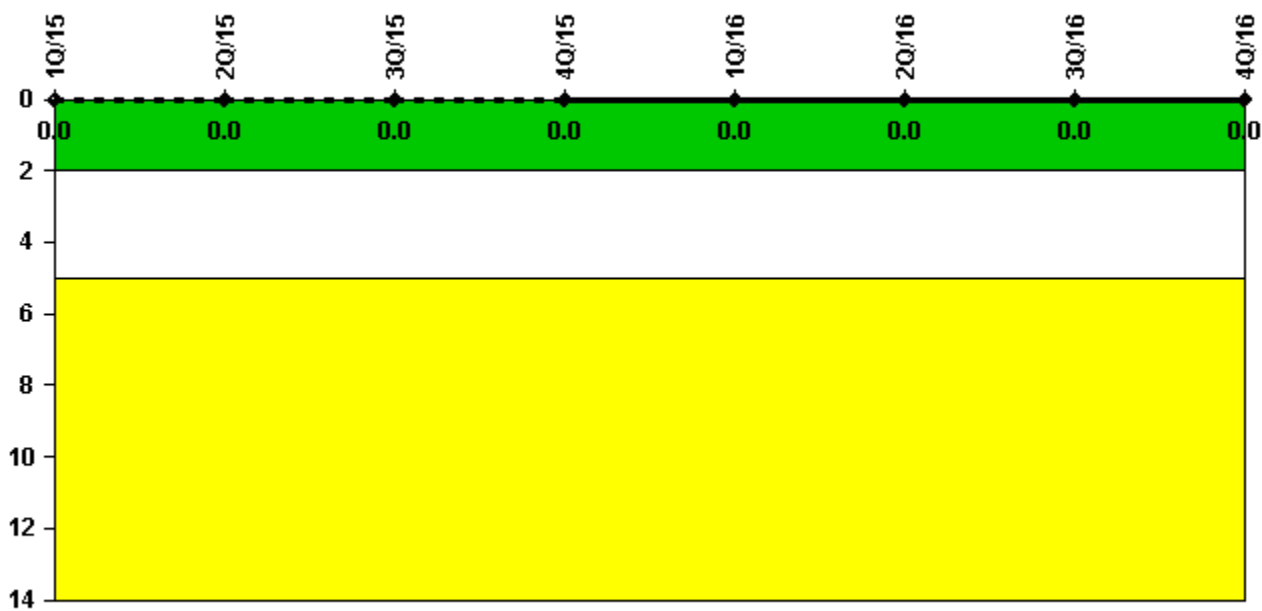
Thresholds: White < 94.0% Yellow < 90.0%

Notes

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

Licensee Comments: none

Occupational Exposure Control Effectiveness



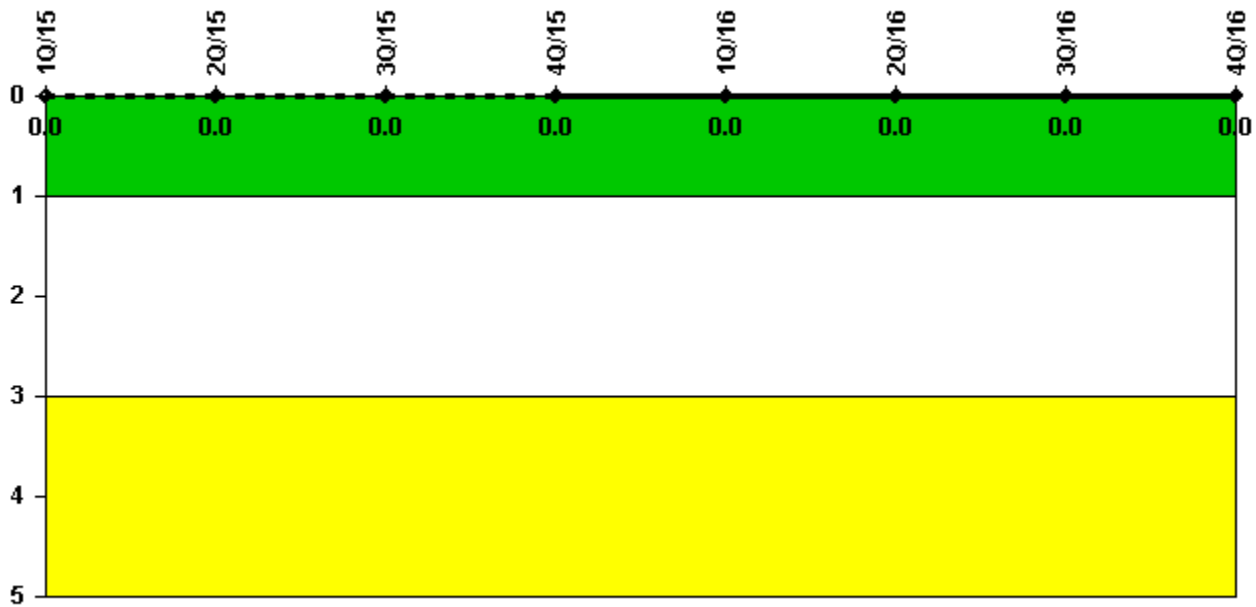
Thresholds: White > 2.0 Yellow > 5.0

Notes

Occupational Exposure Control Effectiveness	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/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
Indicator value	0	0	0	0	0	0	0	0

Licensee Comments: none

RETS/ODCM Radiological Effluent



Thresholds: White > 1.0 Yellow > 3.0

Notes

RETS/ODCM Radiological Effluent	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/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: January 24, 2017