Diablo Canyon 2 – Quarterly Performance Indicators

The solid trend line represents the current reporting period.

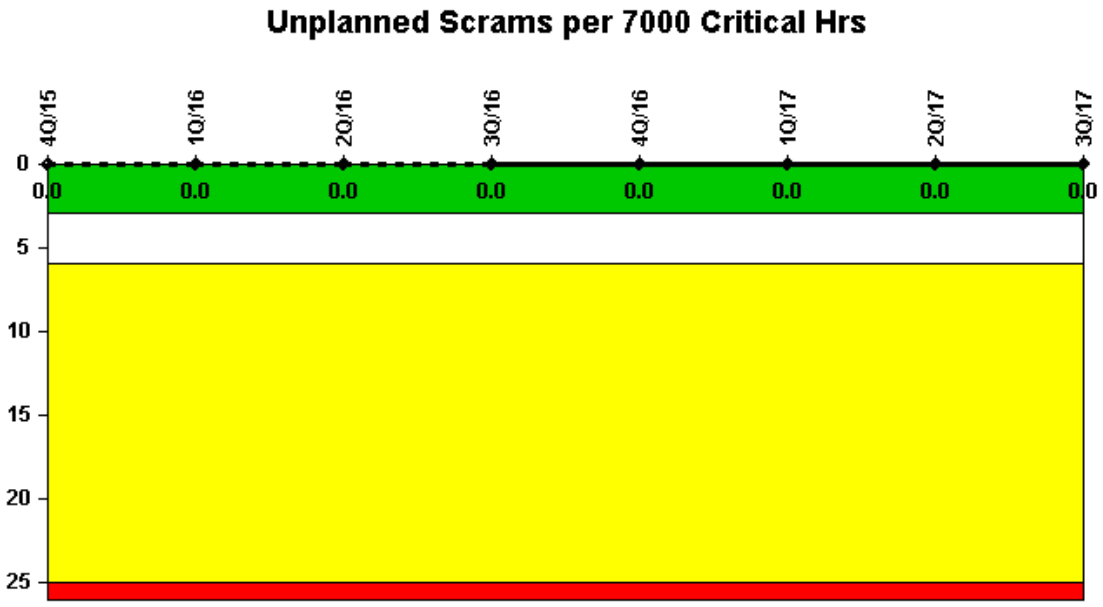
Licensee's General Comments: none

3Q/2017 Performance Indicators

The solid trend line represents the current reporting period.

Licensee's General Comments: none

On this page:



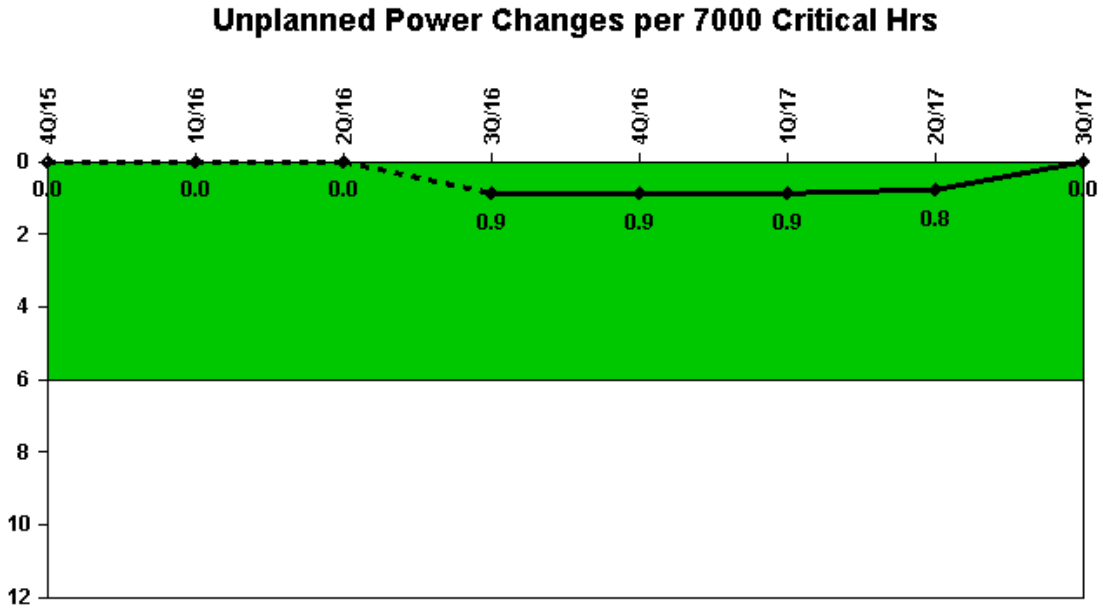
Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

Notes

Unplanned Scrams per 7000 Critical Hrs	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17
Unplanned scrams	0	0	0	0	0	0	0	0
Critical hours	2209.0	2183.0	1436.5	2208.0	2209.0	2159.0	2184.0	2208.0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

TOP

Licensee Comments: none



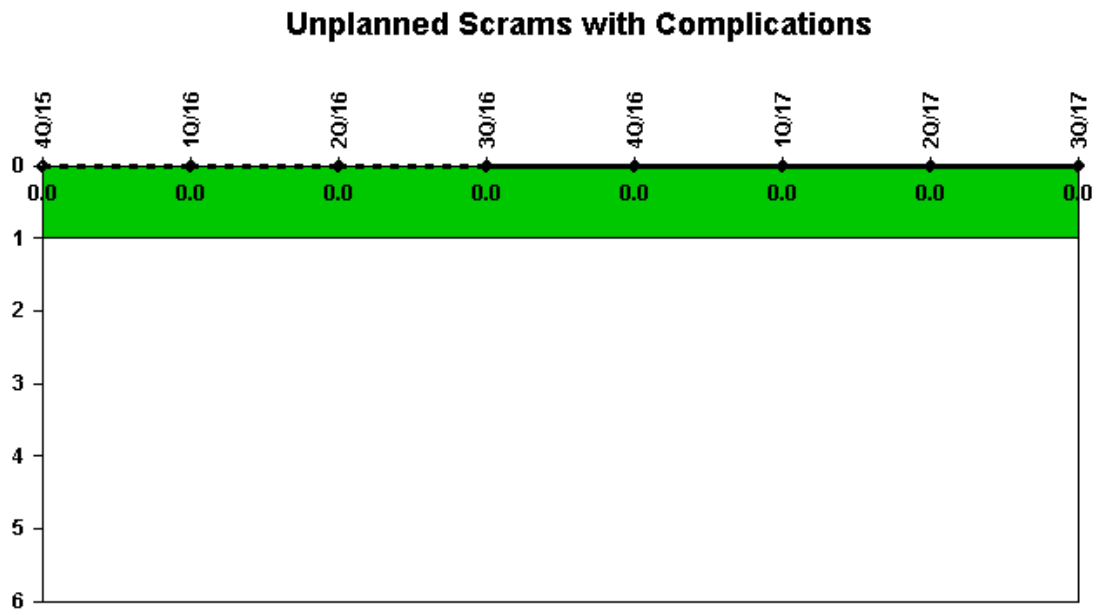
Thresholds: White > 6.0

Notes

Unplanned Power Changes per 7000 Critical Hrs	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17
Unplanned power changes	0	0	0	1.0	0	0	0	0
Critical hours	2209.0	2183.0	1436.5	2208.0	2209.0	2159.0	2184.0	2208.0
Indicator value	**0**	**0**	**0**	**0.9**	**0.9**	**0.9**	**0.8**	**0**

TOP

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 classisfied as unplanned, excluded per NEI 99-02. Reference SAPN 50828812.



Thresholds: White > 1.0

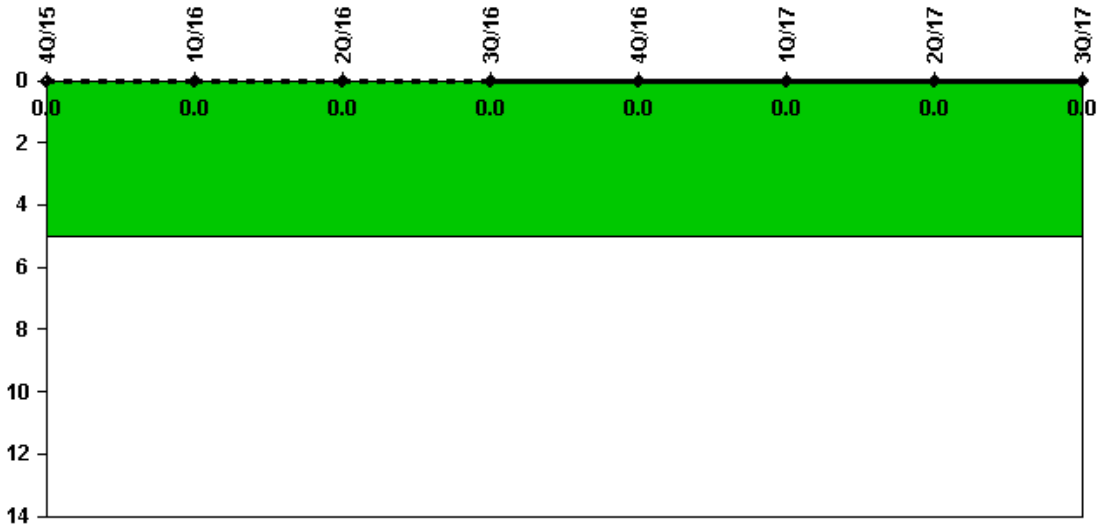
Notes

Unplanned Scrams with Complications	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17
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**

TOP

Licensee Comments: none

Safety System Functional Failures (PWR)



Thresholds: White > 5.0

Notes

Safety System Functional Failures (PWR)	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17
Safety System Functional Failures	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

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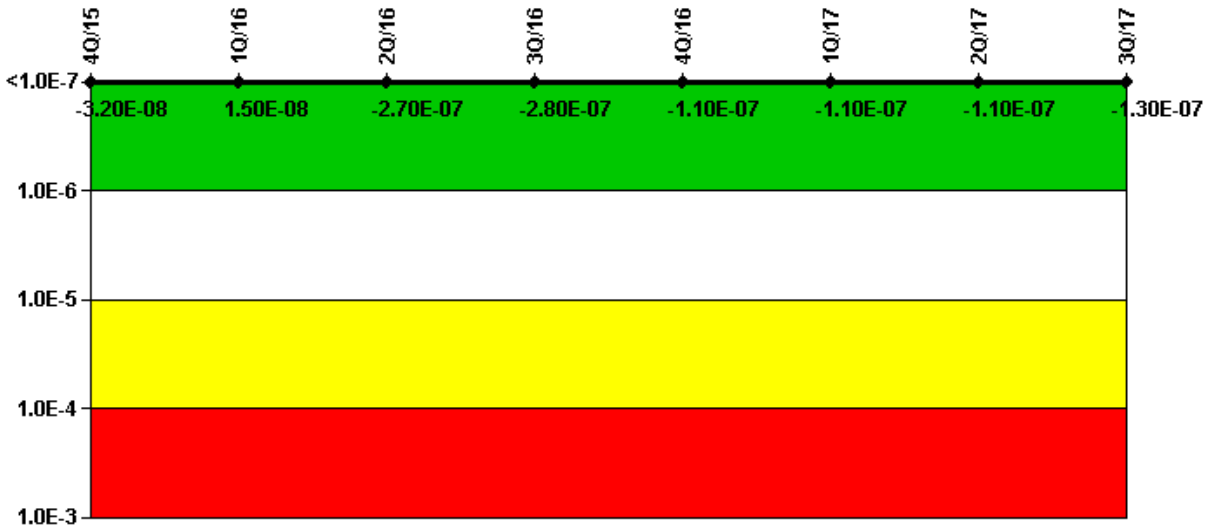
Licensee Comments: none

Mitigating Systems Performance Index, Emergency AC Power System



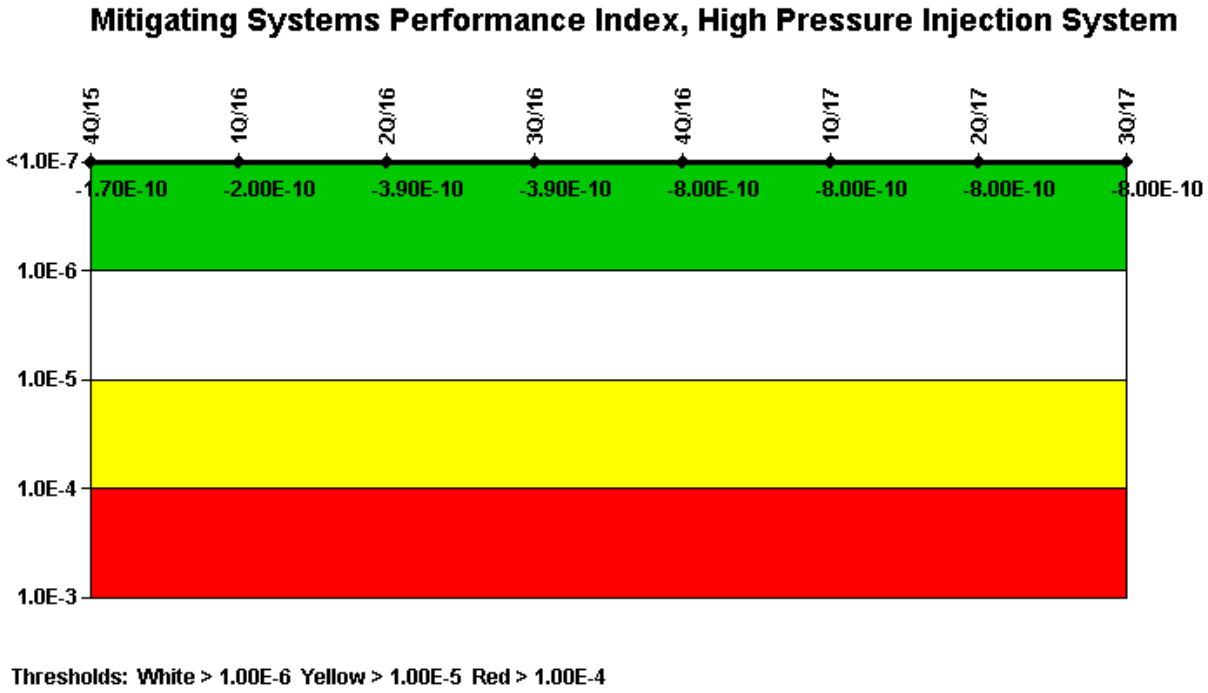
Thresholds: White > 1.00E-6 Yellow > 1.00E-5 Red > 1.00E-4

Notes

Mitigating Systems Performance Index, Emergency AC Power System	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17
UAI (ΔCDF)	-5.17E-09	4.13E-08	4.54E-08	3.66E-08	3.19E-08	3.14E-08	3.10E-08	6.88E-09
URI (ΔCDF)	-2.68E-08	-2.68E-08	-3.19E-07	-3.18E-07	-1.39E-07	-1.39E-07	-1.39E-07	-1.39E-07
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-3.20E-08**	**1.50E-08**	**-2.70E-07**	**-2.80E-07**	**-1.10E-07**	**-1.10E-07**	**-1.10E-07**	**-1.30E-07**

TOP

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.



Notes

Mitigating Systems Performance Index, High Pressure Injection System	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17
UAI (ΔCDF)	1.02E-10	6.96E-11						

			-1.21E-10	-1.21E-10	-1.13E-10	-1.13E-10	-1.13E-10	-1.13E-10
URI (ΔCDF)	-2.68E-10	-2.68E-10	-2.68E-10	-2.68E-10	-6.88E-10	-6.88E-10	-6.88E-10	-6.88E-10
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-1.70E-10**	**-2.00E-10**	**-3.90E-10**	**-3.90E-10**	**-8.00E-10**	**-8.00E-10**	**-8.00E-10**	**-8.00E-10**

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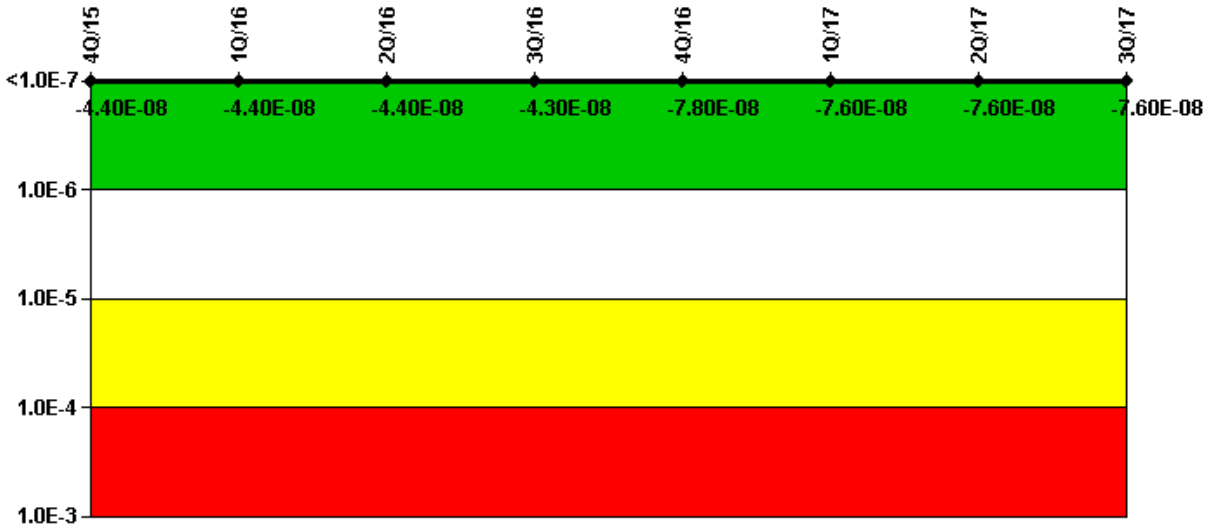
Licensee Comments:
4Q/16: Changed PRA Parameter(s). Diablo Canyon Probabilistic Risk Assessment (PRA) model revision DC03A was approved on 9/30/2016. The Mitigating System Performance Index (MSPI) basis document revision 10 was approved on 10/6/2016 and contains the updated PRA parameters. The DC03A 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, Heat Removal System



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

Notes

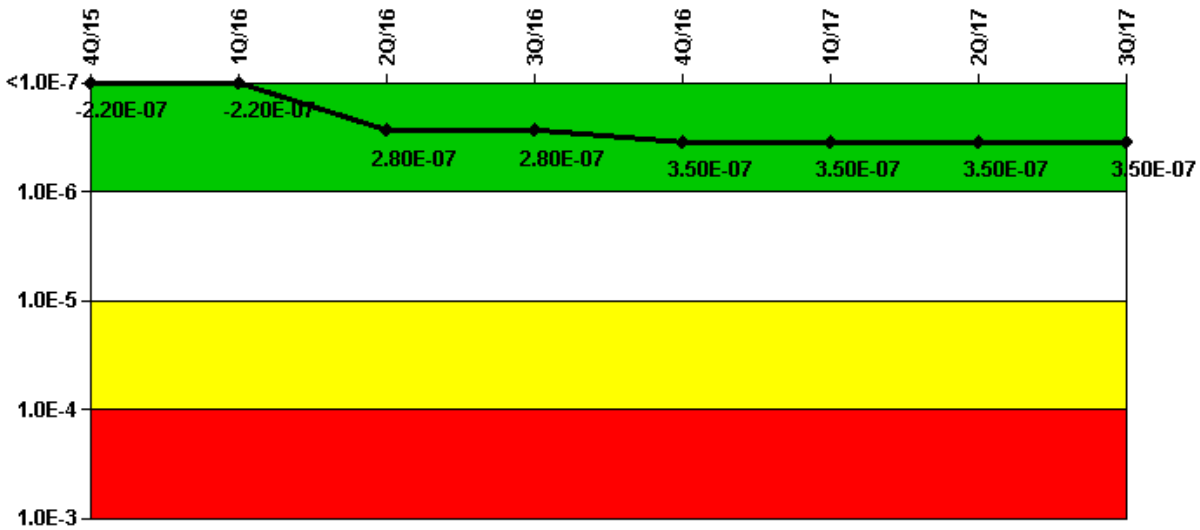
Mitigating Systems Performance Index, Heat Removal System	**4Q/15**	**1Q/16**	**2Q/16**	**3Q/16**	**4Q/16**	**1Q/17**	**2Q/17**	**3Q/17**
UAI (ΔCDF)	-1.78E-08	-1.78E-08	-1.78E-08	-1.78E-08	-1.85E-08	-1.85E-08	-1.85E-08	-1.85E-08
URI (ΔCDF)	-2.62E-08	-2.62E-08	-2.62E-08	-2.55E-08	-5.92E-08	-5.74E-08	-5.74E-08	-5.74E-08

PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-4.40E-08**	**-4.40E-08**	**-4.40E-08**	**-4.30E-08**	**-7.80E-08**	**-7.60E-08**	**-7.60E-08**	**-7.60E-08**

TOP

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	**4Q/15**	**1Q/16**	**2Q/16**	**3Q/16**	**4Q/16**	**1Q/17**	**2Q/17**	**3Q/17**
UAI (ΔCDF)	-3.22E-08	-3.18E-08	-2.97E-08	-3.00E-08	-1.91E-08	-1.91E-08	-1.91E-08	-1.91E-08
URI (ΔCDF)	-1.90E-07	-1.90E-07	3.10E-07	3.10E-07	3.74E-07	3.74E-07	3.74E-07	3.74E-07
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-2.20E-07**	**-2.20E-07**	**2.80E-07**	**2.80E-07**	**3.50E-07**	**3.50E-07**	**3.50E-07**	**3.50E-07**

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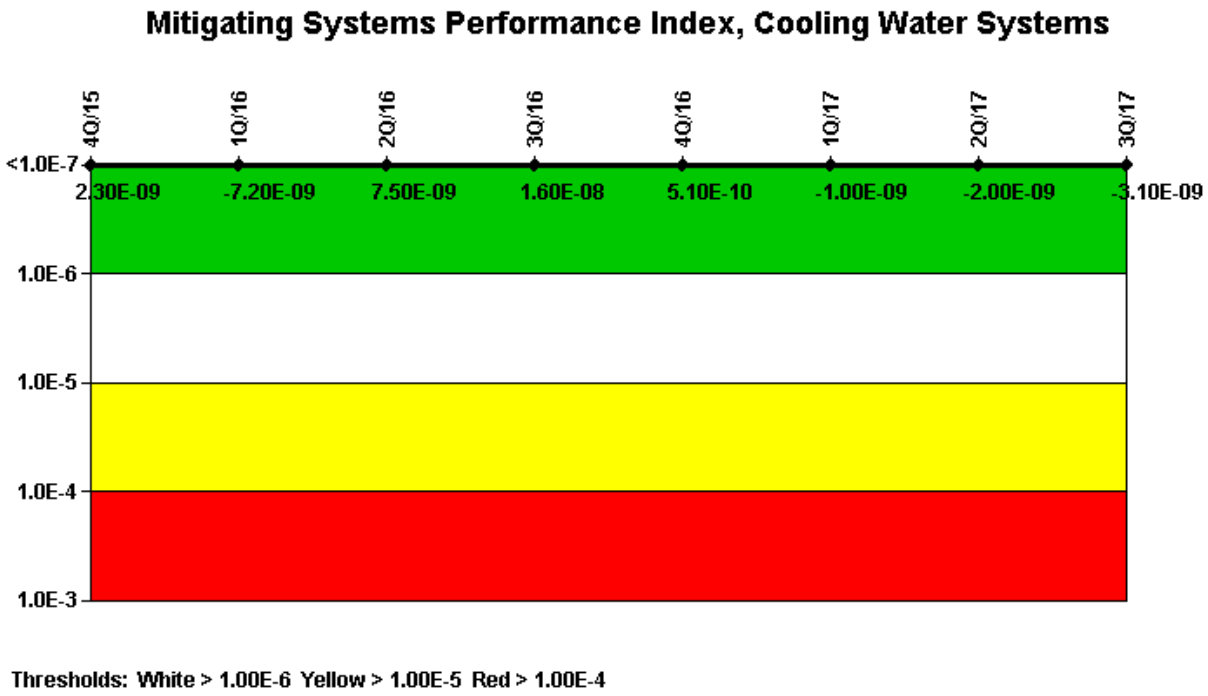
Licensee Comments:
3Q/17: Risk Cap Invoked.
2Q/17: Risk Cap Invoked.
1Q/17: Risk Cap Invoked.
4Q/16: Risk Cap Invoked. Changed PRA Parameter(s). Diablo Canyon Probabilistic Risk Assessment (PRA) model revision DC03A was approved on 9/30/2016. The Mitigating System Performance Index (MSPI) basis document 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.
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, Fussel-Vessely, and basic event probabilities for all monitored trains and components were revised.



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

Notes

Mitigating Systems Performance Index, Cooling Water Systems	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17
UAI (ΔCDF)	1.94E-08	9.90E-09	2.46E-08	3.32E-08	4.98E-09	3.42E-09	2.44E-09	1.33E-09
URI (ΔCDF)	-1.71E-08	-1.71E-08	-1.71E-08	-1.71E-08	-4.47E-09	-4.46E-09	-4.46E-09	-4.46E-09
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**2.30E-09**	**-7.20E-09**	**7.50E-09**	**1.60E-08**	**5.10E-10**	**-1.00E-09**	**-2.00E-09**	**-3.10E-09**

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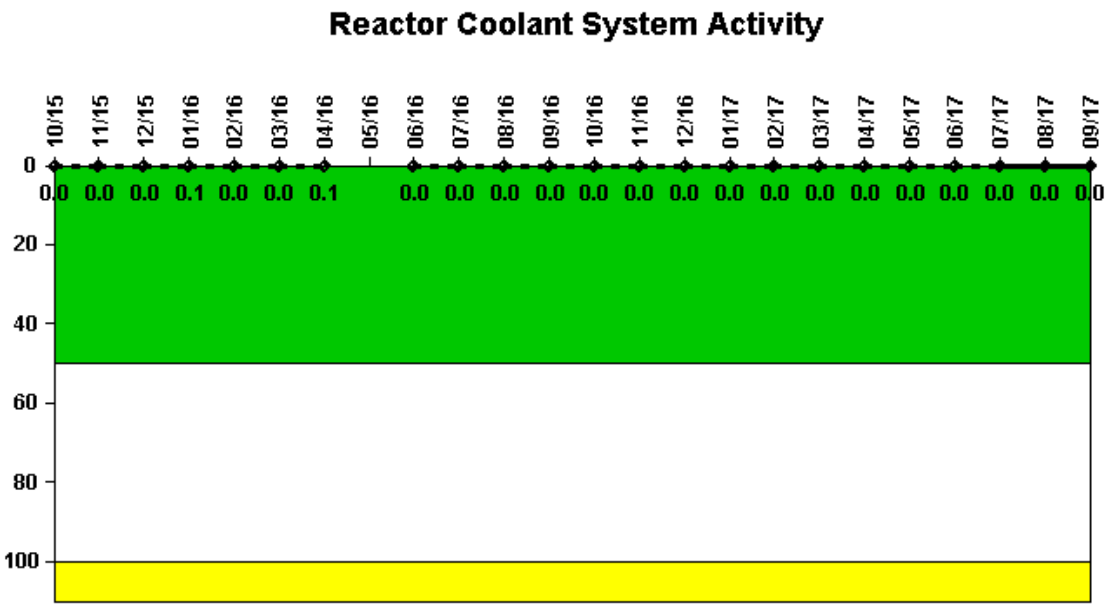
Licensee Comments:
4Q/16: Changed PRA Parameter(s). Diablo Canyon Probabilistic Risk Assessment (PRA) model revision DC03A was approved on 9/30/2016. The Mitigating System Performance Index (MSPI) basis document revision 10 was approved on 10/6/2016 and contains the updated PRA parameters. The DC03A 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.



Thresholds: White > 50.0 Yellow > 100.0

Notes

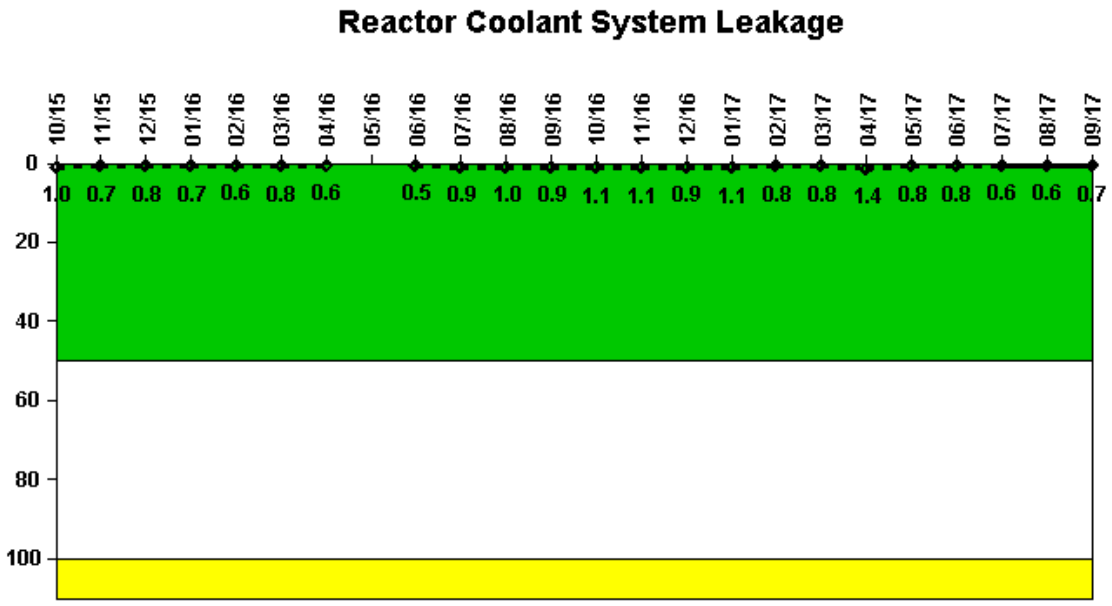
Reactor Coolant System Activity	**10/15**	**11/15**	**12/15**	**1/16**	**2/16**	**3/16**	**4/16**	**5/16**	**6/16**	**7/16**	**8/16**	**9/16**
Maximum activity	0.000286	0.000290	0.000313	0.000611	0.000352	0.000352	0.000530	N/A	0.000146	0.000143	0.000149	0.000157
Technical specification limit	1.0	1.0	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**

Reactor Coolant System Activity	**10/16**	**11/16**	**12/16**	**1/17**	**2/17**	**3/17**	**4/17**	**5/17**	**6/17**	**7/17**	**8/17**	**9/17**
Maximum activity	0.000168	0.000161	0.000167	0.000172	0.000176	0.000186	0.000184	0.000195	0.000195	0.000200	0.000294	0.000287
	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

Technical specification limit												
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

TOP

Licensee Comments: none



Thresholds: White > 50.0 Yellow > 100.0

Notes

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
Indicator value	**1.0**	**0.7**	**0.8**	**0.7**	**0.6**	**0.8**	**0.6**	**N/A**	**0.5**	**0.9**	**1.0**	**0.9**

Reactor Coolant System Leakage	**10/16**	**11/16**	**12/16**	**1/17**	**2/17**	**3/17**	**4/17**	**5/17**	**6/17**	**7/17**	**8/17**	**9/17**
Maximum leakage	0.105	0.108	0.088	0.113	0.083	0.076	0.137	0.083	0.079	0.060	0.064	0.073
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	**1.1**	**1.1**	**0.9**	**1.1**	**0.8**	**0.8**	**1.4**	**0.8**	**0.8**	**0.6**	**0.6**	**0.7**

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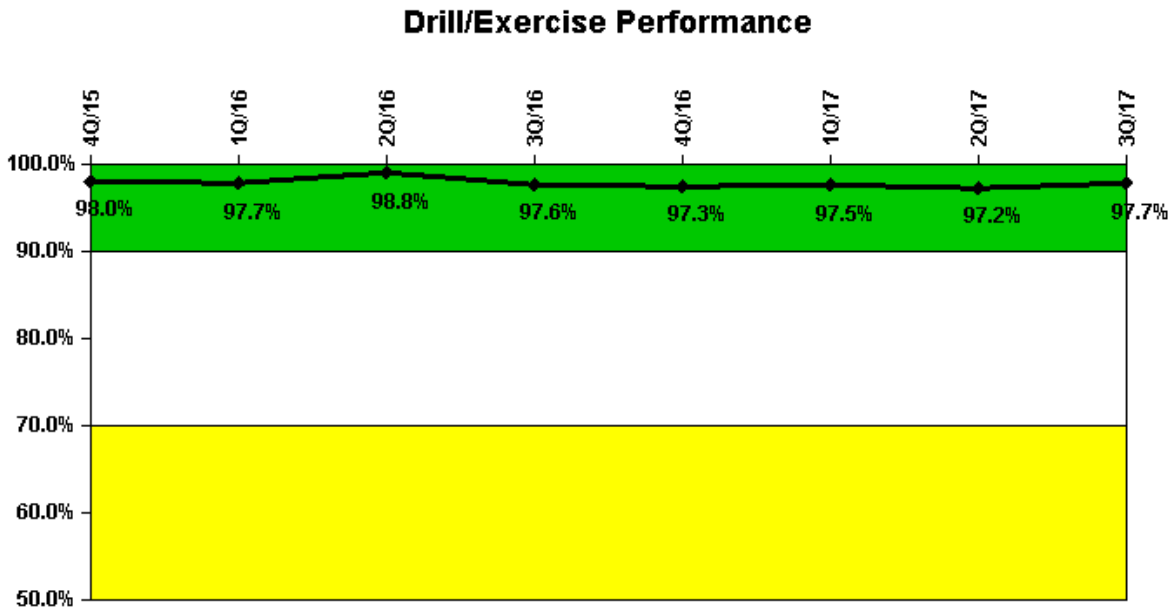
Licensee Comments: none



Thresholds: White < 90.0% Yellow < 70.0%

Notes

Drill/Exercise Performance	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17
Successful opportunities	4.0	37.0	48.0	33.0	37.0	44.0	16.0	39.0
Total opportunities	4.0	38.0	48.0	36.0	38.0	44.0	17.0	39.0
Indicator value	**98.0%**	**97.7%**	**98.8%**	**97.6%**	**97.3%**	**97.5%**	**97.2%**	**97.7%**

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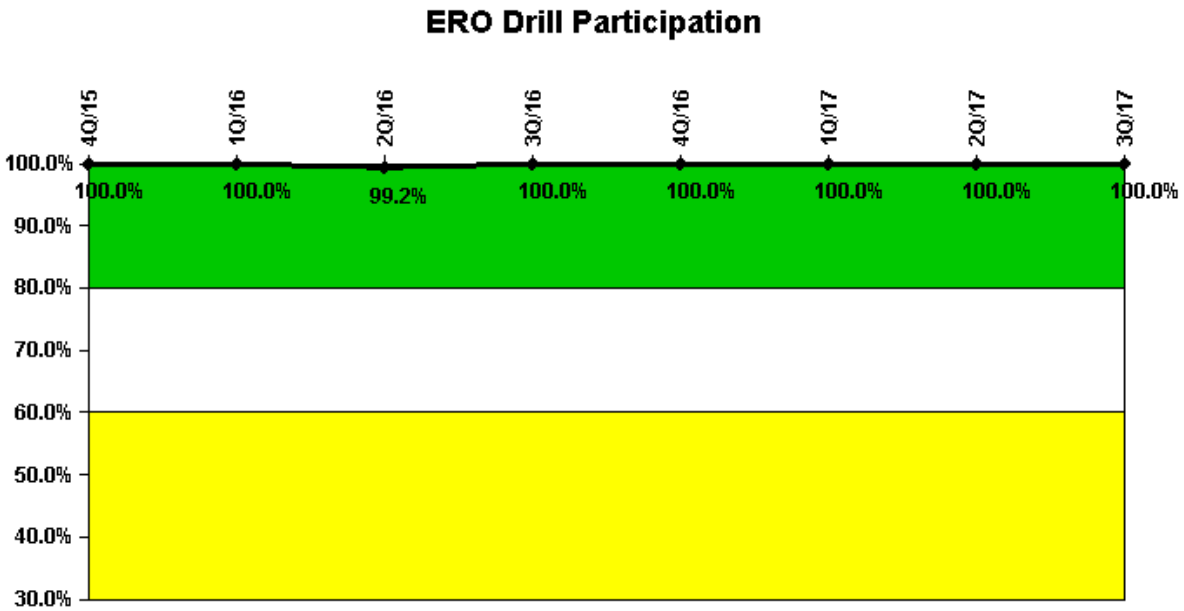
Licensee Comments: none



Thresholds: White < 80.0% Yellow < 60.0%

Notes

ERO Drill Participation	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17
Participating Key personnel	119.0	121.0	122.0	127.0	124.0	132.0	131.0	129.0
Total Key personnel	119.0	121.0	123.0	127.0	124.0	132.0	131.0	129.0
Indicator value	**100.0%**	**100.0%**	**99.2%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

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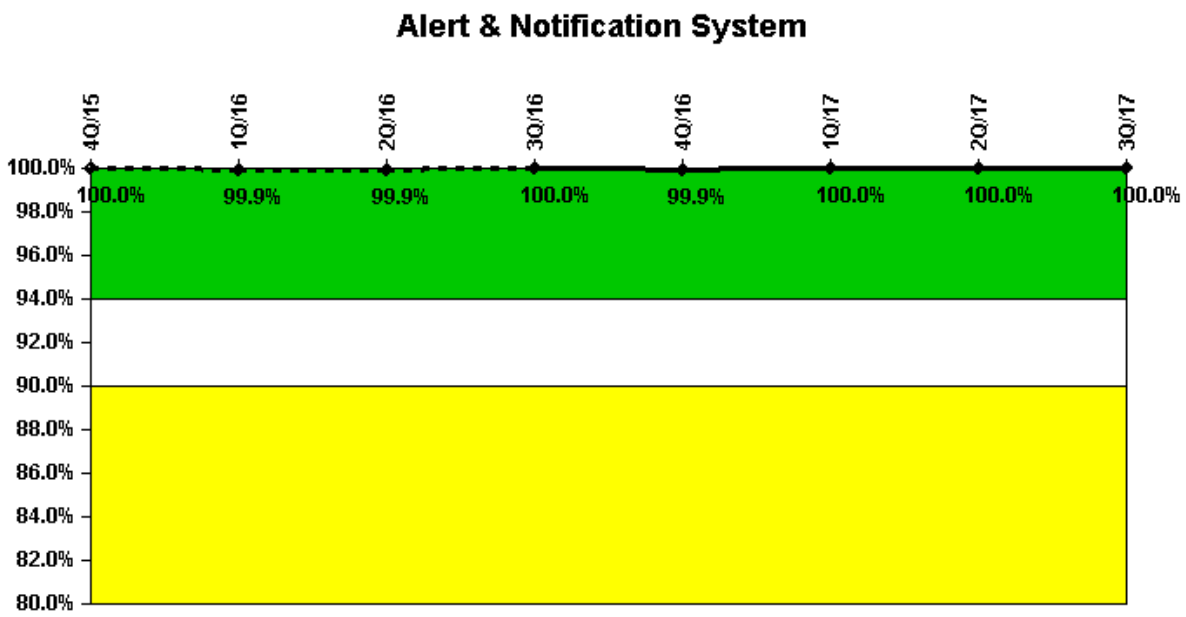
Licensee Comments: none



Thresholds: White < 94.0% Yellow < 90.0%

Notes

Alert & Notification System	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17
Successful siren-tests	1048	916	1047	1179	1047	917	1048	1179
Total sirens-tests	1048	917	1048	1179	1048	917	1048	1179
Indicator value	**100.0%**	**99.9%**	**99.9%**	**100.0%**	**99.9%**	**100.0%**	**100.0%**	**100.0%**

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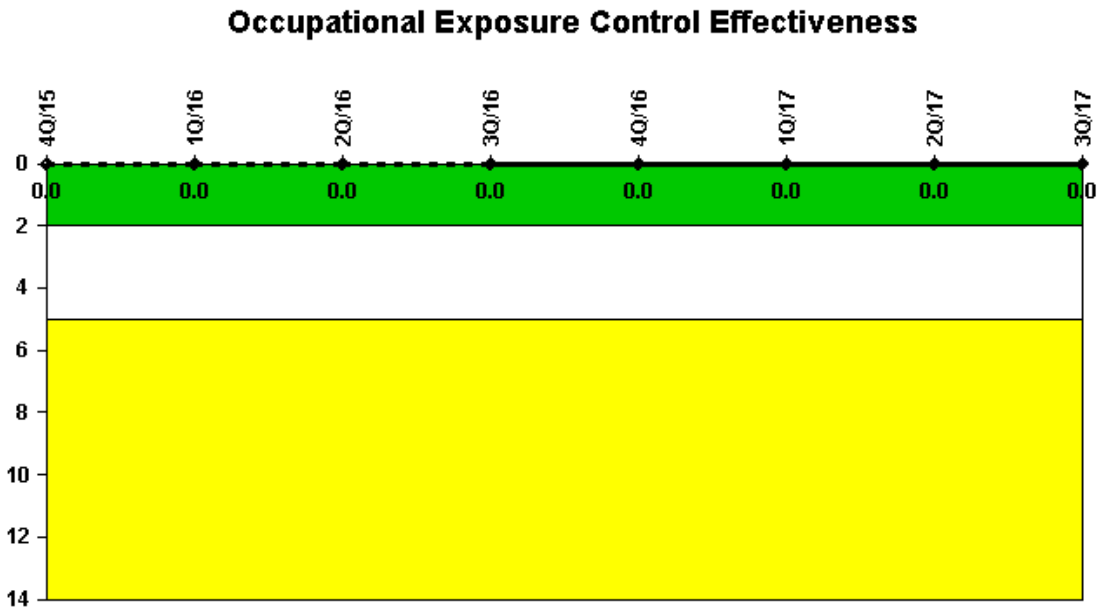
Licensee Comments: none



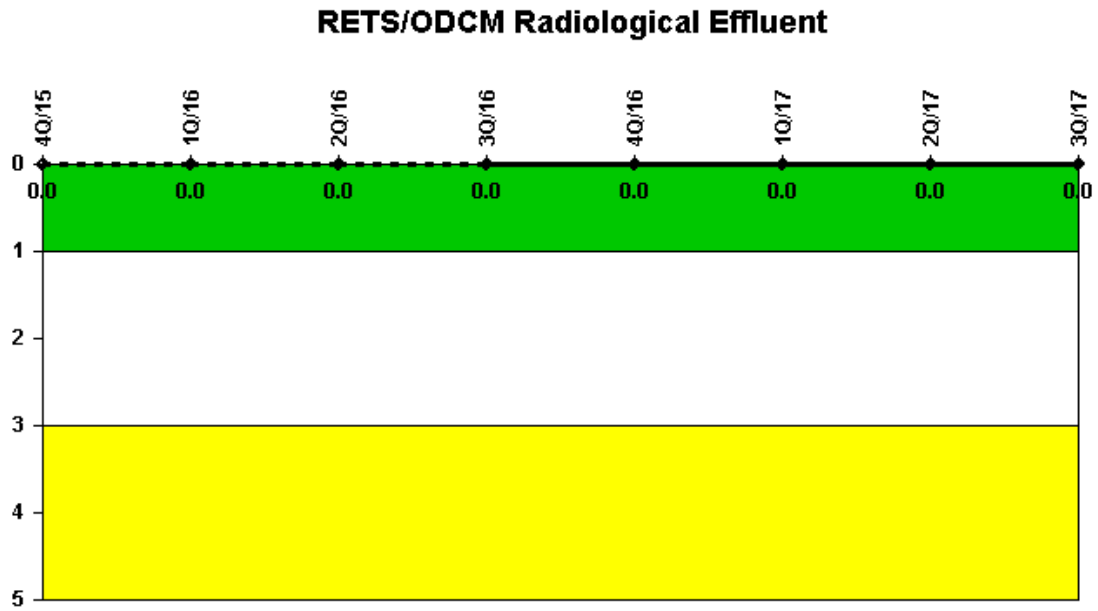
Thresholds: White > 2.0 Yellow > 5.0

Notes

Occupational Exposure Control Effectiveness	**4Q/15**	**1Q/16**	**2Q/16**	**3Q/16**	**4Q/16**	**1Q/17**	**2Q/17**	**3Q/17**
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**

TOP

Licensee Comments: none



Thresholds: White > 1.0 Yellow > 3.0

Notes

RETS/ODCM Radiological Effluent	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17
RETS/ODCM occurrences	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

TOP

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.

Current data as of: October 31, 2017

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