U.S.NRC
United States Nuclear Regulatory Commission
Protecting People and the Environment

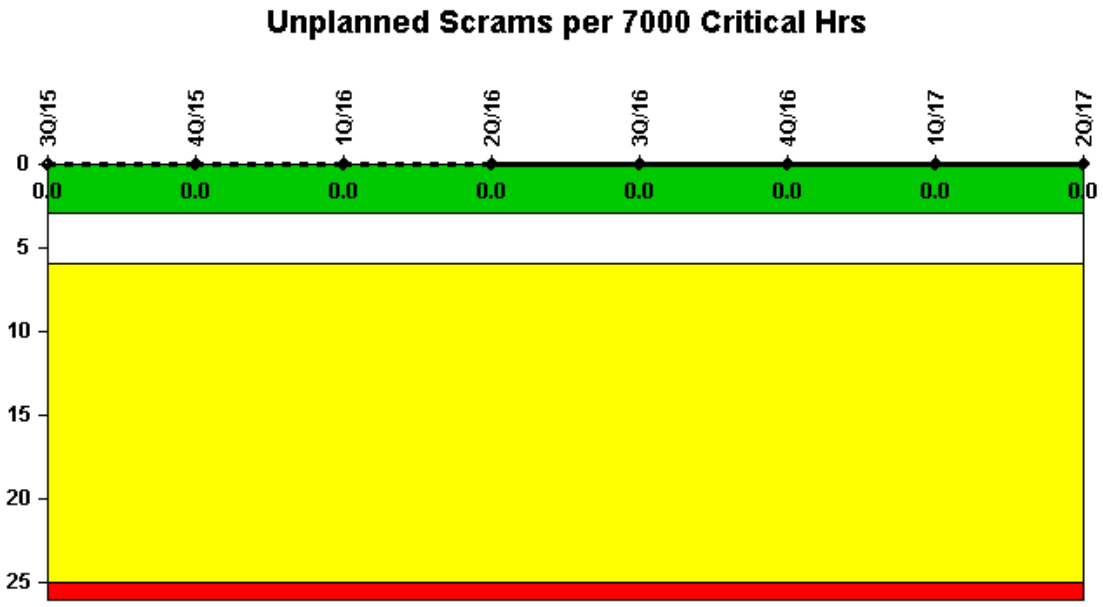
Braidwood 2 – Quarterly Performance Indicators

2Q/2017 Performance Indicators

The solid trend line represents the current reporting period.

Licensee's General Comments: none

On this page:



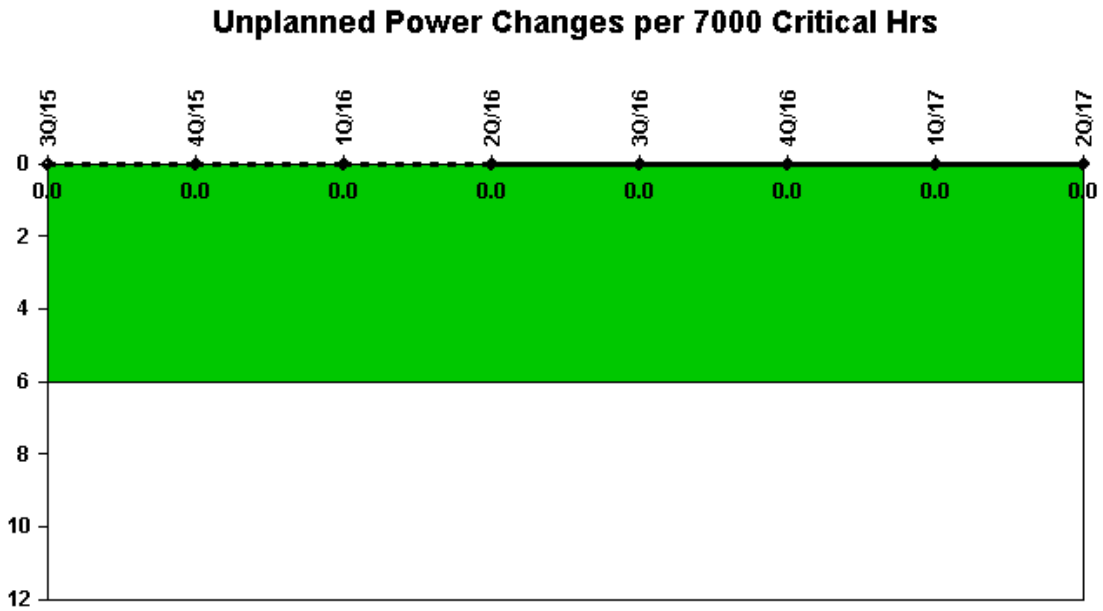
Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

Notes

Unplanned Scrams per 7000 Critical Hrs	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17
Unplanned scrams	0	0	0	0	0	0	0	0
Critical hours	2208.0	1772.3	2183.0	2184.0	2208.0	2209.0	2159.0	1556.0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

TOP

Licensee Comments: none



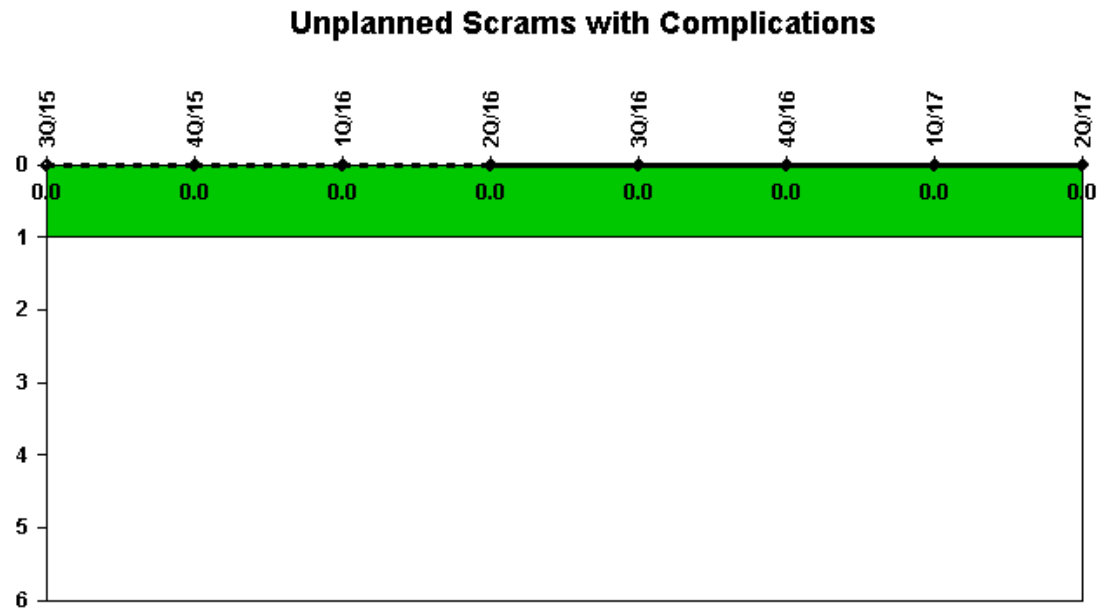
Thresholds: White > 6.0

Notes

Unplanned Power Changes per 7000 Critical Hrs	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17
Unplanned power changes	0	0	0	0	0	0	0	0
Critical hours	2208.0	1772.3	2183.0	2184.0	2208.0	2209.0	2159.0	1556.0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

TOP

Licensee Comments: none



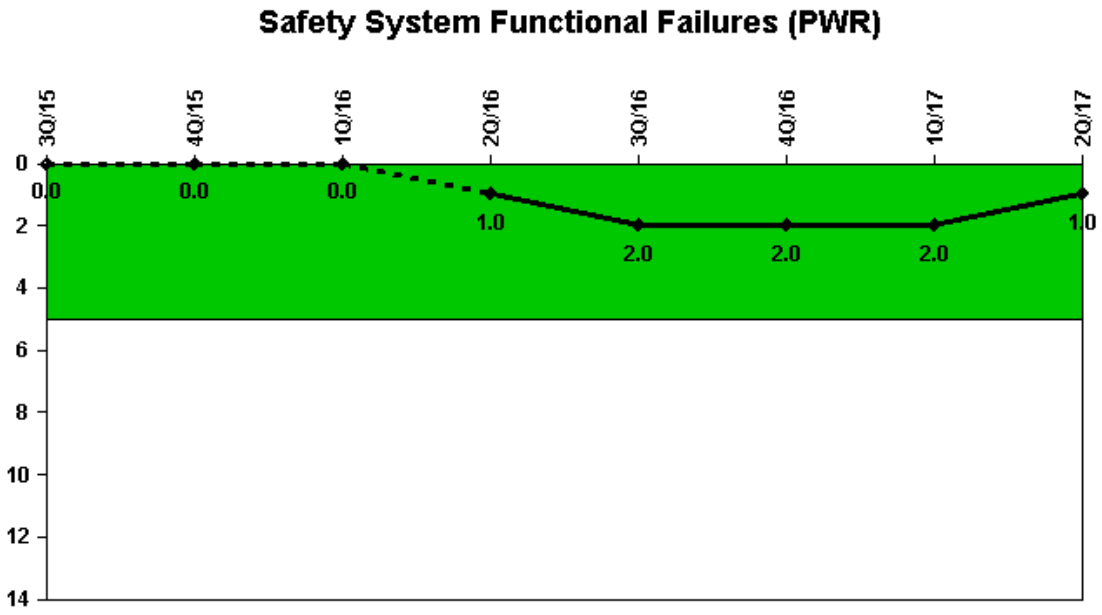
Thresholds: White > 1.0

Notes

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



Thresholds: White > 5.0

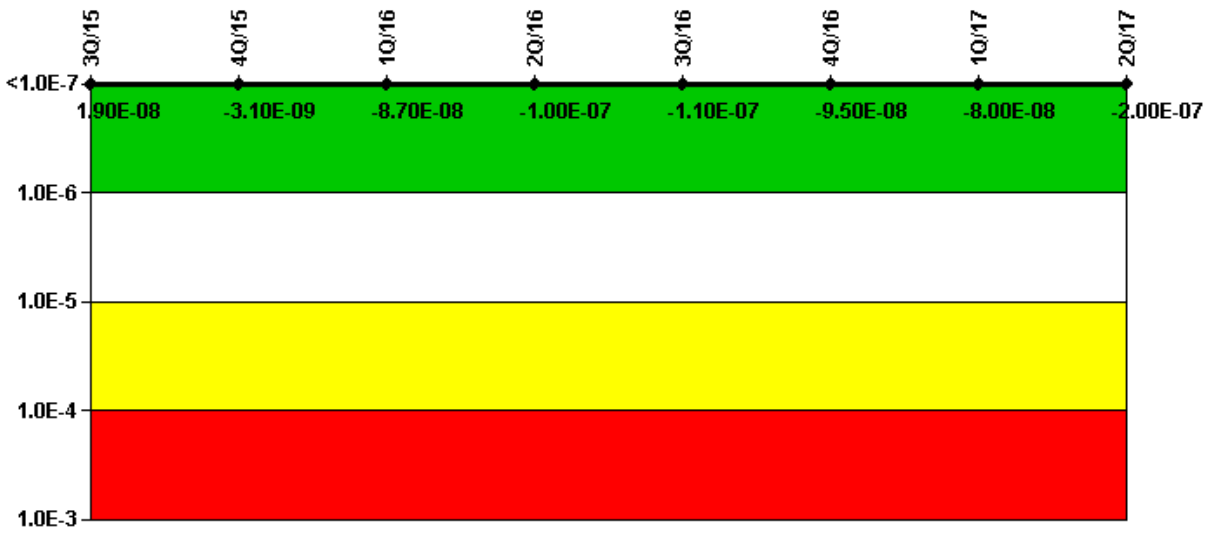
Notes

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

TOP

Licensee Comments:
3Q/16: Licensee Event Report 2016-002-00 - Inadequate Protection from Tornado Missiles Identified Due to Non-Conforming Design Conditions
2Q/16: LER 2016-001-00: Auxiliary Feedwater Diesel Intake Design Deficiency Related to Turbine Building High Energy Line Break Resulted in an Unanalyzed Condition Due to Insufficient Validation of Vendor Analysis Inputs

Mitigating Systems Performance Index, Emergency AC Power System



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

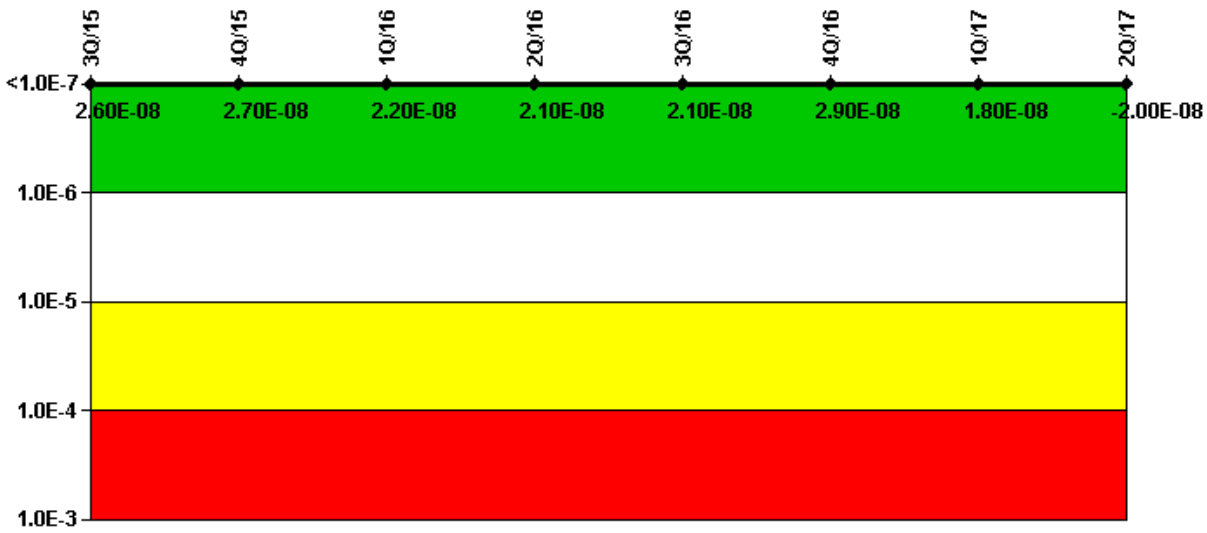
Notes

Mitigating Systems Performance Index, Emergency AC Power System	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17
UAI (ΔCDF)	8.48E-08	5.21E-08	3.58E-08	2.21E-08	8.75E-09	2.49E-08	4.06E-08	4.42E-08
URI (ΔCDF)	-6.59E-08	-5.52E-08	-1.23E-07	-1.23E-07	-1.22E-07	-1.20E-07	-1.21E-07	-2.41E-07
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**1.90E-08**	**-3.10E-09**	**-8.70E-08**	**-1.00E-07**	**-1.10E-07**	**-9.50E-08**	**-8.00E-08**	**-2.00E-07**

TOP

Licensee Comments:
2Q/17: Braidwood PRA Model Revision BB016a, approved March 31, 2017, revised Unit 1 and Unit 2 PRA inputs as part of the periodic data update process.
2Q/16: Changed PRA Parameter(s).
1Q/16: Changed PRA Parameter(s). 4/15/16: Braidwood ASM PRA Model Revision No. BB011b4 approved September 30, 2015, revised Byron Unit 1 and Braidwood Unit 2 PRA inputs for installation of Westinghouse Generation 3 RCP safe shutdown seal installation. These seals were installed in 4Q15 at Braidwood.

Mitigating Systems Performance Index, High Pressure Injection System



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

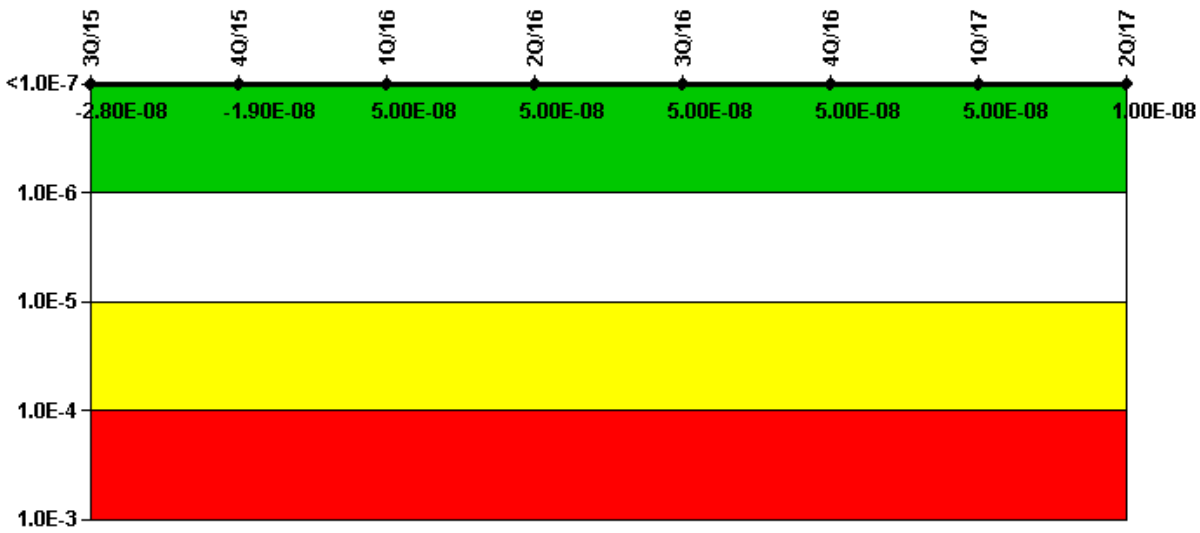
Notes

Mitigating Systems Performance Index, High Pressure Injection System	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17
UAI (ΔCDF)	-2.82E-08	-2.82E-08	-1.79E-08	-1.84E-08	-1.86E-08	-1.07E-08	-2.18E-08	-1.42E-08
URI (ΔCDF)	5.41E-08	5.48E-08	3.96E-08	3.96E-08	3.96E-08	3.96E-08	3.96E-08	-5.98E-09
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**2.60E-08**	**2.70E-08**	**2.20E-08**	**2.10E-08**	**2.10E-08**	**2.90E-08**	**1.80E-08**	**-2.00E-08**

TOP

Licensee Comments:
2Q/17: Braidwood PRA Model Revision BB016a, approved March 31, 2017, revised Unit 1 and Unit 2 PRA inputs as part of the periodic data update process.
2Q/16: Changed PRA Parameter(s).
1Q/16: Changed PRA Parameter(s). 4/15/16: Braidwood ASM PRA Model Revision No. BB011b4 approved September 30, 2015, revised Byron Unit 1 and Braidwood Unit 2 PRA inputs for installation of Westinghouse Generation 3 RCP safe shutdown seal installation. These seals were installed in 4Q15 at Braidwood.

Mitigating Systems Performance Index, Heat Removal System



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

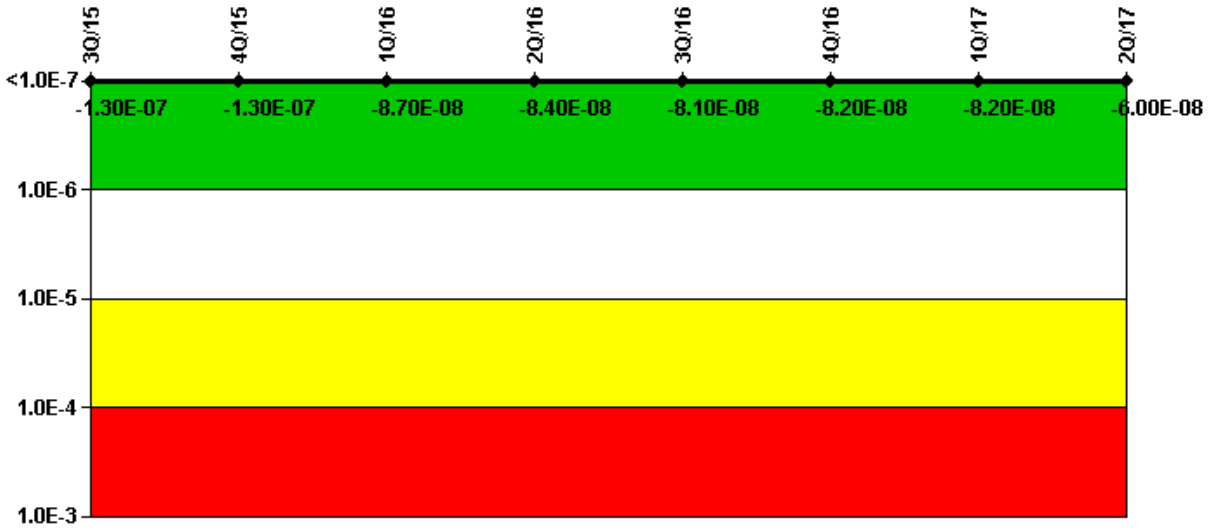
Notes

Mitigating Systems Performance Index, Heat Removal System	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17
UAI (ΔCDF)	-5.60E-08	-5.64E-08	2.25E-08	2.21E-08	2.16E-08	2.16E-08	2.16E-08	-3.40E-08
URI (ΔCDF)	2.76E-08	3.77E-08	2.76E-08	2.78E-08	2.81E-08	2.84E-08	2.89E-08	4.39E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-2.80E-08**	**-1.90E-08**	**5.00E-08**	**5.00E-08**	**5.00E-08**	**5.00E-08**	**5.00E-08**	**1.00E-08**

TOP

Licensee Comments:
2Q/17: Braidwood PRA Model Revision BB016a, approved March 31, 2017, revised Unit 1 and Unit 2 PRA inputs as part of the periodic data update process.
1Q/17: Risk Cap Invoked.
4Q/16: Risk Cap Invoked.
3Q/16: Risk Cap Invoked.
2Q/16: Risk Cap Invoked. Changed PRA Parameter(s).
1Q/16: Risk Cap Invoked. Changed PRA Parameter(s). 4/15/16: Braidwood ASM PRA Model Revision No. BB011b4 approved September 30, 2015, revised Byron Unit 1 and Braidwood Unit 2 PRA inputs for installation of Westinghouse Generation 3 RCP safe shutdown seal installation. These seals were installed in 4Q15 at Braidwood.
4Q/15: Risk Cap Invoked.
3Q/15: Risk Cap Invoked.

Mitigating Systems Performance Index, Residual Heat Removal System



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

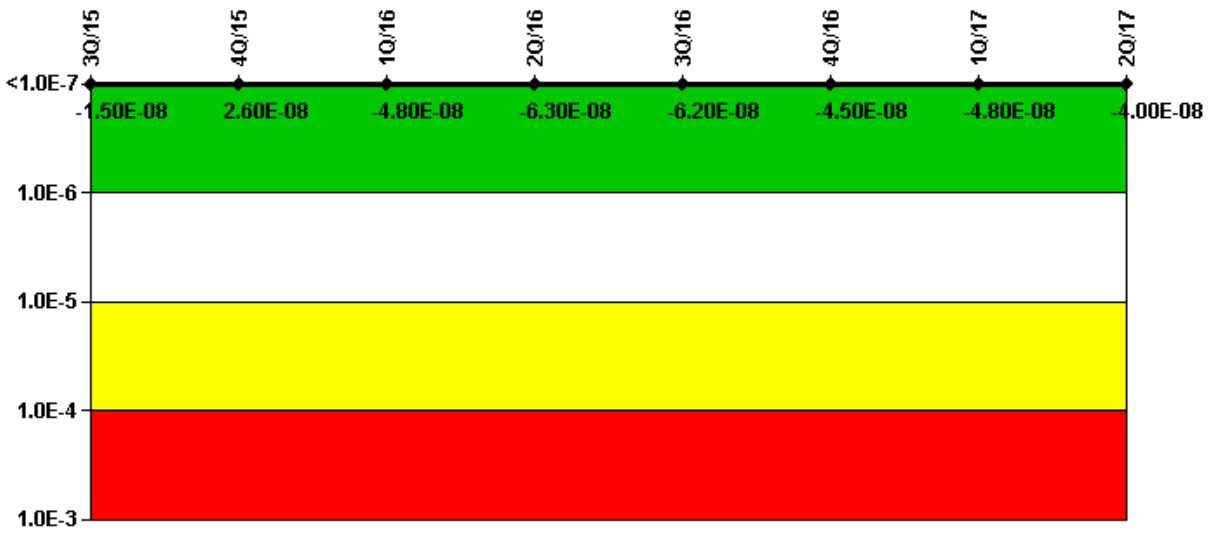
Notes

Mitigating Systems Performance Index, Residual Heat Removal System	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17
UAI (ΔCDF)	-3.48E-08	-3.48E-08	-2.32E-08	-2.32E-08	-2.32E-08	-2.32E-08	-2.32E-08	-1.59E-08
URI (ΔCDF)	-9.76E-08	-9.55E-08	-6.40E-08	-6.08E-08	-5.81E-08	-5.84E-08	-5.88E-08	-4.37E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-1.30E-07**	**-1.30E-07**	**-8.70E-08**	**-8.40E-08**	**-8.10E-08**	**-8.20E-08**	**-8.20E-08**	**-6.00E-08**

TOP

Licensee Comments:
2Q/17: Braidwood PRA Model Revision BB016a, approved March 31, 2017, revised Unit 1 and Unit 2 PRA inputs as part of the periodic data update process.
2Q/16: Changed PRA Parameter(s).
1Q/16: Changed PRA Parameter(s). 4/15/16: Braidwood ASM PRA Model Revision No. BB011b4 approved September 30, 2015, revised Byron Unit 1 and Braidwood Unit 2 PRA inputs for installation of Westinghouse Generation 3 RCP safe shutdown seal installation. These seals were installed in 4Q15 at Braidwood.

Mitigating Systems Performance Index, Cooling Water Systems



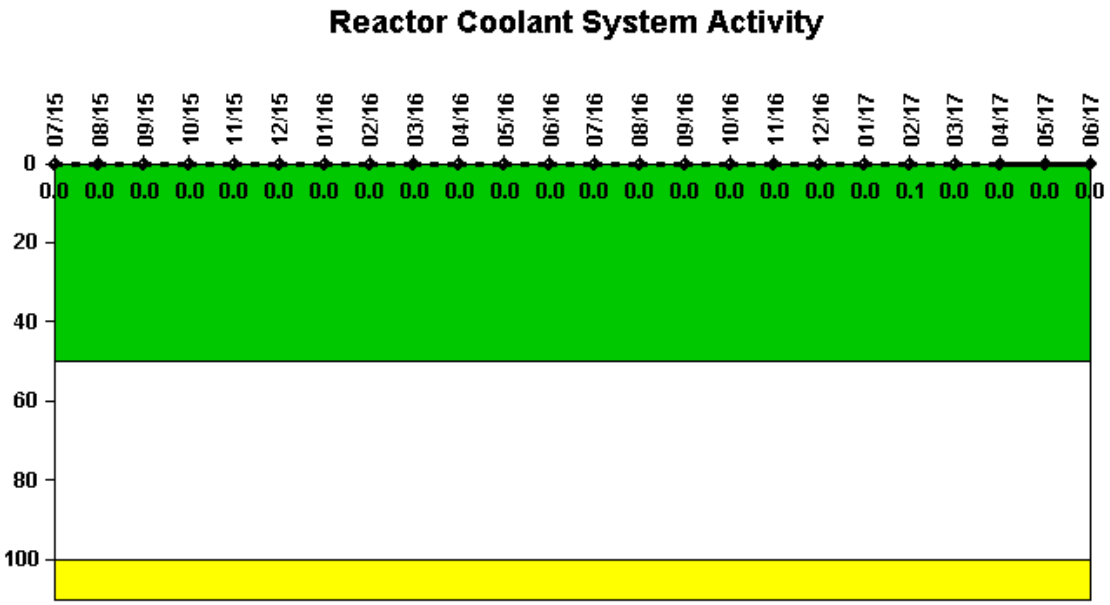
Thresholds: White > 1.00E-6 Yellow > 1.00E-5 Red > 1.00E-4

Notes

Mitigating Systems Performance Index, Cooling Water Systems	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17
UAI (ΔCDF)	9.28E-08	1.31E-07	2.45E-08	1.02E-08	9.39E-09	2.70E-08	2.48E-08	6.31E-08
URI (ΔCDF)	-1.07E-07	-1.05E-07	-7.21E-08	-7.27E-08	-7.14E-08	-7.19E-08	-7.29E-08	-1.03E-07
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-1.50E-08**	**2.60E-08**	**-4.80E-08**	**-6.30E-08**	**-6.20E-08**	**-4.50E-08**	**-4.80E-08**	**-4.00E-08**

TOP

Licensee Comments:
2Q/17: Braidwood PRA Model Revision BB016a, approved March 31, 2017, revised Unit 1 and Unit 2 PRA inputs as part of the periodic data update process.
2Q/16: Changed PRA Parameter(s).
1Q/16: Changed PRA Parameter(s). 4/15/16: Braidwood ASM PRA Model Revision No. BB011b4 approved September 30, 2015, revised Byron Unit 1 and Braidwood Unit 2 PRA inputs for installation of Westinghouse Generation 3 RCP safe shutdown seal installation. These seals were installed in 4Q15 at Braidwood.



Thresholds: White > 50.0 Yellow > 100.0

Notes

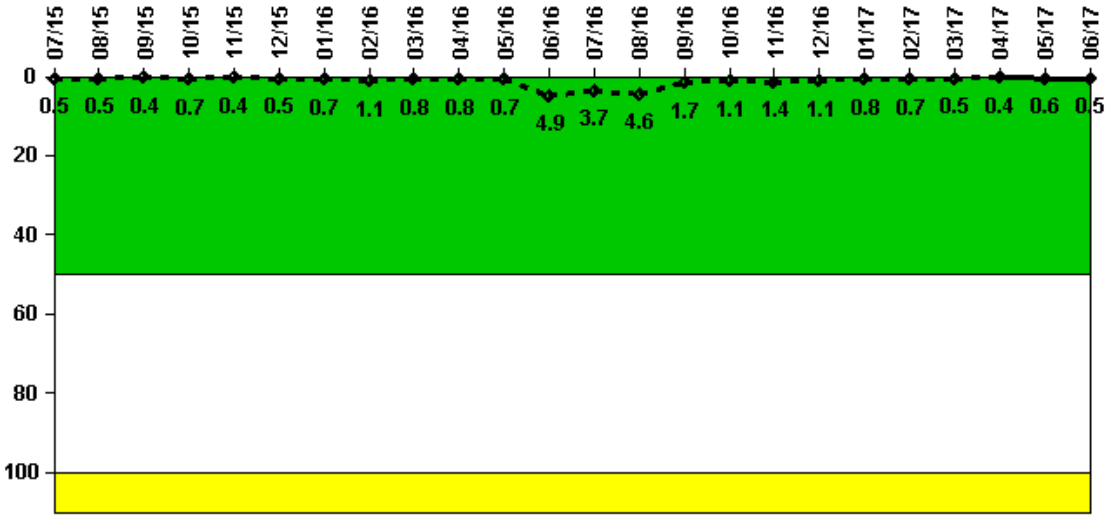
Reactor Coolant System Activity	**7/15**	**8/15**	**9/15**	**10/15**	**11/15**	**12/15**	**1/16**	**2/16**	**3/16**	**4/16**	**5/16**	**6/16**
Maximum activity	0.000265	0.000279	0.000285	0.000107	0.000111	0.000127	0.000151	0.000137	0.000196	0.000162	0.000173	0.000152
Technical specification limit	1.0	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	**7/16**	**8/16**	**9/16**	**10/16**	**11/16**	**12/16**	**1/17**	**2/17**	**3/17**	**4/17**	**5/17**	**6/17**
Maximum activity	0.000168	0.000174	0.000190	0.000211	0.000209	0.000215	0.000230	0.000854	0.000334	0.000227	0.000074	0.000115
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**	**0.1**	**0**	**0**	**0**	**0**

TOP

Licensee Comments: none

Reactor Coolant System Leakage



Thresholds: White > 50.0 Yellow > 100.0

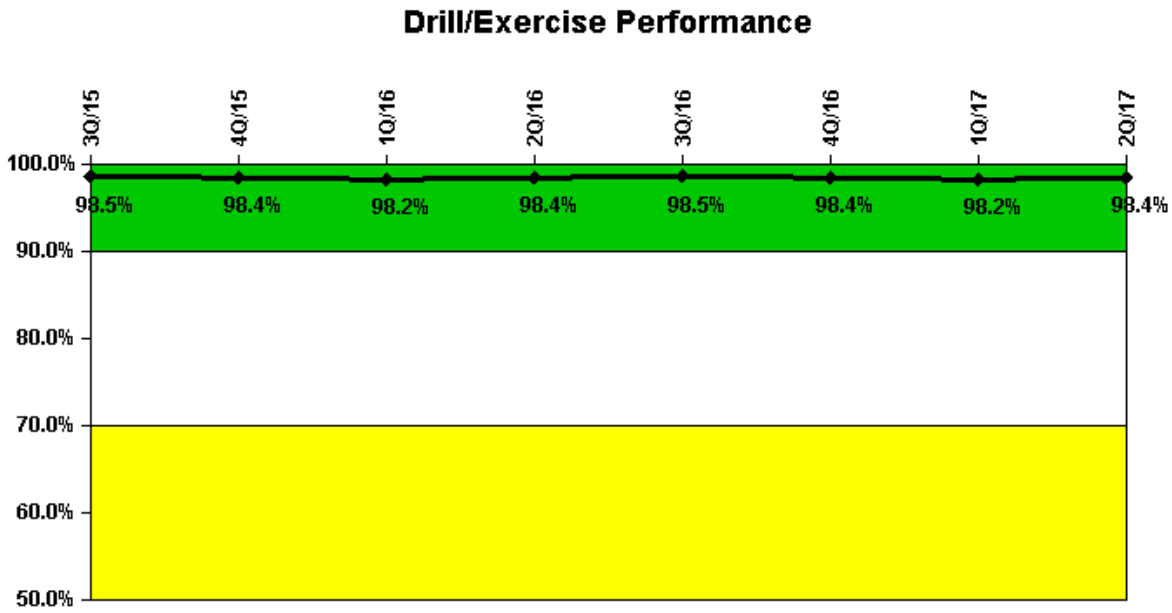
Notes

Reactor Coolant System Leakage	7/15	8/15	9/15	10/15	11/15	12/15	1/16	2/16	3/16	4/16	5/16	6/16
Maximum leakage	0.046	0.049	0.043	0.074	0.039	0.053	0.073	0.112	0.078	0.078	0.067	0.486
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	**0.5**	**0.5**	**0.4**	**0.7**	**0.4**	**0.5**	**0.7**	**1.1**	**0.8**	**0.8**	**0.7**	**4.9**

Reactor Coolant System Leakage	7/16	8/16	9/16	10/16	11/16	12/16	1/17	2/17	3/17	4/17	5/17	6/17
Maximum leakage	0.374	0.460	0.174	0.114	0.144	0.105	0.080	0.066	0.048	0.044	0.057	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	**3.7**	**4.6**	**1.7**	**1.1**	**1.4**	**1.1**	**0.8**	**0.7**	**0.5**	**0.4**	**0.6**	**0.5**

TOP

Licensee Comments: none



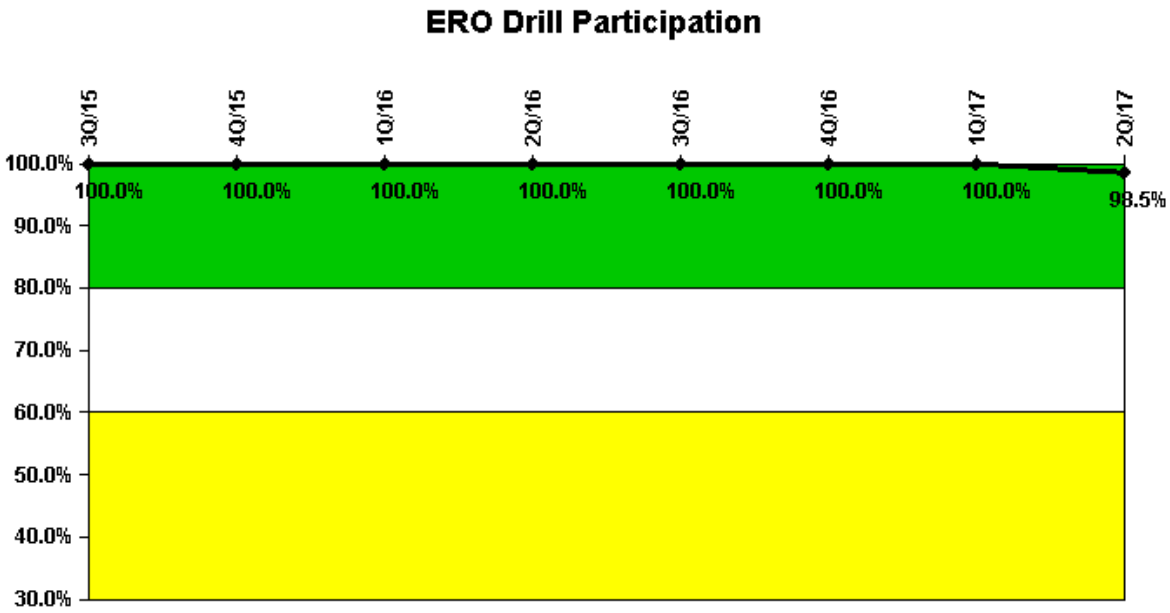
Thresholds: White < 90.0% Yellow < 70.0%

Notes

Drill/Exercise Performance	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17
Successful opportunities	58.0	46.0	34.0	59.0	63.0	46.0	48.0	18.0
Total opportunities	58.0	46.0	35.0	60.0	66.0	46.0	49.0	18.0
Indicator value	**98.5%**	**98.4%**	**98.2%**	**98.4%**	**98.5%**	**98.4%**	**98.2%**	**98.4%**

TOP

Licensee Comments:
1Q/17: 7/6/17 - A review identified two additional successful DEP opportunities for March 2017. Data changed from 22 to 24 successful opportunities and from 23 to 25 total opportunities.



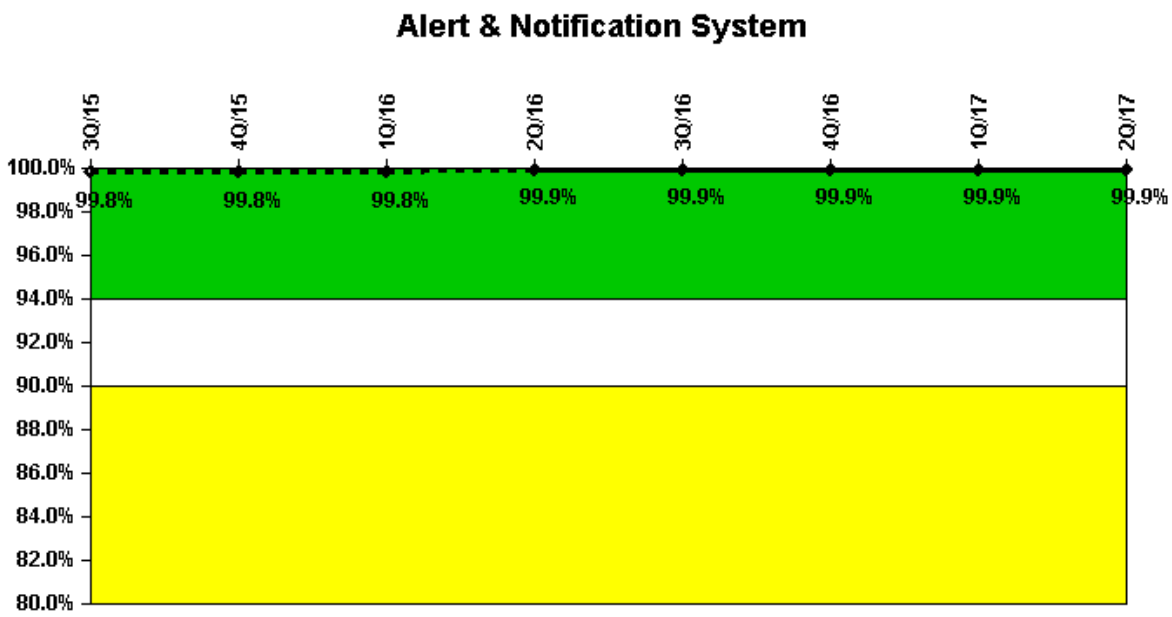
Thresholds: White < 80.0% Yellow < 60.0%

Notes

ERO Drill Participation	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17
Participating Key personnel	67.0	64.0	67.0	66.0	64.0	66.0	71.0	67.0
Total Key personnel	67.0	64.0	67.0	66.0	64.0	66.0	71.0	68.0
Indicator value	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**98.5%**

TOP

Licensee Comments: none



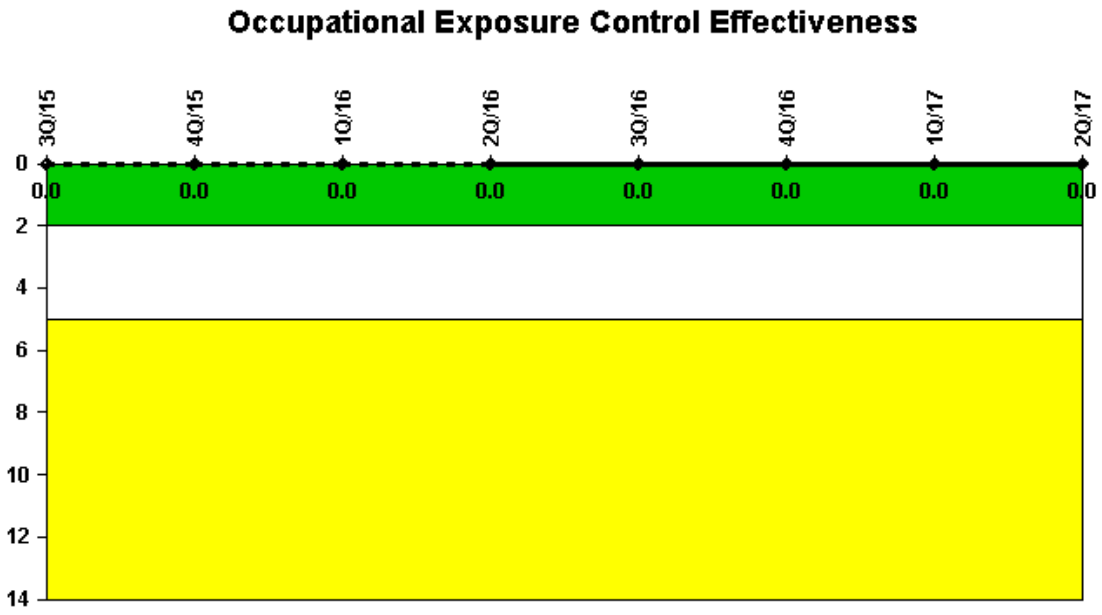
Thresholds: White < 94.0% Yellow < 90.0%

Notes

Alert & Notification System	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17
Successful siren-tests	3112	3070	3070	3071	3064	2976	3116	3067
Total sirens-tests	3120	3072	3072	3072	3072	2976	3120	3072
Indicator value	**99.8%**	**99.8%**	**99.8%**	**99.9%**	**99.9%**	**99.9%**	**99.9%**	**99.9%**

TOP

Licensee Comments: none



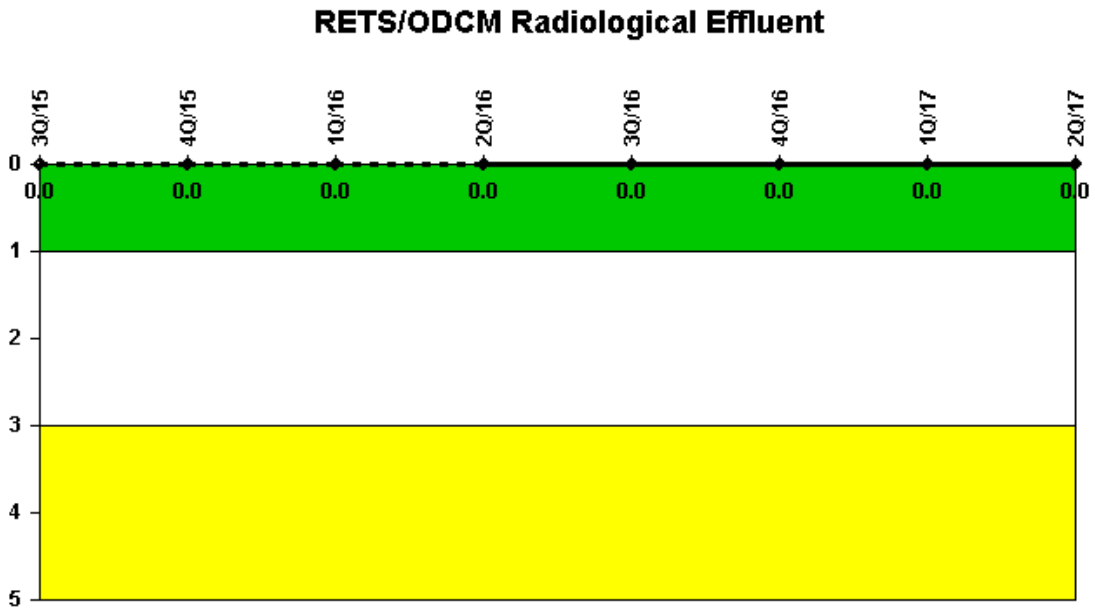
Thresholds: White > 2.0 Yellow > 5.0

Notes

Occupational Exposure Control Effectiveness	**3Q/15**	**4Q/15**	**1Q/16**	**2Q/16**	**3Q/16**	**4Q/16**	**1Q/17**	**2Q/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	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/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: July 26, 2017

Page Last Reviewed/Updated Wednesday, June 07, 2017