



Home > Nuclear Reactors > Operating Reactors > Reactor Oversight Process > Plant Summaries> Brunswick 1 > Quarterly Performance Indicators

Brunswick 1 – Quarterly Performance Indicators

1Q/2017 Performance Indicators

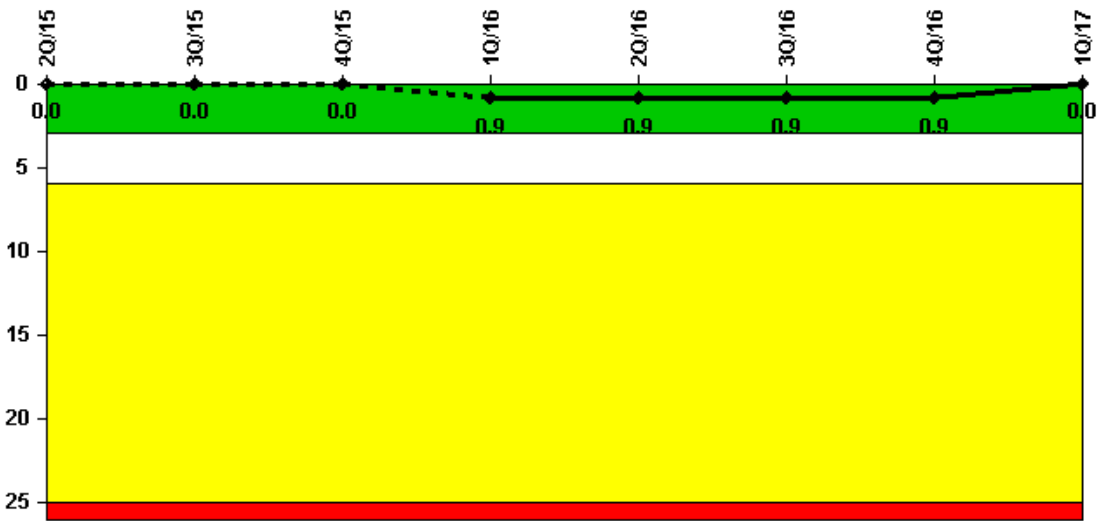
The solid trend line represents the current reporting period.

Licensee's General Comments: none

On this page:

- Unplanned Scrams (IE01)
- Unplanned Power Changes per 7000 Critical Hours (IE03)
- Unplanned Scrams with Complications (IE04)
- Safety System Functional Failures (MS05)
- Emergency AC Power Systems (MS06)
- High Pressure Injection Systems (MS07)
- Heat Removal Systems (MS08)
- Residual Heat Removal Systems (MS09)
- Cooling Water Systems (MS10)
- Reactor Coolant System Activity (BI01)
- Reactor Coolant System Leakage (BI02)
- Drill/Exercise Performance (EP01)
- Emergency Response Organization Drill Participation (EP02)
- Alert and Notification System Reliability (EP03)
- Occupational Exposure Control Effectiveness (OR01)
- RETS/OCDM Radiological Effluent Occurrence (PR01)
- Protected Area Equipment (PP01)

Unplanned Scrams per 7000 Critical Hrs



Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

Notes

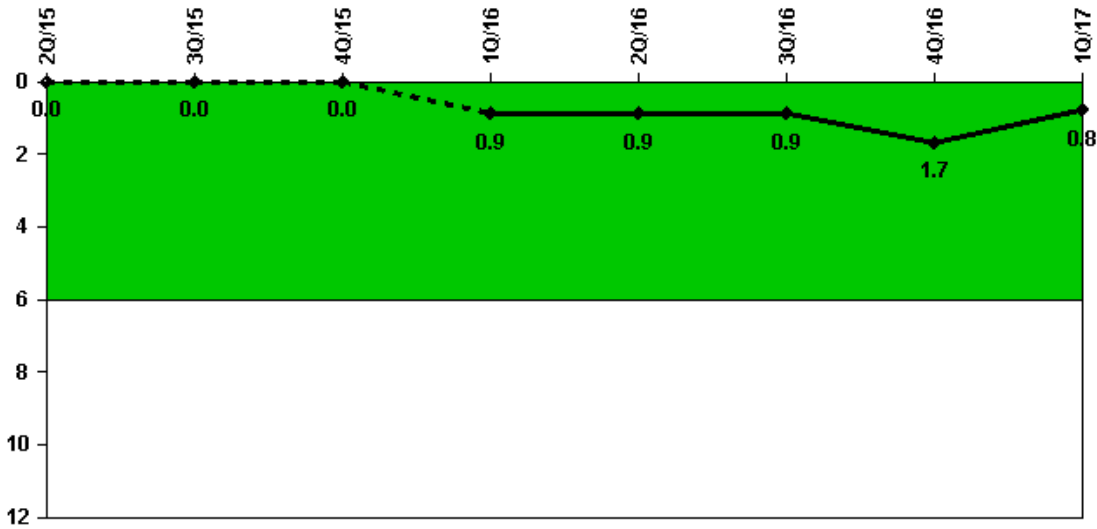
Unplanned Scrams per 7000 Critical Hrs	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17
Unplanned scrams	0	0	0	1.0	0	0	0	0
Critical hours	2184.0	2208.0	2127.2	1421.2	2184.0	2208.0	2209.0	2159.0

Indicator value	0	0	0	0.9	0.9	0.9	0.9	0
-----------------	---	---	---	-----	-----	-----	-----	---

TOP

Licensee Comments: none

Unplanned Power Changes per 7000 Critical Hrs



Thresholds: White > 6.0

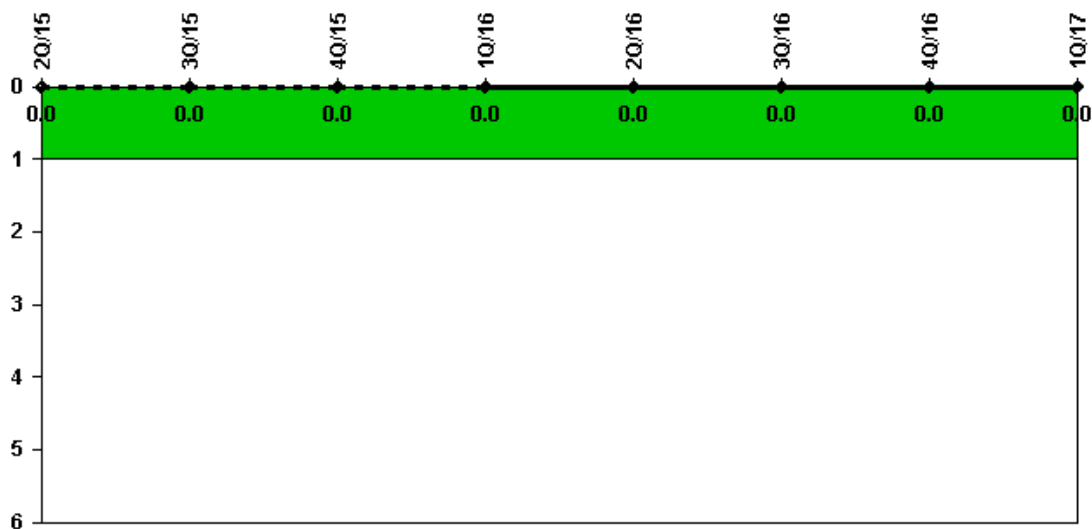
Notes

Unplanned Power Changes per 7000 Critical Hrs	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17
Unplanned power changes	0	0	0	1.0	0	0	1.0	0
Critical hours	2184.0	2208.0	2127.2	1421.2	2184.0	2208.0	2209.0	2159.0
Indicator value	0	0	0	0.9	0.9	0.9	1.7	0.8

▲ TOP

Licensee Comments: none

Unplanned Scrams with Complications



Thresholds: White > 1.0

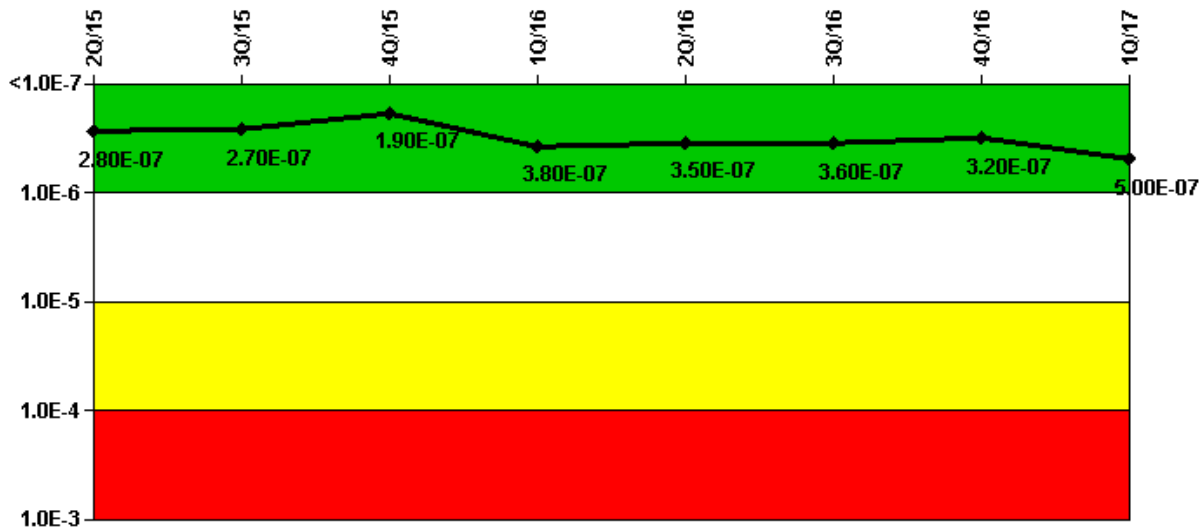
Notes

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

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

	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17
UAI (ΔCDF)	1.30E-07	1.24E-07	1.14E-07	1.68E-07	1.36E-07	1.42E-07	1.02E-07	1.37E-07
URI (ΔCDF)	1.46E-07	1.46E-07	7.27E-08	2.13E-07	2.14E-07	2.14E-07	2.14E-07	3.60E-07
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	2.80E-07	2.70E-07	1.90E-07	3.80E-07	3.50E-07	3.60E-07	3.20E-07	5.00E-07

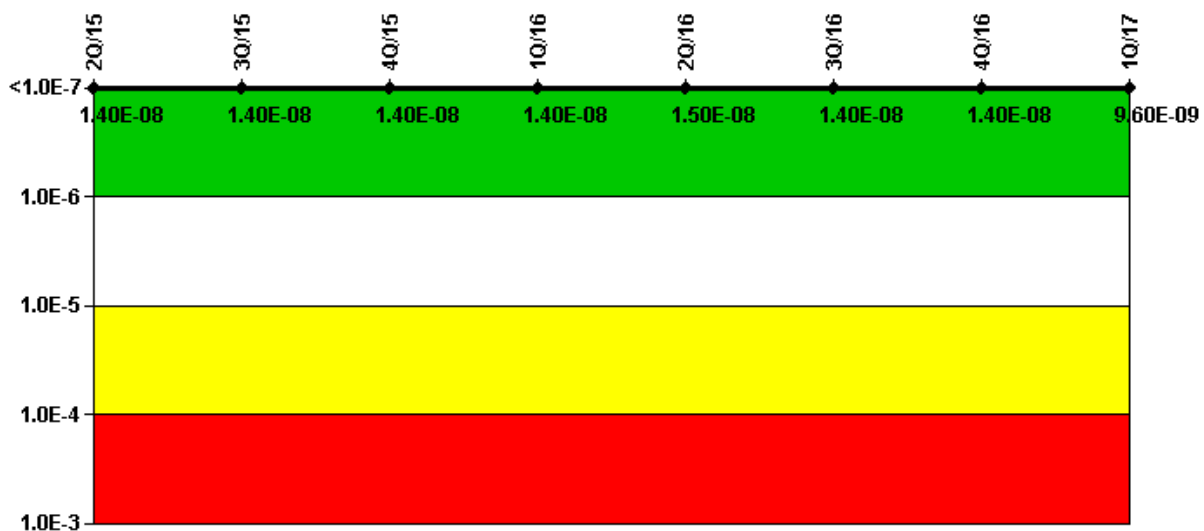
▲ TOP

Licensee Comments:

1Q/16: Planned unavailability hours were adjusted for March 2016 on the Emergency Diesel Generators due to double counting of hours that was discovered during a review of Operations logs and the CDE database. This adjustment did not affect the color of the EAC MPSI indicator.

2Q/15: Planned unavailability hours were adjusted due to missing engine barring on Emergency Diesel Generator #2 in April 2015. This adjustment did not affect the color of the EAC MPSI indicator.

Mitigating Systems Performance Index, High Pressure Injection System



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

Notes

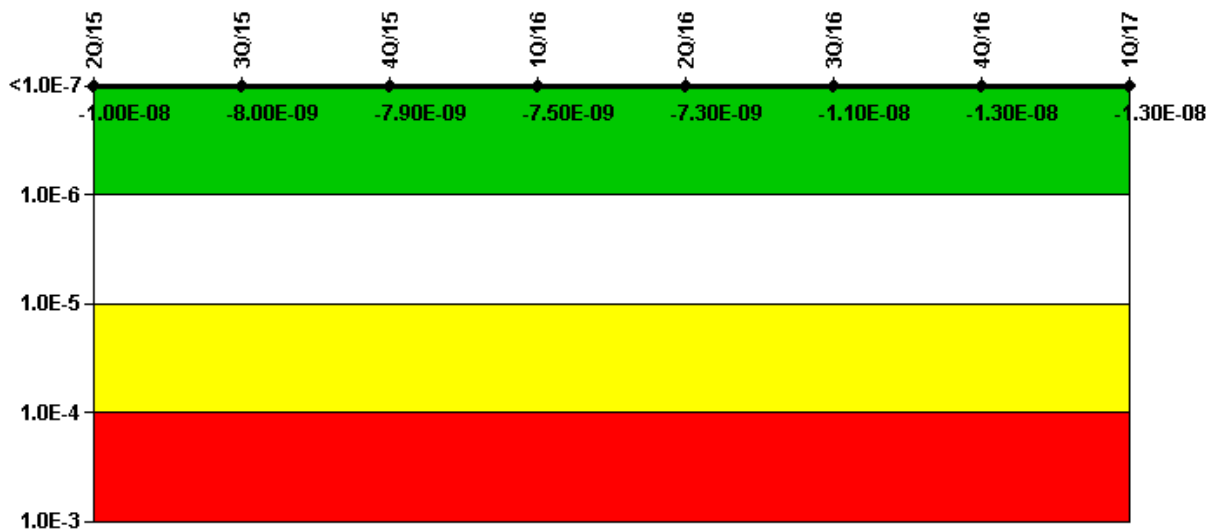
Mitigating Systems Performance Index, High Pressure Injection System

	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17
UAI (Δ CDF)	6.87E-09	6.40E-09	6.43E-09	6.91E-09	7.34E-09	6.45E-09	6.44E-09	2.38E-09
URI (Δ CDF)	7.25E-09	7.25E-09	7.25E-09	7.25E-09	7.25E-09	7.25E-09	7.25E-09	7.25E-09
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	1.40E-08	1.40E-08	1.40E-08	1.40E-08	1.50E-08	1.40E-08	1.40E-08	9.60E-09

▲ TOP

Licensee Comments: none

Mitigating Systems Performance Index, Heat Removal System



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

Notes

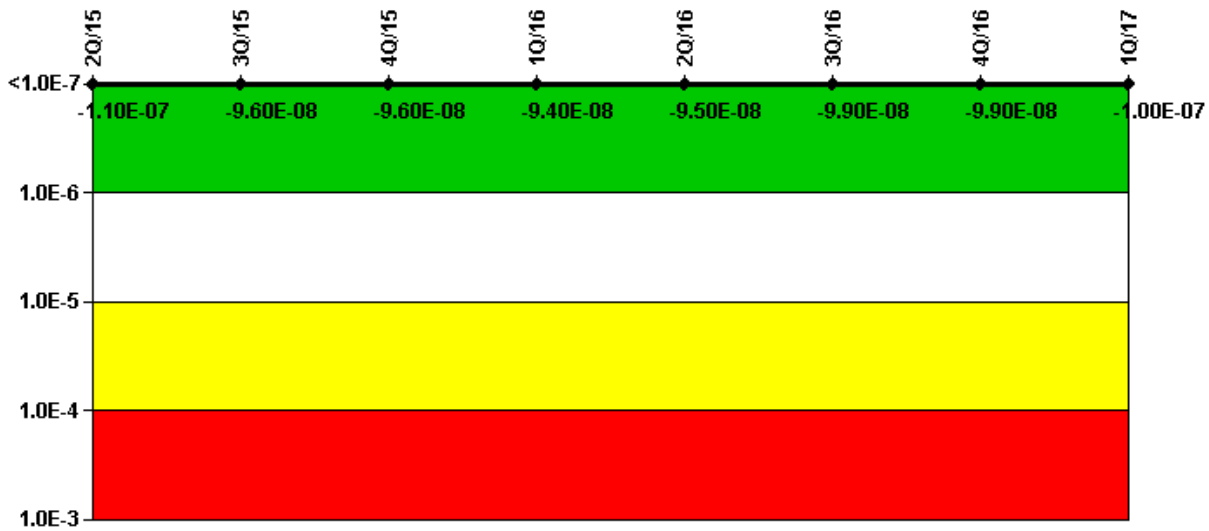
Mitigating Systems Performance Index, Heat Removal System

	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17
UAI (Δ CDF)	-2.23E-10	2.21E-09	2.26E-09	2.64E-09	2.91E-09	-3.76E-10	-3.25E-09	-3.25E-09
URI (Δ CDF)	-1.02E-08	-1.02E-08	-1.02E-08	-1.02E-08	-1.02E-08	-1.02E-08	-1.02E-08	-1.02E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-1.00E-08	-8.00E-09	-7.90E-09	-7.50E-09	-7.30E-09	-1.10E-08	-1.30E-08	-1.30E-08

▲ TOP

Licensee Comments: none

Mitigating Systems Performance Index, Residual Heat Removal System



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

Notes

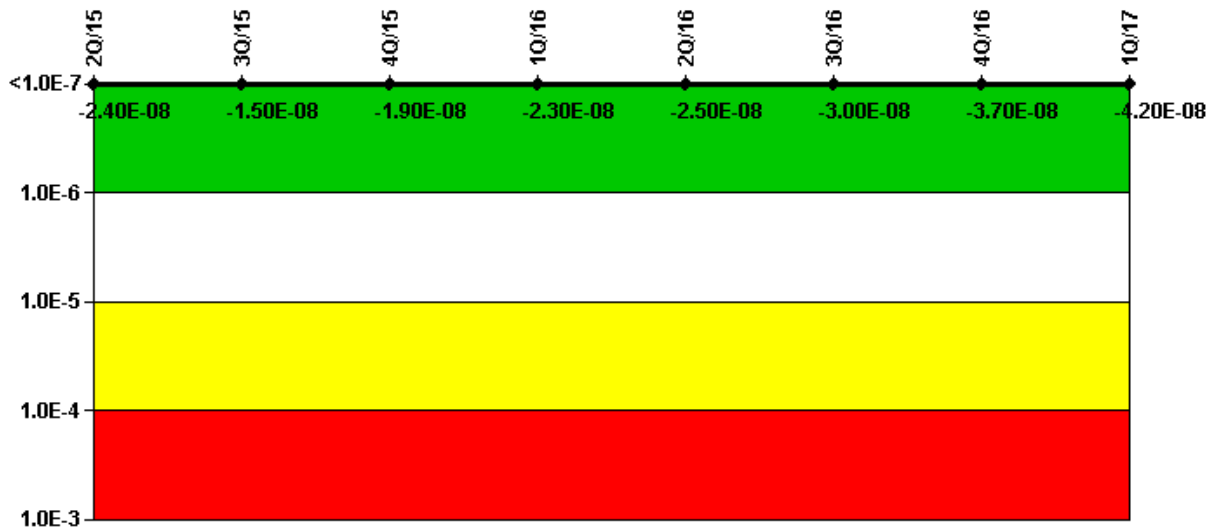
Mitigating Systems Performance Index, Residual Heat Removal System

	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17
UAI (ΔCDF)	-3.45E-08	-2.47E-08	-2.45E-08	-2.26E-08	-2.33E-08	-2.74E-08	-2.77E-08	-2.95E-08
URI (ΔCDF)	-7.13E-08	-7.13E-08	-7.13E-08	-7.13E-08	-7.13E-08	-7.13E-08	-7.13E-08	-7.13E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-1.10E-07	-9.60E-08	-9.60E-08	-9.40E-08	-9.50E-08	-9.90E-08	-9.90E-08	-1.00E-07

▲ TOP

Licensee Comments: none

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

	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17
UAI (ΔCDF)	-9.05E-09	-3.25E-10	-4.59E-09	-8.56E-09	-9.59E-09	-1.44E-08	-2.18E-08	-2.64E-08
URI (ΔCDF)	-1.48E-08	-1.48E-08	-1.48E-08	-1.48E-08	-1.56E-08	-1.56E-08	-1.56E-08	-1.56E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-2.40E-08	-1.50E-08	-1.90E-08	-2.30E-08	-2.50E-08	-3.00E-08	-3.70E-08	-4.20E-08

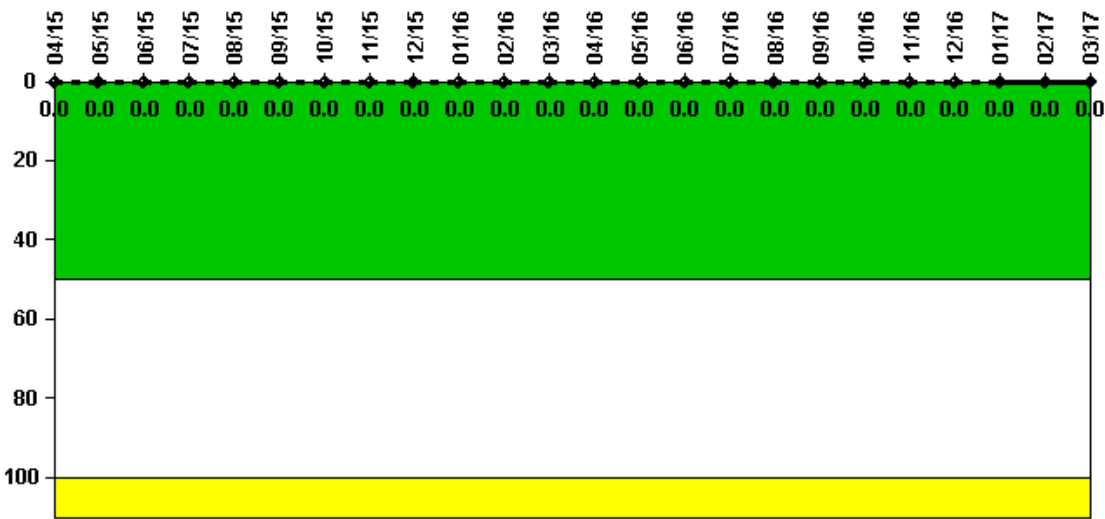
▲ TOP

Licensee Comments:

3Q/15: Changed PRA Parameter(s). The MSPI Basis document (BNP-PSA-069), Revision 13, was approved on 3/24/14 that corrected data for the Service Water (Cooling Water) pump alignments and various valves. This data was not updated within CDE until 8/24/15 due to lack of communication of the change to the MSPI Basis Document. CDE values for Cooling Water were updated back to the approval date of the MSPI Basis Document. No thresholds were crossed due to this change and the greatest delta in calculated unavailability margin due to this change was only 3%.

2Q/15: Changed PRA Parameter(s). The MSPI Basis document (BNP-PSA-069), Revision 13, was approved on 3/24/14 that corrected data for the Service Water (Cooling Water) pump alignments and various valves. This data was not updated within CDE until 8/24/15 due to lack of communication of the change to the MSPI Basis Document. CDE values for Cooling Water were updated back to the approval date of the MSPI Basis Document. No thresholds were crossed due to this change and the greatest delta in calculated unavailability margin due to this change was only 3%.

Reactor Coolant System Activity



Thresholds: White > 50.0 Yellow > 100.0

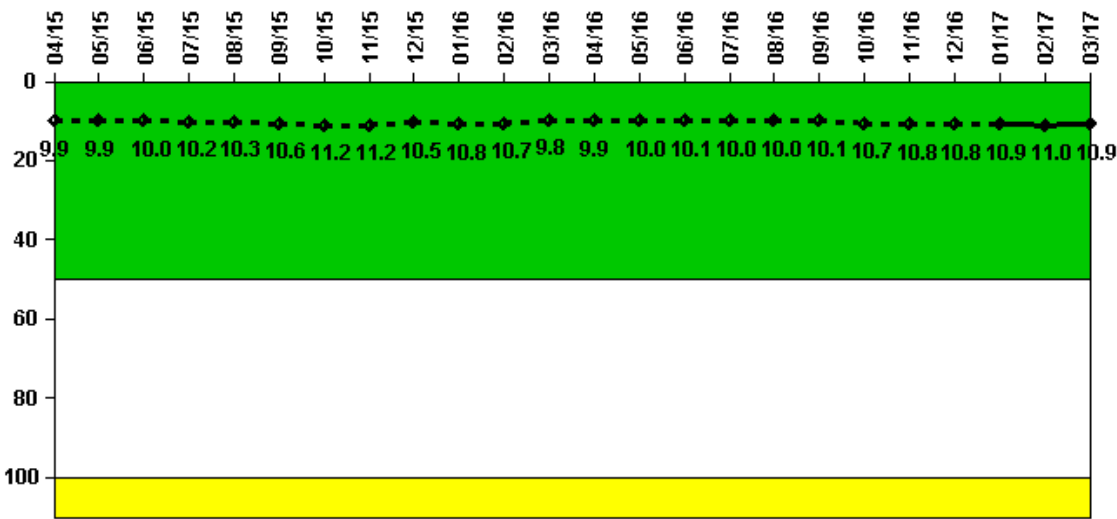
Notes

Reactor Coolant System Activity	4/15	5/15	6/15	7/15	8/15	9/15	10/15	11/15	12/15	1/16	2/16	3/16
Maximum activity	0.000034	0.000046	0.000036	0.000041	0.000035	0.000060	0.000038	0.000038	0.000038	0.000036	0.000036	0.000035
Technical specification limit	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Indicator value	0	0	0	0	0	0	0	0	0	0	0	0
Reactor Coolant System Activity	4/16	5/16	6/16	7/16	8/16	9/16	10/16	11/16	12/16	1/17	2/17	3/17
Maximum activity	0.000033	0.000029	0.000043	0.000031	0.000035	0.000034	0.000029	0.000036	0.000027	0.000026	0.000029	0.000035
Technical specification limit	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Indicator value	0	0	0	0	0	0	0	0	0	0	0	0

▲ TOP

Licensee Comments: none

Reactor Coolant System Leakage



Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Leakage	4/15	5/15	6/15	7/15	8/15	9/15	10/15	11/15	12/15	1/16	2/16	3/16
Maximum leakage	2.485	2.480	2.500	2.540	2.570	2.650	2.800	2.790	2.620	2.690	2.680	2.440
Technical specification limit	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0

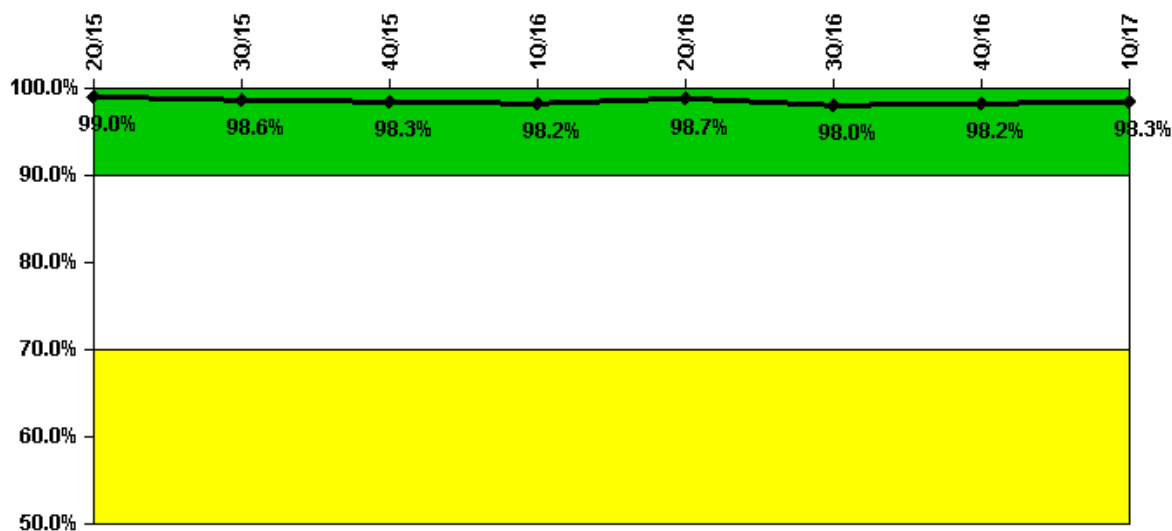
Indicator value	9.9	9.9	10.0	10.2	10.3	10.6	11.2	11.2	10.5	10.8	10.7	9.8
Reactor Coolant System Leakage	4/16	5/16	6/16	7/16	8/16	9/16	10/16	11/16	12/16	1/17	2/17	3/17
Maximum leakage	2.470	2.510	2.520	2.510	2.510	2.520	2.680	2.700	2.710	2.730	2.750	2.730
Technical specification limit	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0

Indicator value	9.9	10.0	10.1	10.0	10.0	10.1	10.7	10.8	10.8	10.9	11.0	10.9
-----------------	-----	------	------	------	------	------	------	------	------	------	------	------

▲ TOP

Licensee Comments: none

Drill/Exercise Performance



Thresholds: White < 90.0% Yellow < 70.0%

Notes

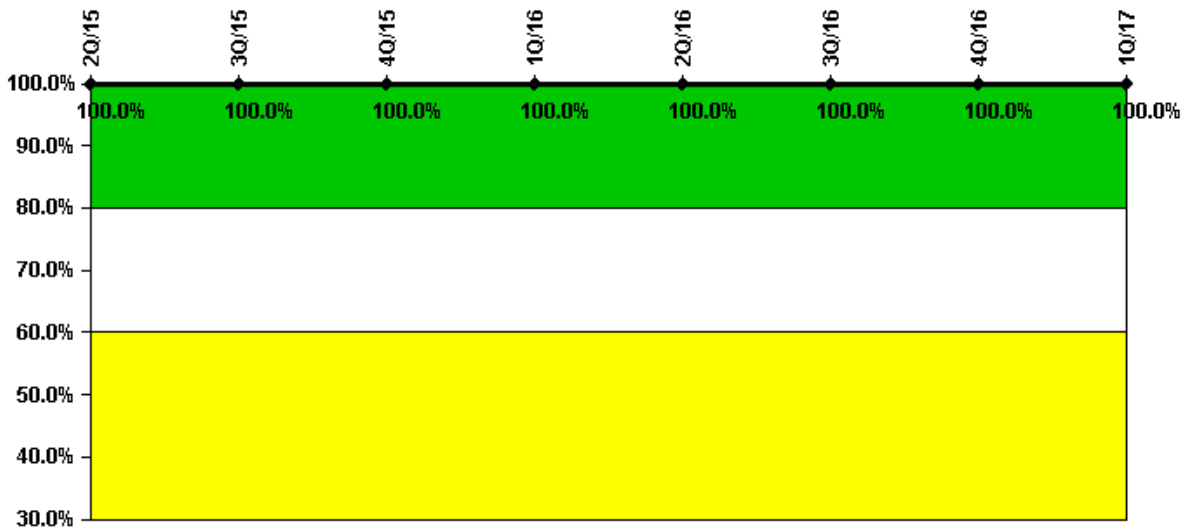
Drill/Exercise Performance	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17
Successful opportunities	21.0	30.0	22.0	8.0	9.0	29.0	35.0	23.0
Total opportunities	22.0	31.0	22.0	8.0	9.0	30.0	35.0	23.0

Indicator value 99.0% 98.6% 98.3% 98.2% 98.7% 98.0% 98.2% 98.3%

▲ TOP

Licensee Comments: none

ERO Drill Participation



Thresholds: White < 80.0% Yellow < 60.0%

Notes

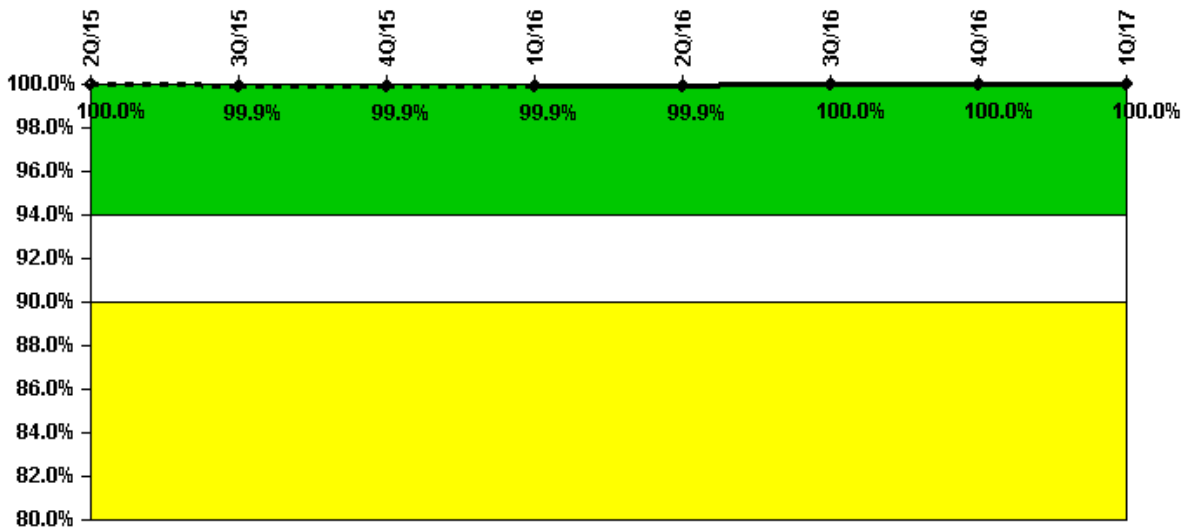
ERO Drill Participation	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17
Participating Key personnel	101.0	106.0	112.0	108.0	102.0	109.0	112.0	102.0
Total Key personnel	101.0	106.0	112.0	108.0	102.0	109.0	112.0	102.0

Indicator value **100.0% 100.0% 100.0% 100.0% 100.0% 100.0% 100.0% 100.0%**

▲ TOP

Licensee Comments: none

Alert & Notification System



Thresholds: White < 94.0% Yellow < 90.0%

Notes

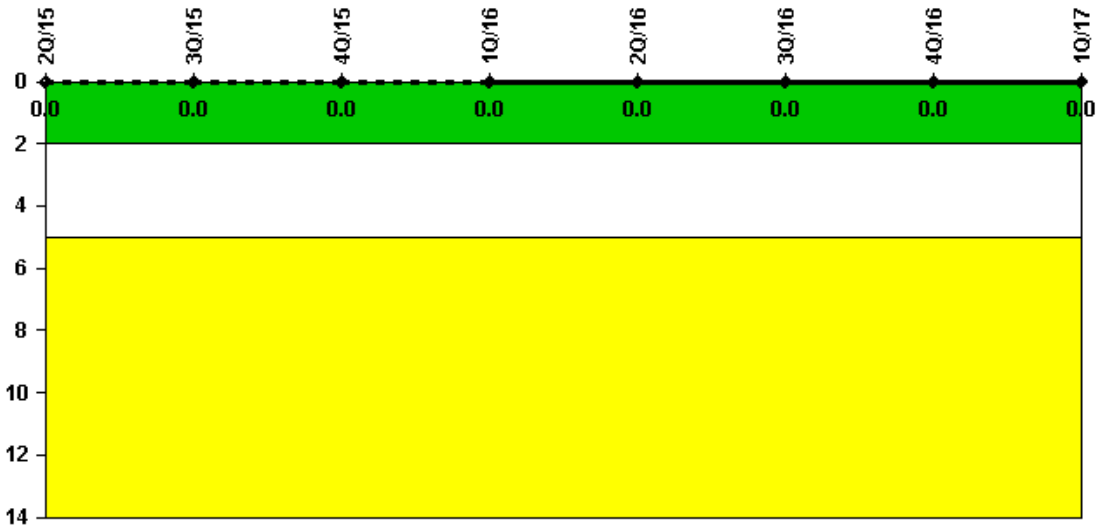
Alert & Notification System	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17
Successful siren-tests	532	530	570	532	532	532	532	532
Total sirens-tests	532	532	570	532	532	532	532	532

Indicator value **100.0% 99.9% 99.9% 99.9% 99.9% 100.0% 100.0% 100.0%**

▲ TOP

Licensee Comments: none

Occupational Exposure Control Effectiveness



Thresholds: White > 2.0 Yellow > 5.0

Notes

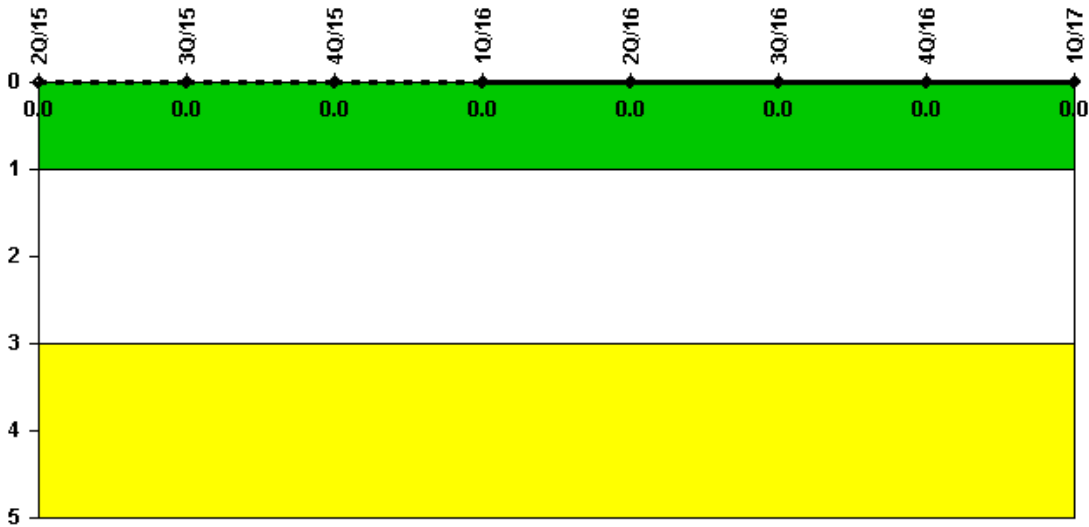
Occupational Exposure Control Effectiveness 2Q/15 3Q/15 4Q/15 1Q/16 2Q/16 3Q/16 4Q/16 1Q/17

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

RETS/ODCM Radiological Effluent



Thresholds: White > 1.0 Yellow > 3.0

Notes

RETS/ODCM Radiological Effluent 2Q/15 3Q/15 4Q/15 1Q/16 2Q/16 3Q/16 4Q/16 1Q/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: May 5, 2017

Page Last Reviewed/Updated Wednesday, June 07, 2017