

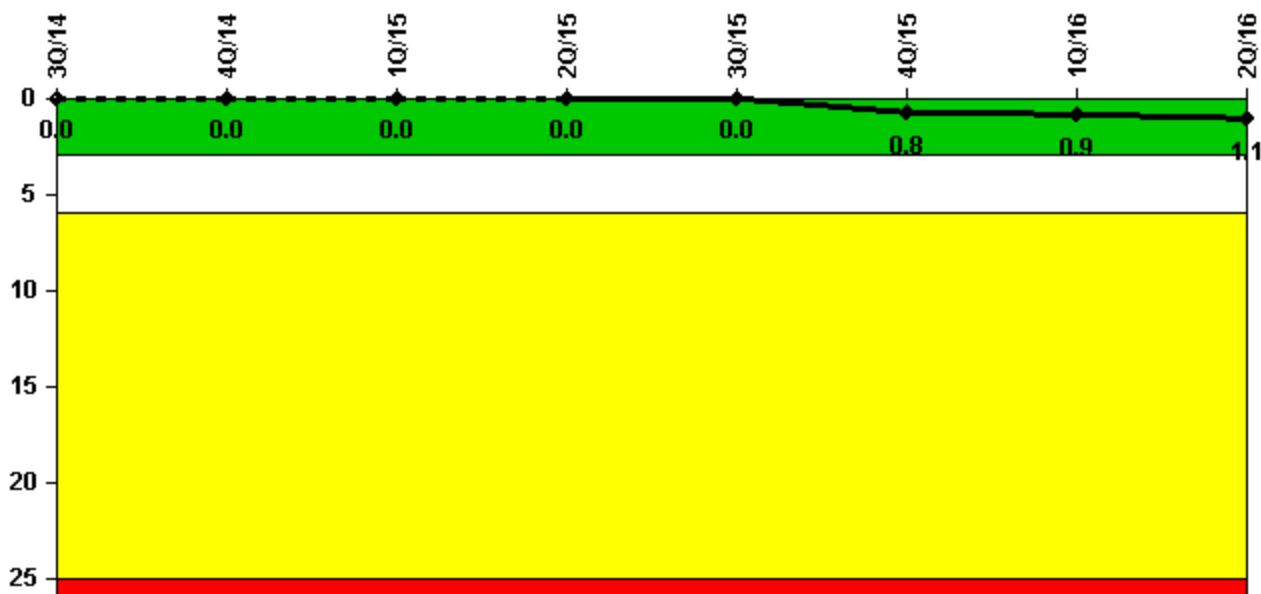
Indian Point 2

2Q/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

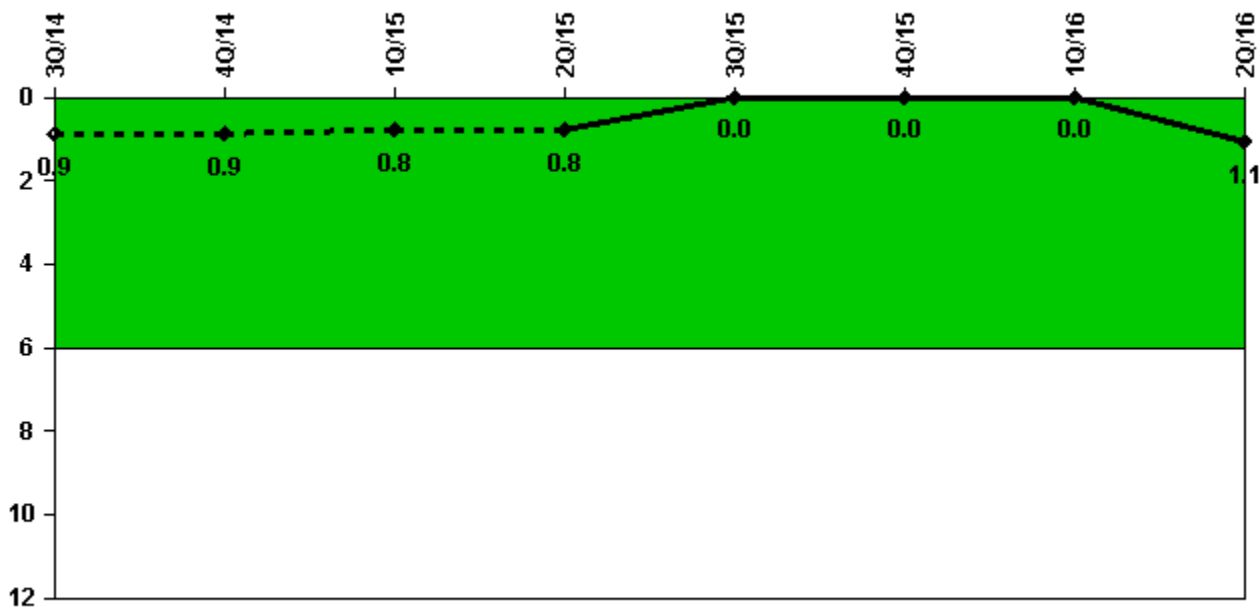
Notes

Unplanned Scrams per 7000 Critical Hrs	3Q/14	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16
Unplanned scrams	0	0	0	0	0	1.0	0	0
Critical hours	2208.0	2209.0	2159.0	2184.0	2208.0	2154.3	1584.0	319.8
Indicator value	0	0	0	0	0	0.8	0.9	1.1

Licensee Comments:

4Q/15: On December 5, 2015, a manual reactor trip was initiated due to indications of multiple dropped control rods. Initiating event was a fault of Motor Control Center (MCC) 24-2H that caused the upstream supply breaker to open to clear the fault resulting in a loss of power to the operating backup power supply in Rod Control Cabinet 2BD with a degraded primary power supply. The loss of power to the Control Rod System caused the Control Rod stationary grippers to de-energize and rods inserted into the reactor core.

Unplanned Power Changes per 7000 Critical Hrs



Thresholds: White > 6.0

Notes

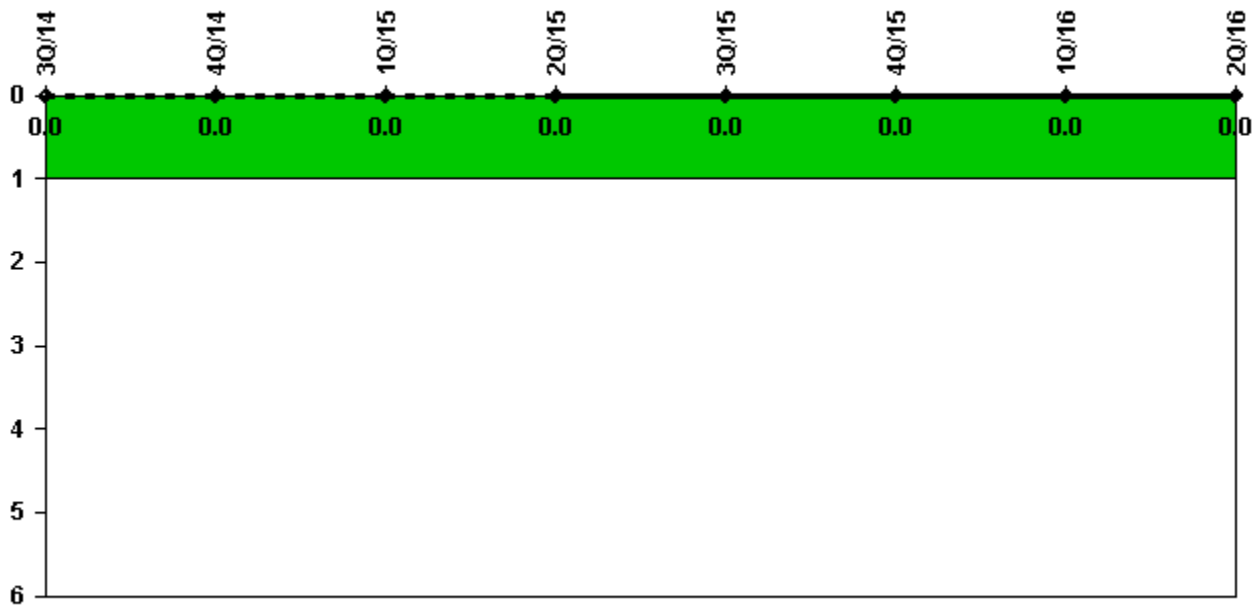
Unplanned Power Changes per 7000 Critical Hrs	3Q/14	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16
Unplanned power changes	1.0	0	0	0	0	0	0	1.0
Critical hours	2208.0	2209.0	2159.0	2184.0	2208.0	2154.3	1584.0	319.8
Indicator value	0.9	0.9	0.8	0.8	0	0	0	1.1

Licensee Comments:

2Q/16: On June 24, 2016, actions were initiated to commence reactor shutdown to comply the Technical Specification LCO 3.7.7 in order to repair a leaking weld on the 20 inch Service Water pipe to nozzle weld on the 21 Component Cooling Water Heat Exchanger. Entered Mode 3 at 07:59 hours, after normal plant shutdown and reactor trip per normal shutdown procedure 2-POP-3.1 (Plant Shutdown From 45% Power).

3Q/14: Unplanned power change on September 18, 2014, due to Technical Specification required power change as a result of misaligned control rod/shutdown bank B during testing. Power reduced to approximately 70%.

Unplanned Scrams with Complications



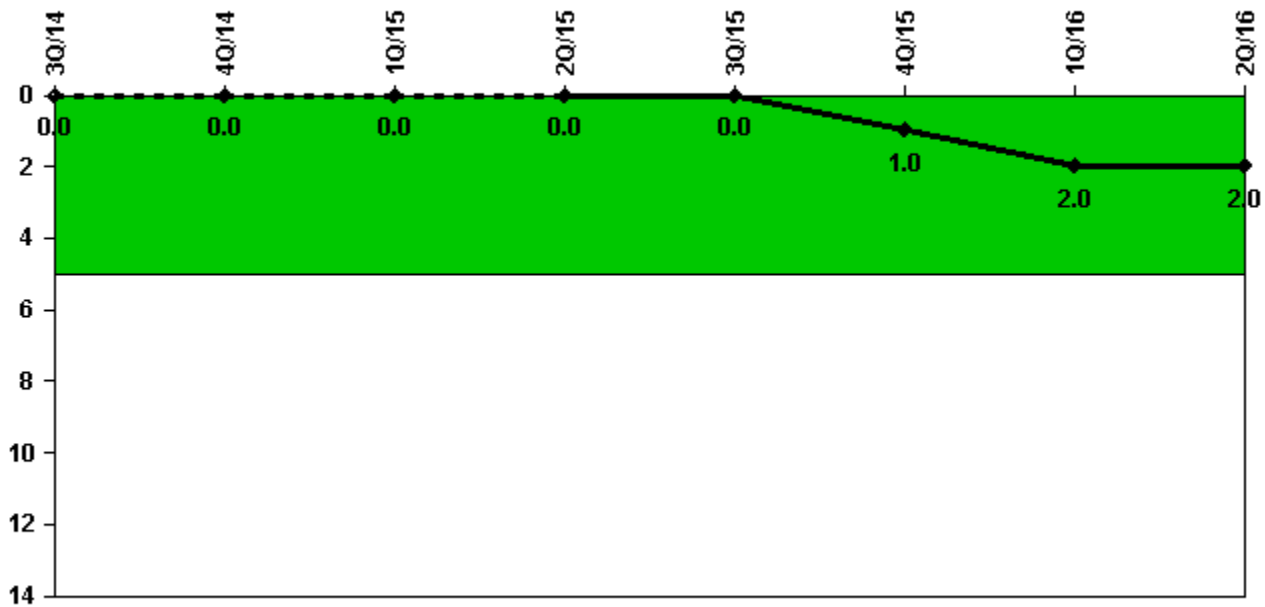
Thresholds: White > 1.0

Notes

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

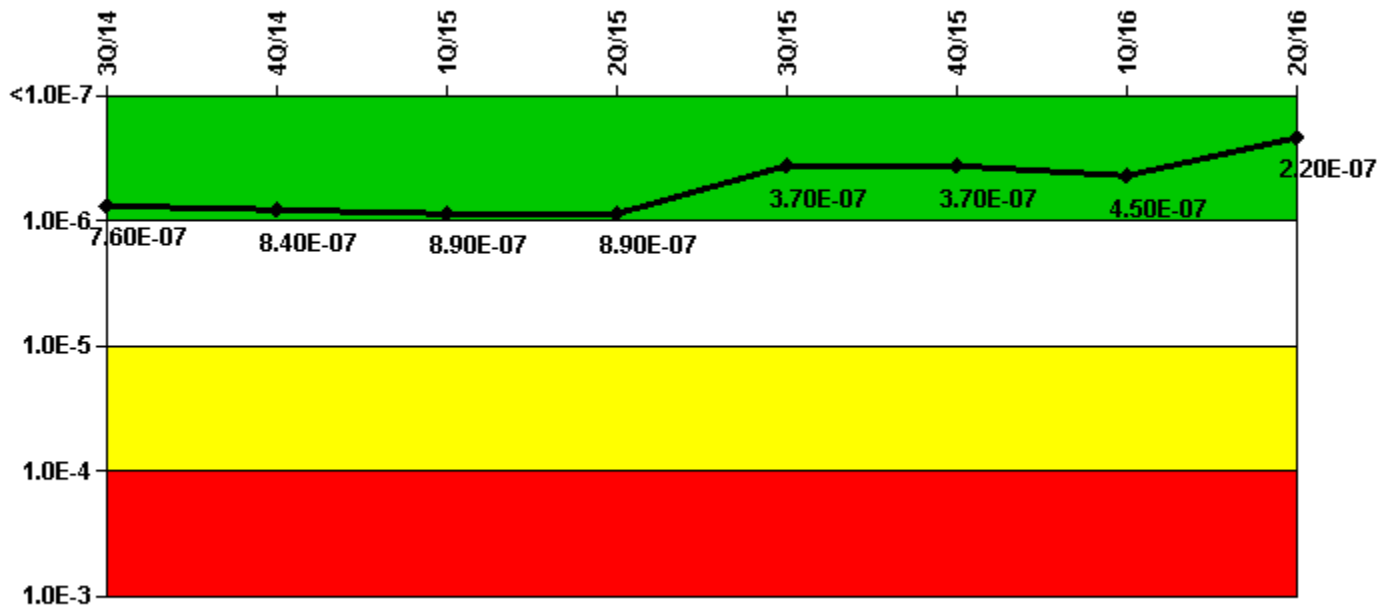
Safety System Functional Failures (PWR)	3Q/14	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16
Safety System Functional Failures	0	0	0	0	0	1	1	0
Indicator value	0	0	0	0	0	1	2	2

Licensee Comments:

1Q/16: LER-2015-004 reported on February 18, 2016, a SSFF due to an inoperable containment caused by a flawed SW pipe elbow on the 21 FCU motor cooler return pipe.

4Q/15: LER-2015-002 reported a SSFF on October 19, 2015, due to fuses for the Residual Heat Removal Heat Exchanger outlet valves that would not remain operable under degraded voltage conditions.

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/14	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16
UAI (ΔCDF)	3.65E-07	4.23E-07	3.76E-07	3.77E-07	8.74E-08	8.64E-08	1.02E-07	8.06E-08
URI (ΔCDF)	3.93E-07	4.15E-07	5.12E-07	5.14E-07	2.83E-07	2.83E-07	3.53E-07	1.36E-07
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	7.60E-07	8.40E-07	8.90E-07	8.90E-07	3.70E-07	3.70E-07	4.50E-07	2.20E-07

Licensee Comments:

1Q/16: Load failure of 23 EDG recorded on 3/7/16 report # 321856 due to a degraded automatic voltage regulator.

3Q/15: Changed PRA Parameter(s). 3Q15 report includes changes to the Unit 2 MSPI PSA parameters as a result of a PRA model interim update approved on May 6, 2015 from the EDG MSPI Margin Improvement Plan. Changes made were to Monitored Component PRA information to be effective July 1, 2015. Also included were changes in the plant specific EAC planned baseline unavailability in MSPI.

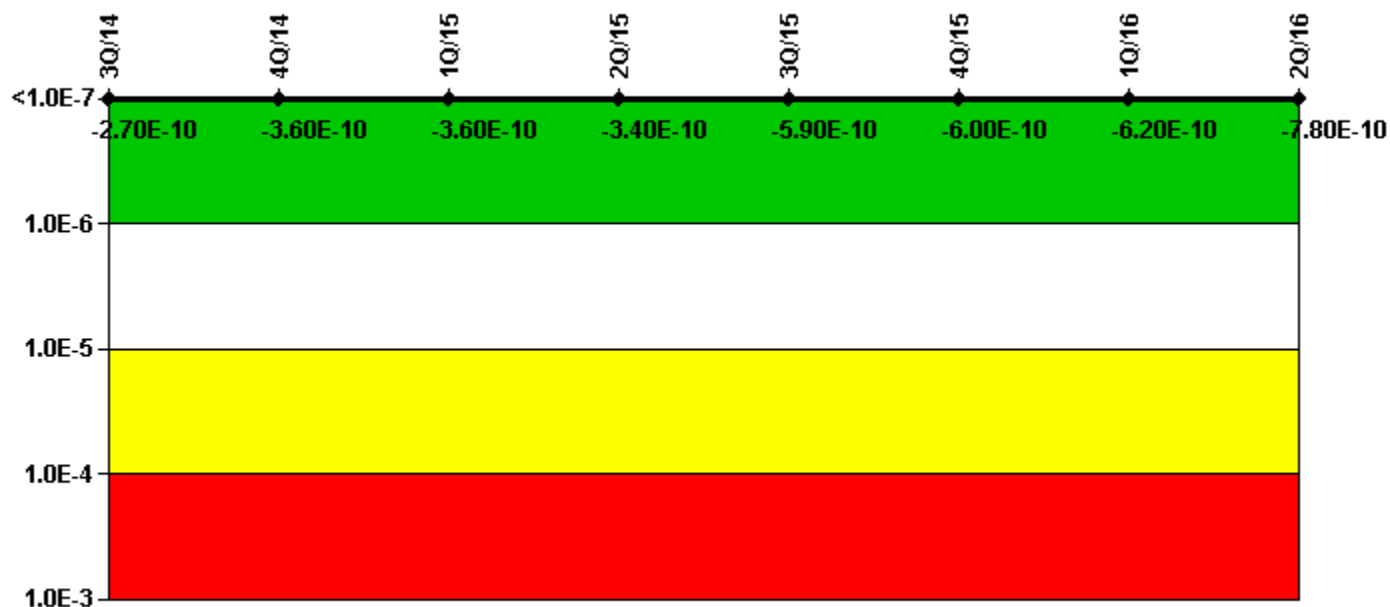
2Q/15: Risk Cap Invoked.

1Q/15: Risk Cap Invoked.

4Q/14: Risk Cap Invoked.

3Q/14: Risk Cap Invoked. On September 12, 2014, a lube oil leak was discovered on the vitaulic coupling of the 23 EDG during post maintenance testing. EDG secured. MSPI Run Failure.

Mitigating Systems Performance Index, High Pressure Injection System



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

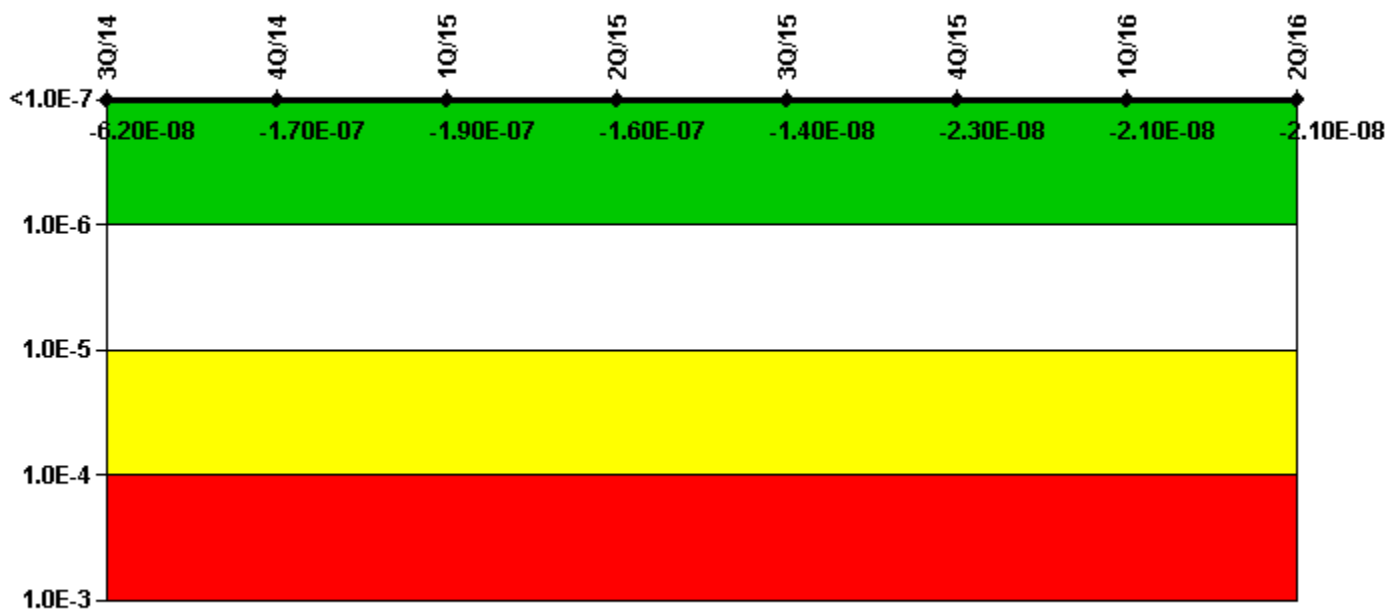
Notes

Mitigating Systems Performance Index, High Pressure Injection System	3Q/14	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16
UAI (Δ CDF)	5.05E-11	-3.50E-11	-3.95E-11	-2.54E-11	-1.41E-10	-1.51E-10	-1.46E-10	-3.14E-10
URI (Δ CDF)	-3.19E-10	-3.27E-10	-3.18E-10	-3.11E-10	-4.51E-10	-4.53E-10	-4.75E-10	-4.69E-10
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-2.70E-10	-3.60E-10	-3.60E-10	-3.40E-10	-5.90E-10	-6.00E-10	-6.20E-10	-7.80E-10

Licensee Comments:

3Q/15: Changed PRA Parameter(s). 3Q15 report includes changes to the Unit 2 MSPI PSA parameters as a result of a PRA model interim update approved on May 6, 2015 from the EDG MSPI Margin Improvement Plan. Changes made were to Monitored Component PRA information to be effective July 1, 2015. Also included were changes in the plant specific EAC planned baseline unavailability in MSPI.

Mitigating Systems Performance Index, Heat Removal System



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

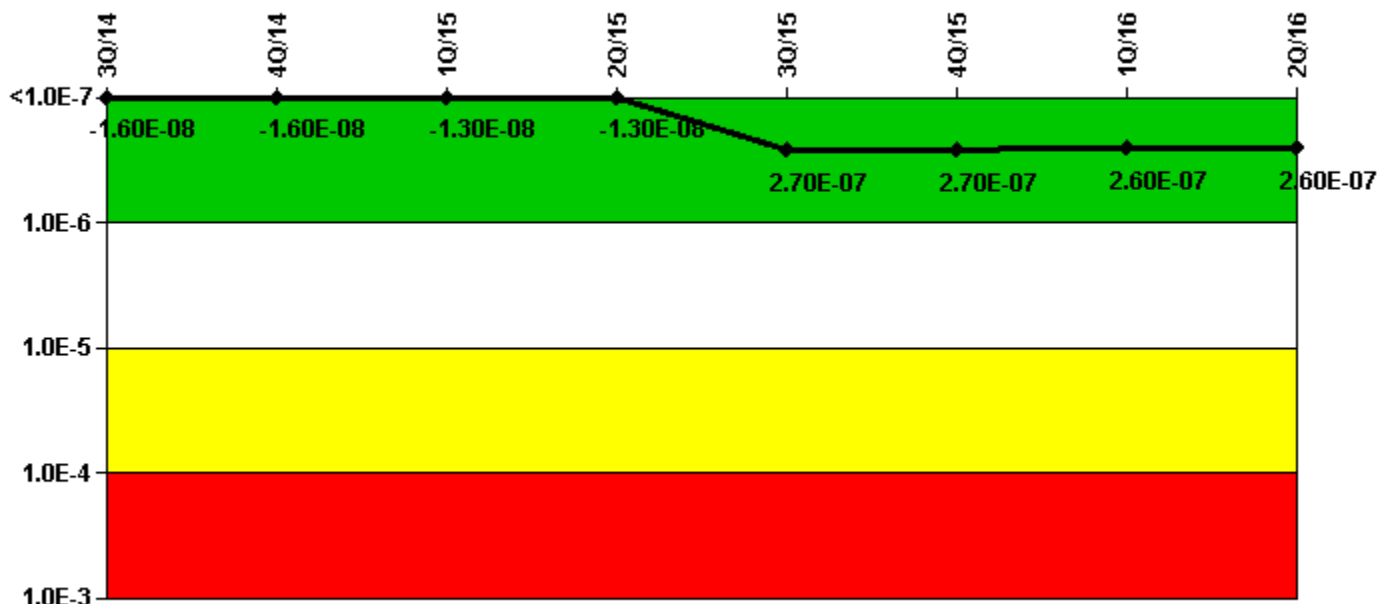
Notes

Mitigating Systems Performance Index, Heat Removal System	3Q/14	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16
UAI (Δ CDF)	3.81E-09	2.10E-08	5.35E-10	1.06E-08	1.40E-08	6.84E-09	1.05E-08	1.24E-08
URI (Δ CDF)	-6.59E-08	-1.93E-07	-1.86E-07	-1.71E-07	-2.83E-08	-2.94E-08	-3.18E-08	-3.33E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-6.20E-08	-1.70E-07	-1.90E-07	-1.60E-07	-1.40E-08	-2.30E-08	-2.10E-08	-2.10E-08

Licensee Comments:

3Q/15: Changed PRA Parameter(s). 3Q15 report includes changes to the Unit 2 MSPI PSA parameters as a result of a PRA model interim update approved on May 6, 2015 from the EDG MSPI Margin Improvement Plan. Changes made were to Monitored Component PRA information to be effective July 1, 2015. Also included were changes in the plant specific EAC planned baseline unavailability in MSPI.

Mitigating Systems Performance Index, Residual Heat Removal System



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

Notes

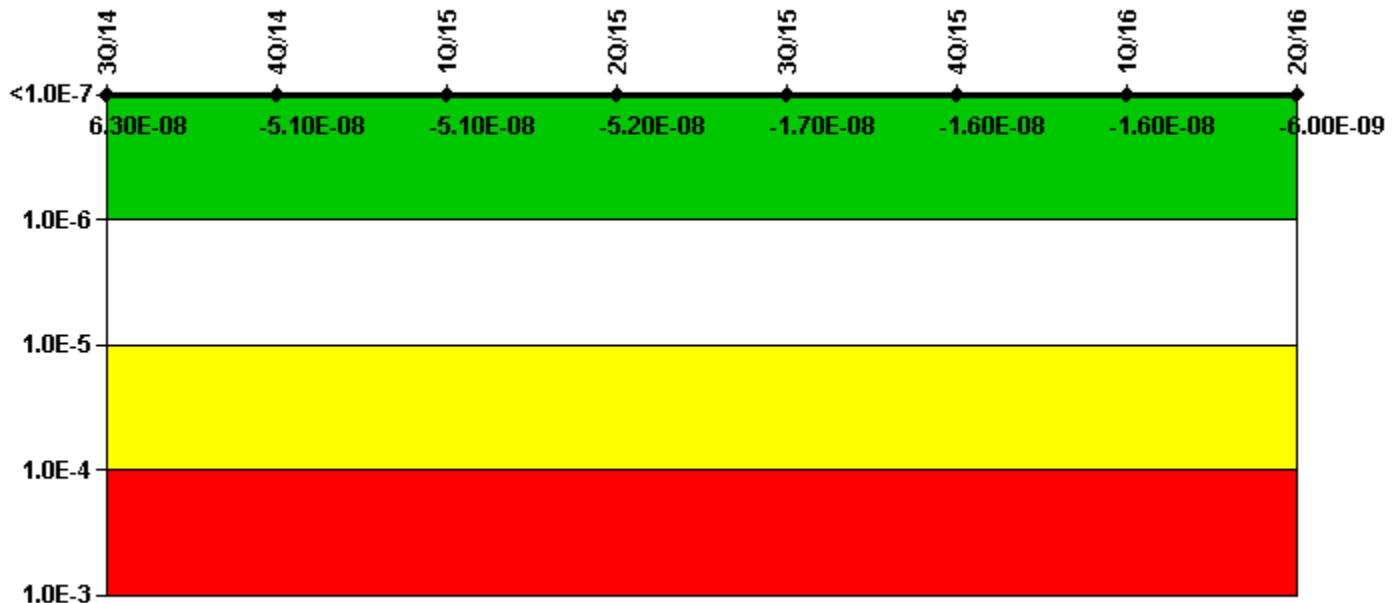
Mitigating Systems Performance Index, Residual Heat Removal System	3Q/14	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16
UAI (ΔCDF)	-3.97E-09	-4.19E-09	-4.35E-09	-4.36E-09	-3.99E-09	-4.26E-09	-4.13E-09	-8.89E-09
URI (ΔCDF)	-1.17E-08	-1.17E-08	-8.35E-09	-8.26E-09	2.70E-07	2.70E-07	2.67E-07	2.65E-07
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-1.60E-08	-1.60E-08	-1.30E-08	-1.30E-08	2.70E-07	2.70E-07	2.60E-07	2.60E-07

Licensee Comments:

3Q/15: The planned unavailability hours changed for the 21 and 22 RHR pump (0.0 hrs to 0.8 hrs) to reflect the final OE that the valves were inoperable as a result of the response to a CBDI inspection question and a final determination that the normally closed 21 and 22 RHR Pumps Heat Exchanger outlet valves (MOV-746 & MOV-747) would not adequately operate under degraded voltage conditions as a result of inadequate fuses. This resulted in both trains of RHR being considered inoperable. LER-2015-002 reported this event as a safety system functional failure. On December 29, 2015, ICES input data for the RHR event was determined to be complete which included a Maintenance Rule functional failure and MSPI safety system functional failure of both RHR Hx outlet valves. The ICES report was completed in ICES and initiated for review by INPO December 29, 2015. This action caused MSPI to be recalculated.

3Q/15: Changed PRA Parameter(s). 3Q15 report includes changes to the Unit 2 MSPI PSA parameters as a result of a PRA model interim update approved on May 6, 2015 from the EDG MSPI Margin Improvement Plan. Changes made were to Monitored Component PRA information to be effective July 1, 2015. Also included were changes in the plant specific EAC planned baseline unavailability in MSPI.

Mitigating Systems Performance Index, Cooling Water Systems



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

Notes

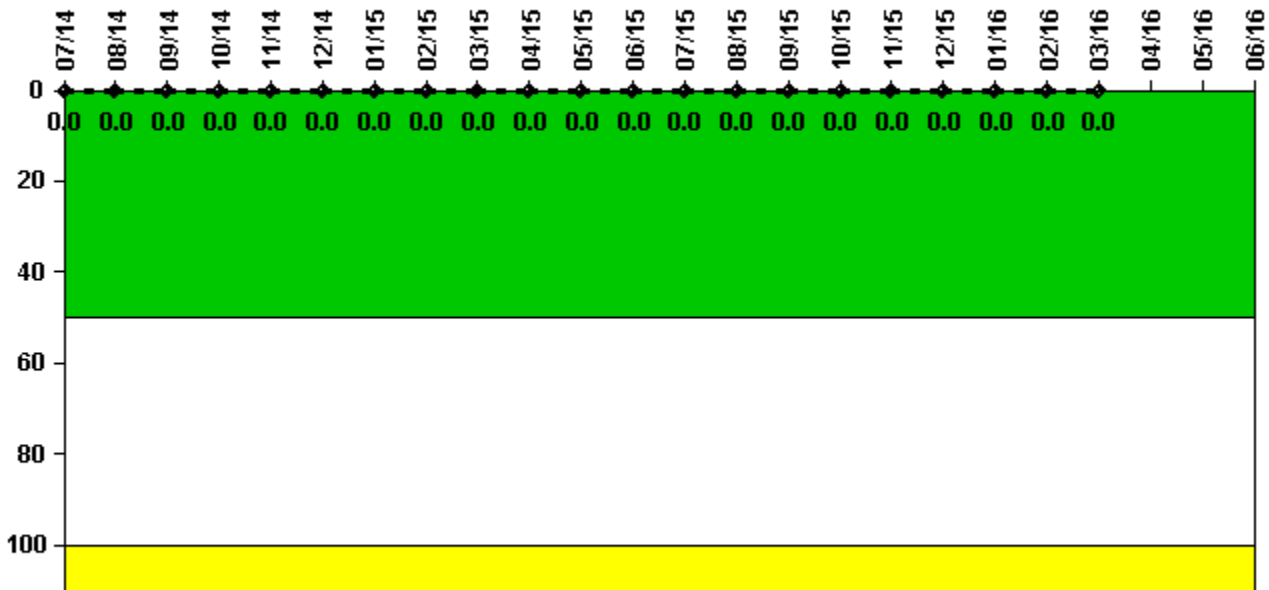
Mitigating Systems Performance Index, Cooling Water Systems	3Q/14	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16
UAI (Δ CDF)	-3.61E-09	-4.38E-09	-4.67E-09	-5.17E-09	3.42E-09	3.50E-09	3.67E-09	1.43E-08
URI (Δ CDF)	6.66E-08	-4.68E-08	-4.64E-08	-4.64E-08	-2.07E-08	-1.95E-08	-2.02E-08	-2.03E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	6.30E-08	-5.10E-08	-5.10E-08	-5.20E-08	-1.70E-08	-1.60E-08	-1.60E-08	-6.00E-09

Licensee Comments:

3Q/15: The September 2015 CCWP demands and run hours were revised. 21 CCP demands changed from 0 to 1, run hours changed from 0.0 to 0.58; 22 CCP demands changed from 0 to 1, run hours changed from 720.0 to 719.48; 23 CCP demands changed from 0 to 1; run hours changed from 720.0 to 719.47.

3Q/15: Changed PRA Parameter(s). 3Q15 report includes changes to the Unit 2 MSPI PSA parameters as a result of a PRA model interim update approved on May 6, 2015 from the EDG MSPI Margin Improvement Plan. Changes were made to Monitored Component PRA information to be effective July 1, 2015. Also included were changes in the plant specific EAC planned baseline unavailability in MSPI.

Reactor Coolant System Activity



Thresholds: White > 50.0 Yellow > 100.0

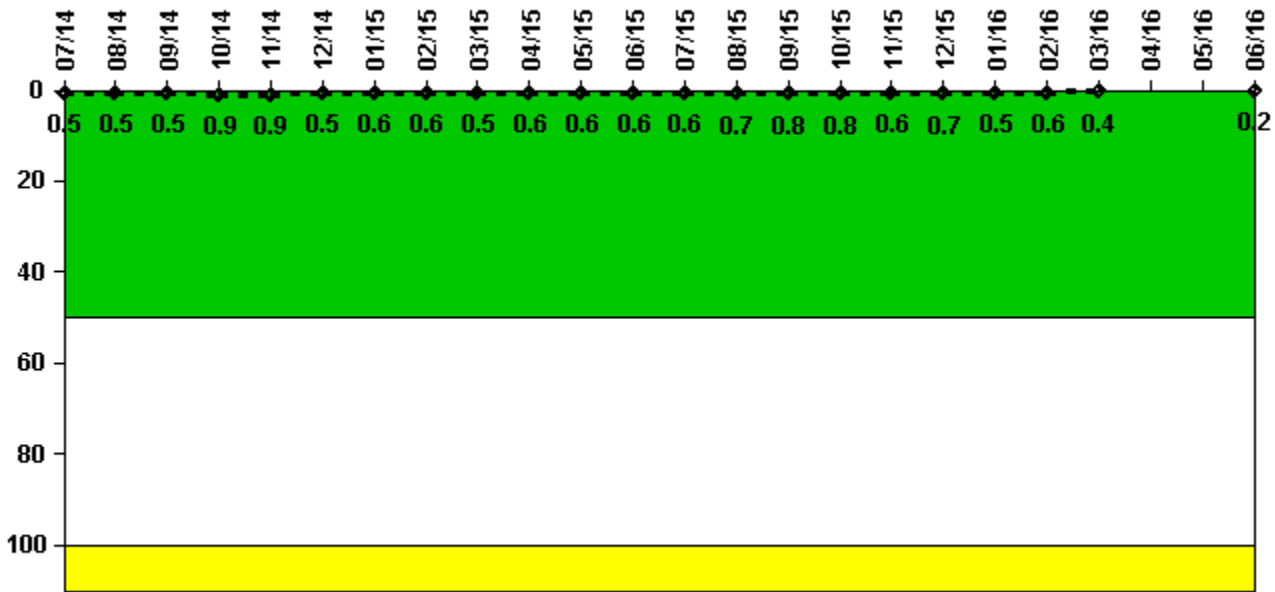
Notes

Reactor Coolant System Activity	7/14	8/14	9/14	10/14	11/14	12/14	1/15	2/15	3/15	4/15	5/15	6/15
Maximum activity	0.000153	0.000141	0.000148	0.000158	0.000170	0.000175	0.000175	0.000170	0.000195	0.000182	0.000179	0.000190
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	7/15	8/15	9/15	10/15	11/15	12/15	1/16	2/16	3/16	4/16	5/16	6/16
Maximum activity	0.000206	0.000202	0.000203	0.000216	0.000260	0.000223	0.000271	0.000245	0.000150	N/A	N/A	N/A
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	N/A	N/A	N/A

Licensee Comments:

6/16: Plant started refueling outage 3/7/16. No RCS coolant activity calculated.

Reactor Coolant System Leakage



Thresholds: White > 50.0 Yellow > 100.0

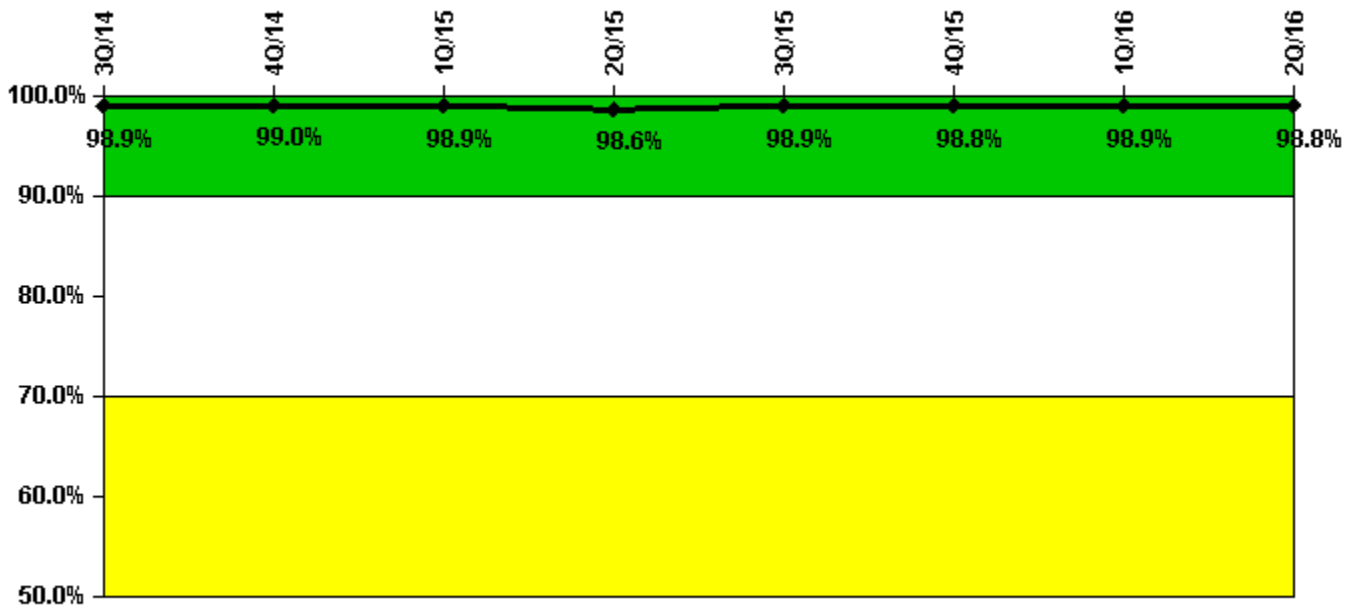
Notes

Reactor Coolant System Leakage	7/14	8/14	9/14	10/14	11/14	12/14	1/15	2/15	3/15	4/15	5/15	6/15
Maximum leakage	0.050	0.050	0.050	0.090	0.090	0.053	0.060	0.060	0.050	0.060	0.060	0.060
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	0.5	0.9	0.9	0.5	0.6	0.6	0.5	0.6	0.6	0.6
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	0.060	0.070	0.080	0.080	0.060	0.070	0.050	0.060	0.040	N/A	N/A	0.020
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	0.7	0.8	0.8	0.6	0.7	0.5	0.6	0.4	N/A	N/A	0.2

Licensee Comments:

6/16: Plant started refueling outage which was extended due to degraded RV baffle-former bolts. Unit startup was 6/16/16. No RCS Leal Rate was determined during outage due to plant in outage.

Drill/Exercise Performance



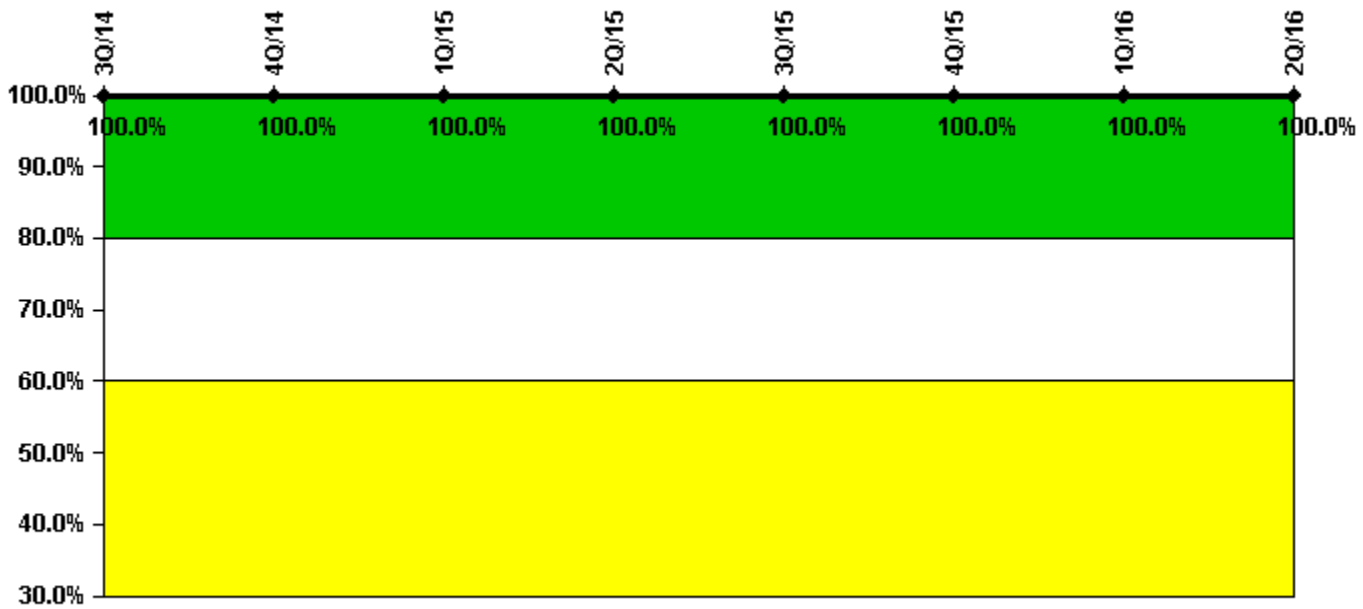
Thresholds: White < 90.0% Yellow < 70.0%

Notes

Drill/Exercise Performance	3Q/14	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16
Successful opportunities	200.0	109.0	20.0	71.0	146.0	28.0	26.0	62.0
Total opportunities	203.0	109.0	21.0	72.0	147.0	28.0	26.0	64.0
Indicator value	98.9%	99.0%	98.9%	98.6%	98.9%	98.8%	98.9%	98.8%

Licensee Comments: none

ERO Drill Participation



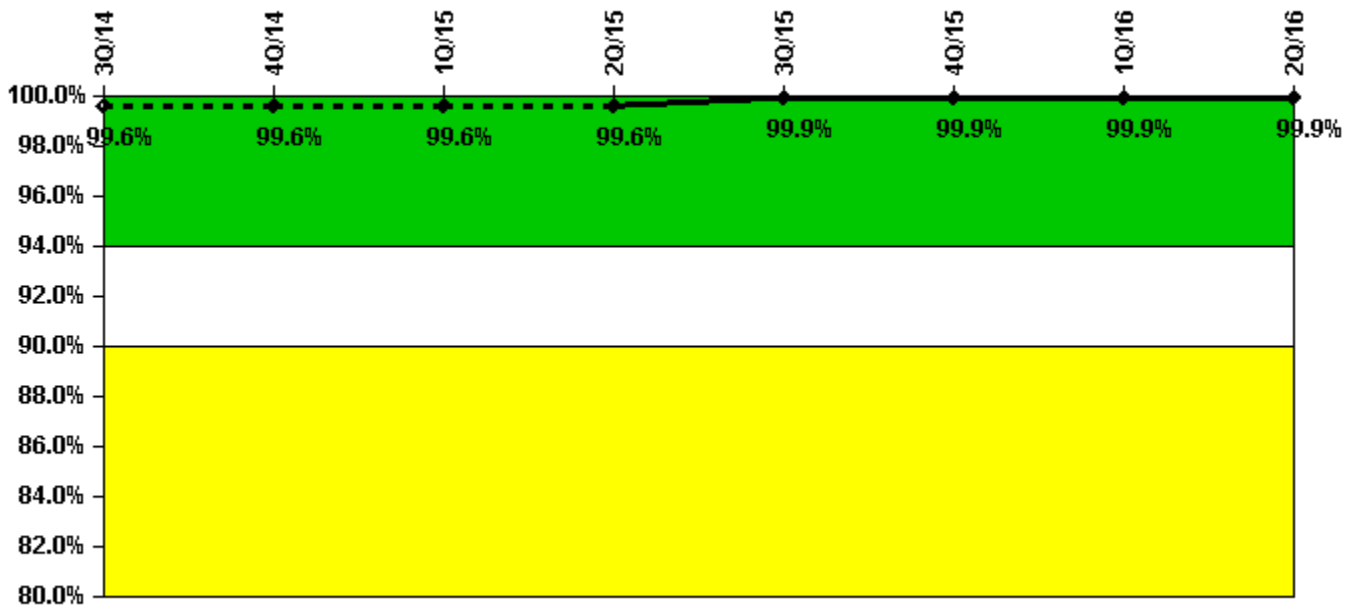
Thresholds: White < 80.0% Yellow < 60.0%

Notes

ERO Drill Participation	3Q/14	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16
Participating Key personnel	100.0	106.0	104.0	104.0	105.0	103.0	103.0	101.0
Total Key personnel	100.0	106.0	104.0	104.0	105.0	103.0	103.0	101.0
Indicator value	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Licensee Comments: none

Alert & Notification System



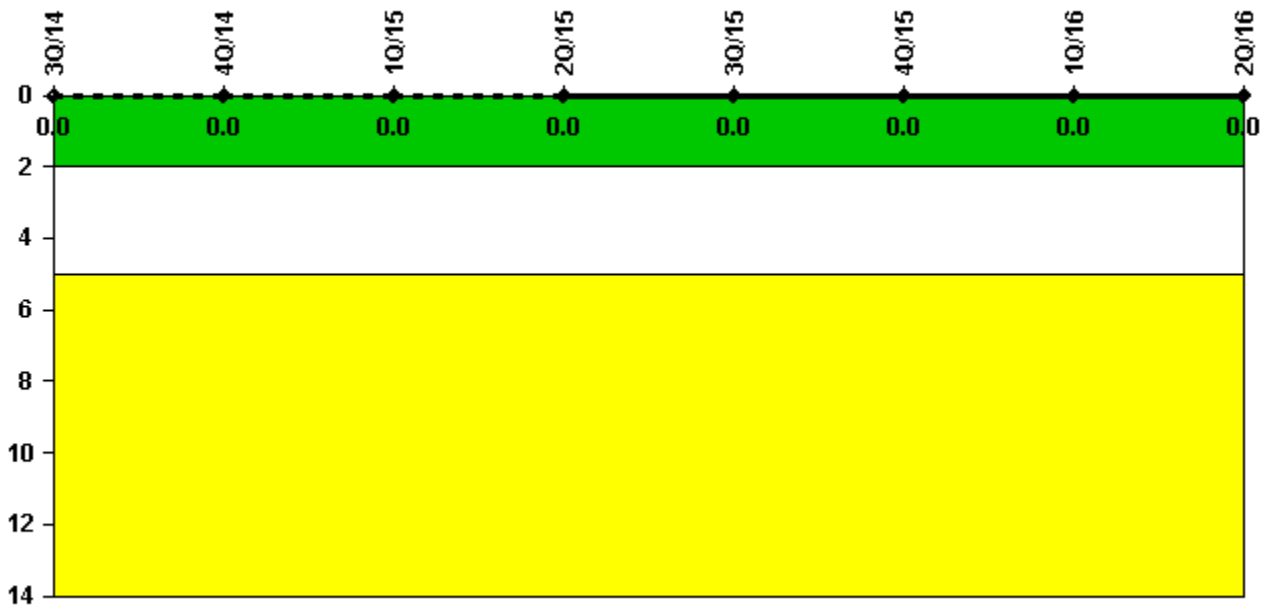
Thresholds: White < 94.0% Yellow < 90.0%

Notes

Alert & Notification System	3Q/14	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16
Successful siren-tests	1110	1104	1135	917	1105	1046	1188	1050
Total sirens-tests	1126	1104	1135	917	1109	1046	1188	1050
Indicator value	99.6%	99.6%	99.6%	99.6%	99.9%	99.9%	99.9%	99.9%

Licensee Comments: none

Occupational Exposure Control Effectiveness



Thresholds: White > 2.0 Yellow > 5.0

Notes

Occupational Exposure Control Effectiveness	3Q/14	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/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	3Q/14	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/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: July 25, 2016