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Indian Point 3 – Quarterly Performance Indicators

3Q/2017 Performance Indicators

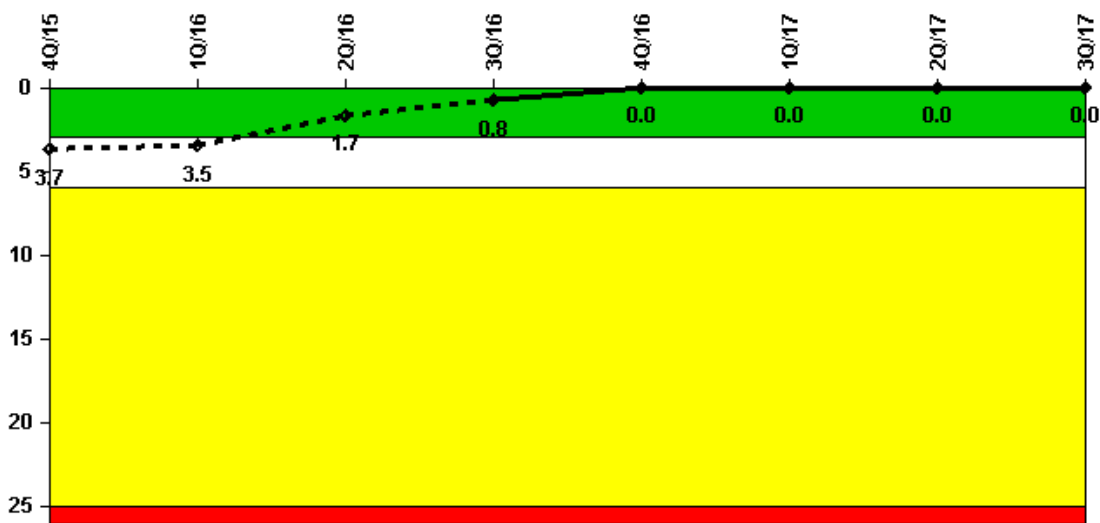
The solid trend line represents the current reporting period.

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 \(MS05\)](#)
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- [Reactor Coolant System Activity \(BI01\)](#)
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- [Emergency Response Organization Drill Participation \(EP02\)](#)
- [Alert and Notification System Reliability \(EP03\)](#)
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- [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	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17
Unplanned scrams	1.0	0	0	0	0	0	0	0
Critical hours	2157.5	2183.0	2184.0	2208.0	2209.0	1703.0	846.5	2208.0

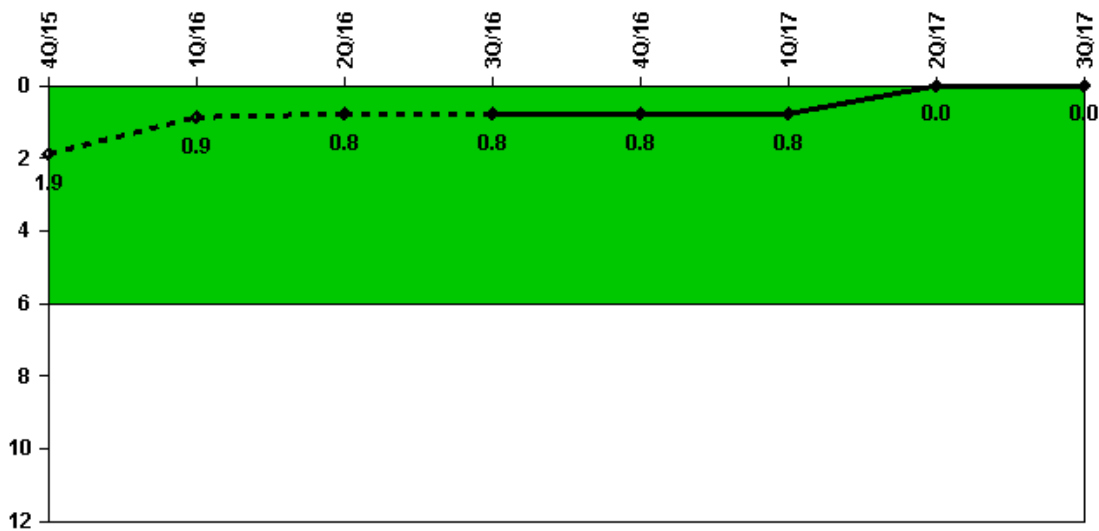
Indicator value	3.7	3.5	1.7	0.8	0	0	0	0
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Licensee Comments:

4Q/15: PI exceeded Green threshold due to a reactor trip on December 14, 2015, as a result of a Main Generator protective trip (Primary Lockout Relay 86P) due to a 345 kV grid disturbance. This trip is the fourth reactor trip (RT) in 4 quarters. Prior RTs include RT May 9, due to failure of the 31 Main Transformer, RT June 15, due to a 345 kV switchyard breaker failure, manual RT July 8, due to decreasing SG levels caused by main feedwater (FW) pump low suction pressure as a result of a mis-wired circuit board for the FW pump speed control system.

Unplanned Power Changes per 7000 Critical Hrs



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	1.0	0	0	0	0	0
Critical hours	2157.5	2183.0	2184.0	2208.0	2209.0	1703.0	846.5	2208.0

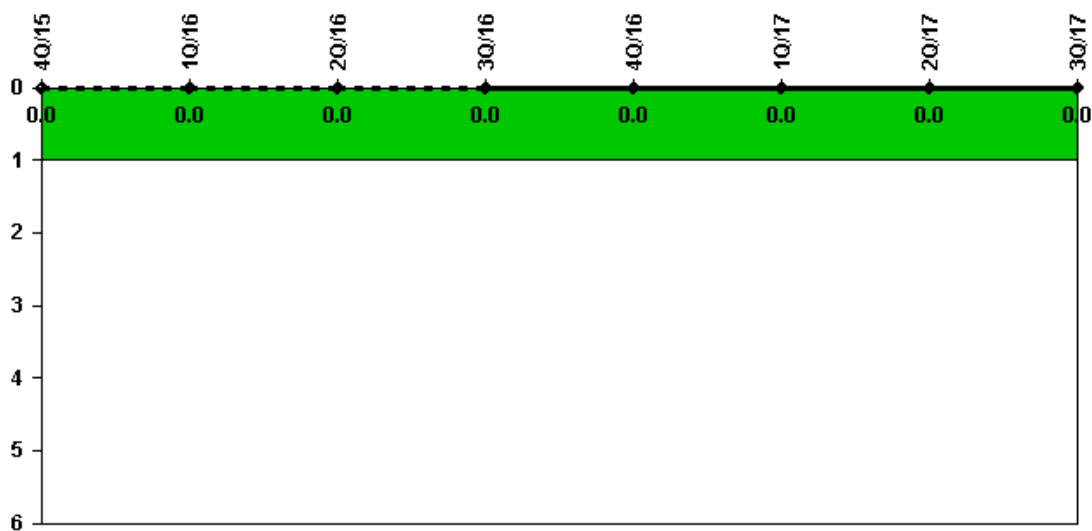
Indicator value	1.9	0.9	0.8	0.8	0.8	0.8	0	0
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Licensee Comments:

2Q/16: On April 26, 2016, the unit reduced power to 48% reactor power to mitigate the failing of the Heater Drain Tank level controllers.

Unplanned Scrams with Complications



Thresholds: White > 1.0

Notes

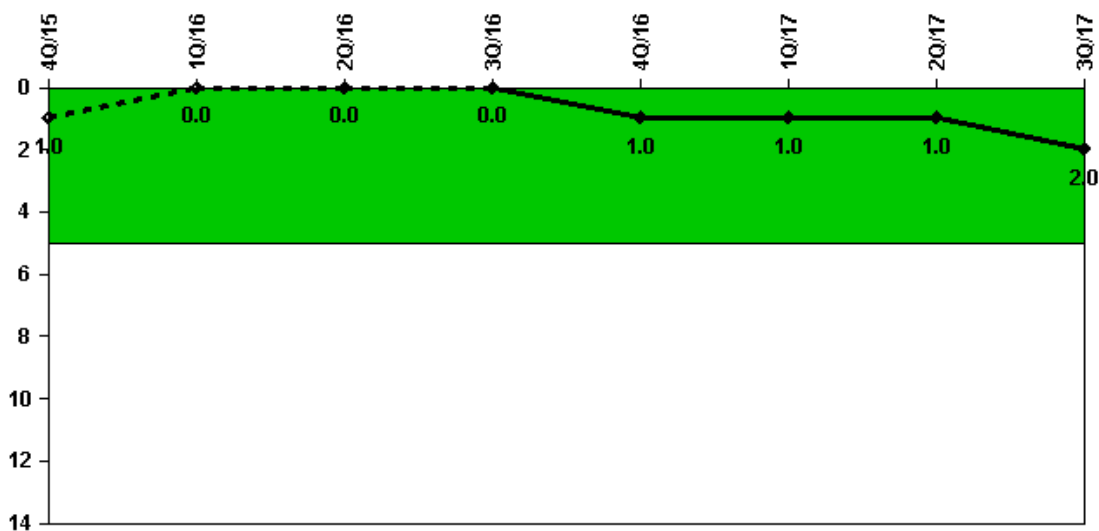
Unplanned Scrams with Complications 4Q/15 1Q/16 2Q/16 3Q/16 4Q/16 1Q/17 2Q/17 3Q/17
 Scrums with complications 0 0 0 0 0 0 0 0

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 1 0 0 1

Indicator value **1 0 0 0 1 1 1 2**

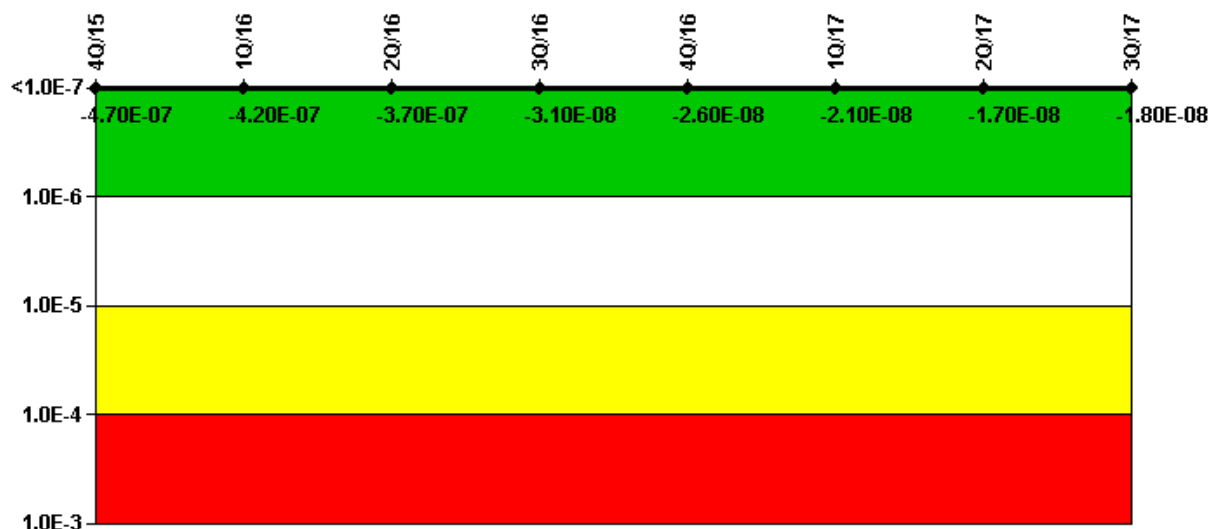
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Licensee Comments:

3Q/17: LER 2017-001-00 reported an SSFF on July 13, 2017.

4Q/16: LER-2016-001 reported on December 21, 2016, a SSFF due to an inoperable containment caused by a flaw in the 31 fan cooler unit service water return coil line affecting containment integrity.

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)	3.87E-07	3.33E-07	3.86E-07	5.59E-08	6.07E-08	6.71E-08	7.49E-08	7.42E-08
URI (ΔCDF)	-8.59E-07	-7.52E-07	-7.53E-07	-8.71E-08	-8.70E-08	-8.81E-08	-9.21E-08	-9.24E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-4.70E-07	-4.20E-07	-3.70E-07	-3.10E-08	-2.60E-08	-2.10E-08	-1.70E-08	-1.80E-08

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Licensee Comments:

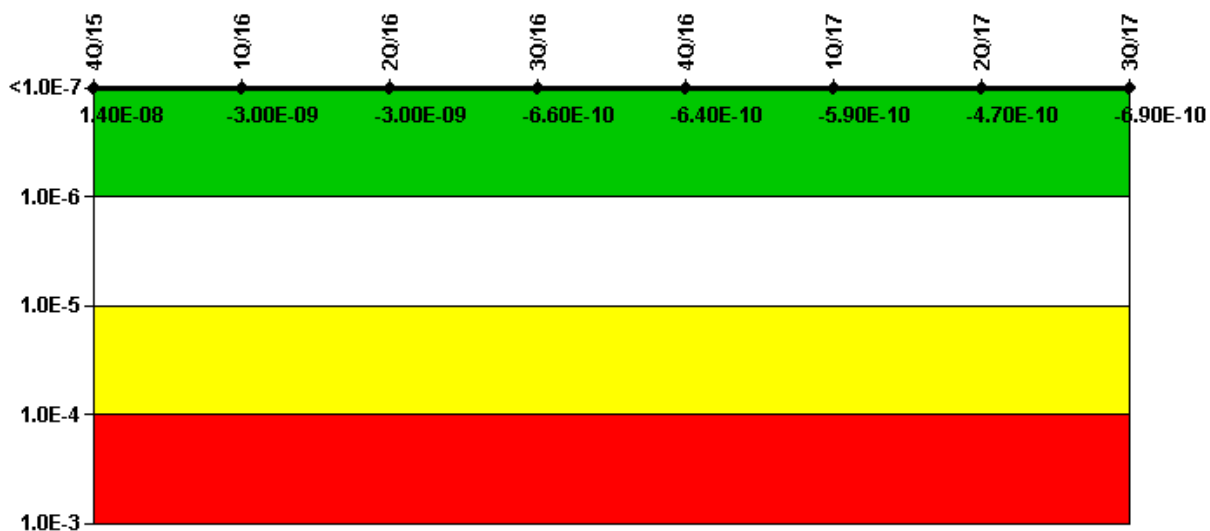
3Q/17: Change to 2nd Quarter 2017 Run Hours as described in CR-IP2-2017-04268. No effect on color of performance indicator.

2Q/17: Change to 2nd Quarter 2017 Run Hours as described in CR-IP2-2017-04268. No effect on color of performance indicator.

3Q/16: An interim update of the Unit 3 Probabilistic Safety Assessment (PSA) model was prepared and issued as an Engineering Report to incorporate a recent procedural enhancement which allows the Unit 3 SBO/Appendix R diesel Generator (ARDG) to be credited for scenarios other than Appendix R fires and Station Blackout. Specifically, the plant procedures and operator training now provide instructions (including the required entry condition and cues) for aligning the ARDG to a 480 Volt AC Safeguards Bus in the event of a loss of offsite power (LOOP) with failure of one or more Emergency Diesel Generators (EDGs).

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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

	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17
UAI (ΔCDF)	3.55E-10	-1.11E-09	-1.08E-09	-2.19E-10	-2.04E-10	-1.48E-10	-3.67E-11	-2.59E-10
URI (ΔCDF)	1.32E-08	-1.92E-09	-1.95E-09	-4.39E-10	-4.34E-10	-4.39E-10	-4.34E-10	-4.28E-10
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	1.40E-08	-3.00E-09	-3.00E-09	-6.60E-10	-6.40E-10	-5.90E-10	-4.70E-10	-6.90E-10

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Licensee Comments:

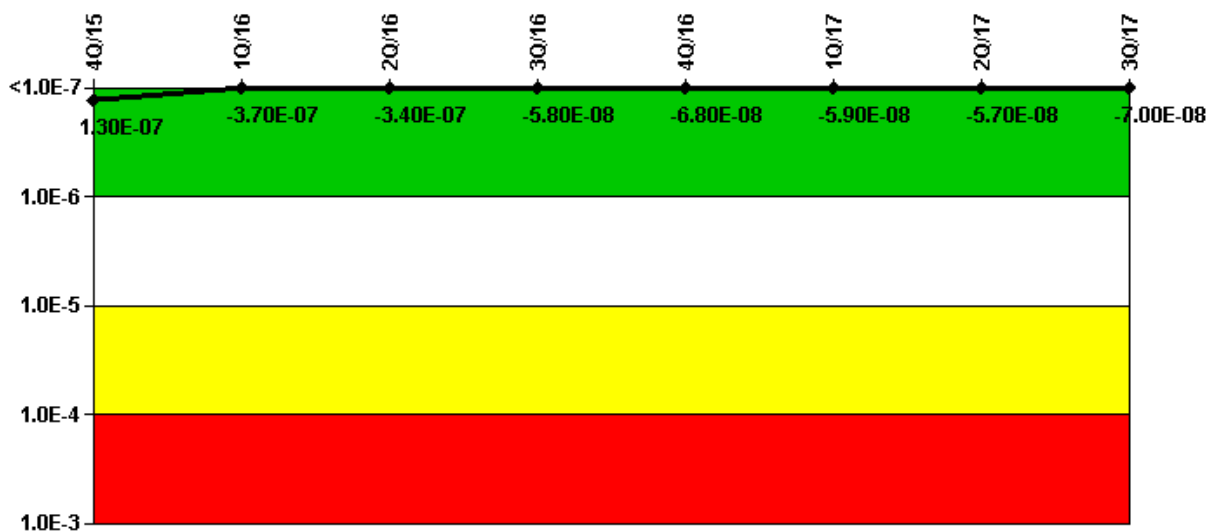
3Q/17: Changes to 2nd Quarter 2017 Planned Unavailable Hours, Demands, and Run Hours as described in CR-IP2-2017-03196. No effect on color of performance indicator.

2Q/17: Changes to 2nd Quarter 2017 Planned Unavailable Hours, Demands, and Run Hours as described in CR-IP2-2017-03196. No effect on color of performance indicator.

3Q/16: An interim update of the Unit 3 Probabilistic Safety Assessment (PSA) model was prepared and issued as an Engineering Report to incorporate a recent procedural enhancement which allows the Unit 3 SBO/Appendix R diesel Generator (ARDG) to be credited for scenarios other than Appendix R fires and Station Blackout. Specifically, the plant procedures and operator training now provide instructions (including the required entry conditions and cues) for aligning the ARDG to a 480 Volt AC safeguards Bus in the event of a loss of offsite power (LOOP) with failure of one or more Emergency Diesel Generators (EDGs).

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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)	-2.17E-09	-3.83E-08	-3.16E-08	2.43E-09	-7.69E-09	2.46E-09	4.14E-09	-9.21E-09
URI (ΔCDF)	1.33E-07	-3.29E-07	-3.10E-07	-6.06E-08	-6.04E-08	-6.13E-08	-6.14E-08	-6.09E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	1.30E-07	-3.70E-07	-3.40E-07	-5.80E-08	-6.80E-08	-5.90E-08	-5.70E-08	-7.00E-08

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Licensee Comments:

4Q/16: During an interim PRA model update initiated in July 2016, an error was made during CDE update that changed the baseline unplanned unavailability (UABLU) for the 32 Turbine Driven AFW Pump to 6.9E-4 when it should have been changed to 9.1E-4. The value of 6.9E-4 is for the Motor Driven AFW Pumps. The error resulted in the reported CDE UAI value being conservative. The error was recorded in the IPEC Corrective Action Program as CR-IP3-2016-03714.

4Q/16: Changed PRA Parameter(s). During an interim PRA model update initiated in July 2016, an error was made during CDE update that changed the baseline unplanned unavailability (UABLU) for the 32 Turbine Driven AFW Pump to 6.9E-4 when it should have been changed to 9.1E-4. The value of 6.9E-4 is for the Motor Driven AFW Pumps. The error resulted in the reported CDE UAI value being conservative. The error was recorded in the IPEC Corrective Action Program as CR-IP3-2016-03714.

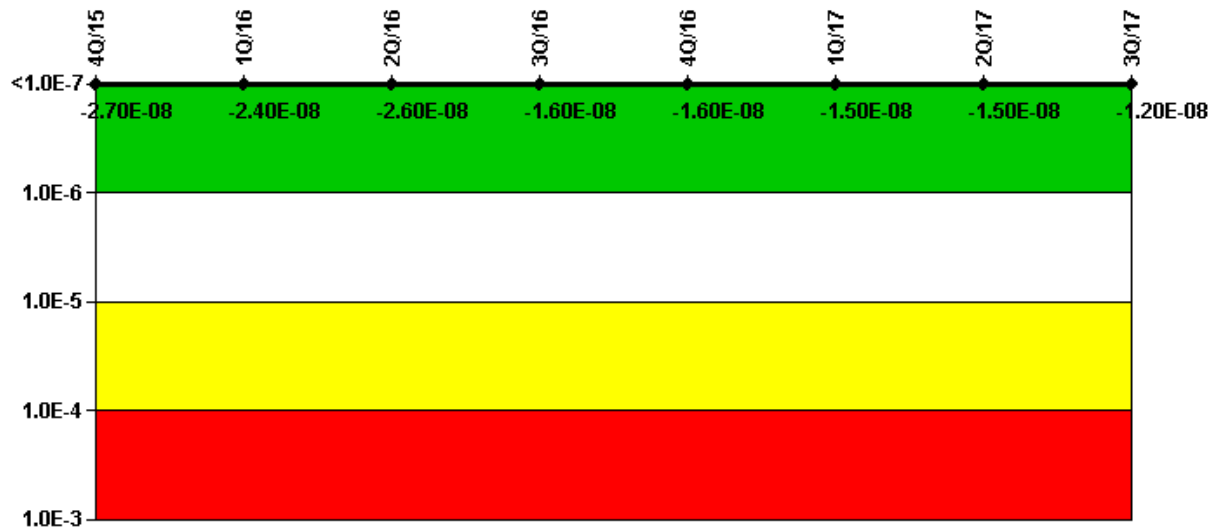
3Q/16: An interim update of the Unit 3 Probabilistic Safety Assessment (PSA) model was prepared and issued as an Engineering Report to incorporate a recent procedural enhancement which allows the Unit 3 SBO/Appendix R Diesel Generator (ARDG) to be credited for scenarios other than Appendix R fires and Station Blackout. Specifically, the plant procedures and operator training now provide instructions (including the required entry conditions and cues) for aligning the ARDG to a 480 volt AC Safeguards Bus in the event of a loss of offsite power (LOOP) with failure of one or more Emergency Diesel Generators (EDGs).

3Q/16: An interim update of the Unit 3 Probabilistic Safety Assessment (PSA) model was prepared and issued as an Engineering Report to incorporate a recent procedural enhancement which allows the Unit 3 SBO/Appendix R Diesel Generator (ARDG) to be credited for scenarios other than Appendix R fires and Station Blackout. Specifically, the plant procedures and operator training now provide instructions (including the required entry conditions and cues) for aligning the ARDG to a 480 volt AC Safeguards Bus in the event of a loss of offsite power (LOOP) with failure of one or more Emergency Diesel Generators (EDGs).

4Q/15: Risk Cap Invoked.

4Q/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

	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17
UAI (ΔCDF)	-1.14E-08	-1.21E-08	-1.44E-08	-8.78E-09	-8.78E-09	-8.59E-09	-7.96E-09	-5.18E-09
URI (ΔCDF)	-1.58E-08	-1.19E-08	-1.16E-08	-7.03E-09	-6.94E-09	-6.86E-09	-6.94E-09	-6.94E-09
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-2.70E-08	-2.40E-08	-2.60E-08	-1.60E-08	-1.60E-08	-1.50E-08	-1.50E-08	-1.20E-08

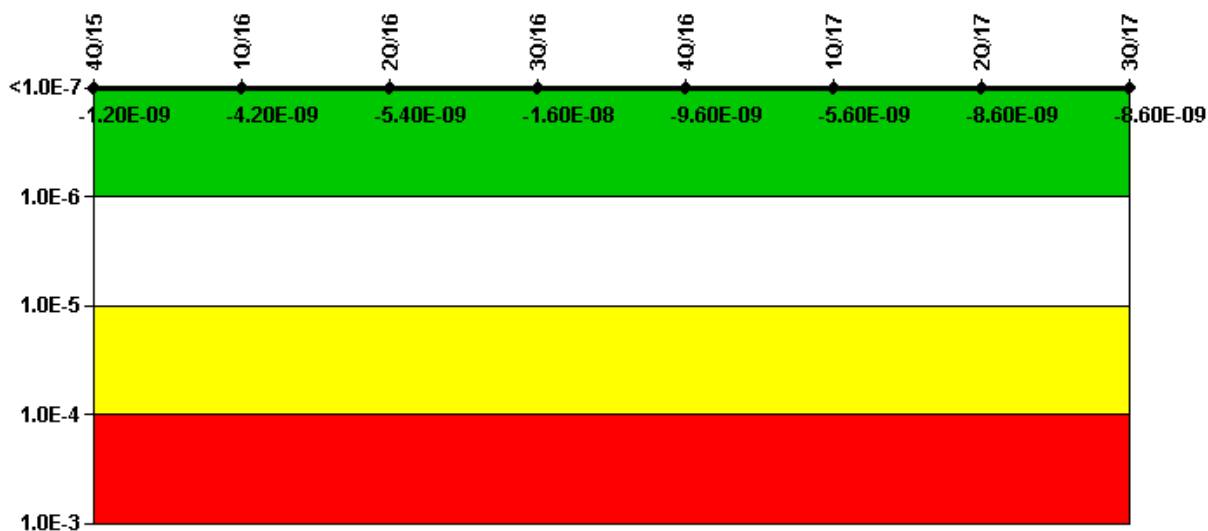
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Licensee Comments:

3Q/16: An interim update of the Probabilistic Safety Assessment (PSA) model was prepared and issued as an Engineering Report to incorporate a recent procedural enhancement which allows the Unit 3 SBO/Appendix R Diesel Generator (ARDG) to be credited for scenarios other than Appendix R fires and Station Blackout. Specifically, the plant procedures and operator training now provide instructions (including the required entry conditions and cues) for aligning the ARDG to a 480 Volt AC Safeguards Bus in the event of a loss of offsite power (LOOP) with failure of one or more Emergency Diesel Generators (EDGs).

3Q/16: Changed PRA Parameter(s). An interim update of the Probabilistic Safety Assessment (PSA) model was prepared and issued as an Engineering Report to incorporate a recent procedural enhancement which allows the Unit 3 SBO/Appendix R Diesel Generator (ARDG) to be credited for scenarios other than Appendix R fires and Station Blackout. Specifically, the plant procedures and operator training now provide instructions (including the required entry conditions and cues) for aligning the ARDG to a 480 Volt AC Safeguards Bus in the event of a loss of offsite power (LOOP) with failure of one or more Emergency Diesel Generators (EDGs).

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

	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17
UAI (ΔCDF)	2.74E-08	2.19E-08	2.01E-08	7.60E-09	1.39E-08	1.72E-08	1.45E-08	1.46E-08
URI (ΔCDF)	-2.86E-08	-2.60E-08	-2.55E-08	-2.35E-08	-2.35E-08	-2.28E-08	-2.31E-08	-2.32E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-1.20E-09	-4.20E-09	-5.40E-09	-1.60E-08	-9.60E-09	-5.60E-09	-8.60E-09	-8.60E-09

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Licensee Comments:

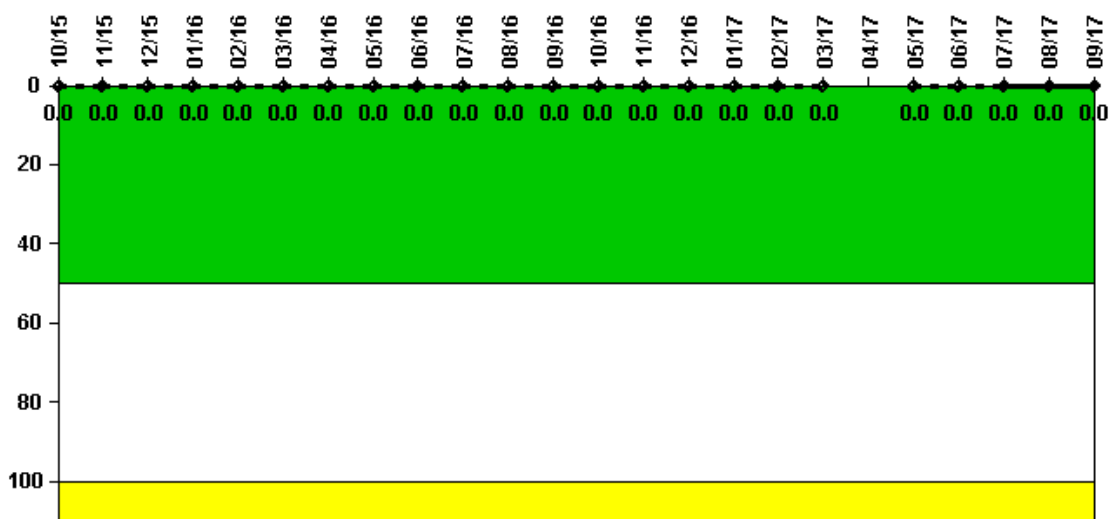
3Q/17: Change to 2nd Quarter 2017 Run Hours as described in CR-IP2-2017-04222. No effect on color of performance indicator.

2Q/17: Change to 2nd Quarter 2017 Run Hours as described in CR-IP2-2017-04222. No effect on color of performance indicator.

3Q/16: An interim update of the Unit 3 Probabilistic Assessment (PSA) was prepared and issued as an Engineering Report to incorporate a recent procedural enhancement which allows the Unit 3 SBO/Appendix R Diesel Generator (ARDG) to be credited for scenarios other than Appendix R fires and Station Blackout. Specifically, the plant procedures and operator training now provide instructions (including the required entry conditions and cues) for aligning the ARDG to a 480 Volt AC Safeguards Bus in the event of a loss of offsite power (LOOP) with failure of one or more Emergency Diesel Generators (EDGs).

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Reactor Coolant System Activity



Thresholds: White > 50.0 Yellow > 100.0

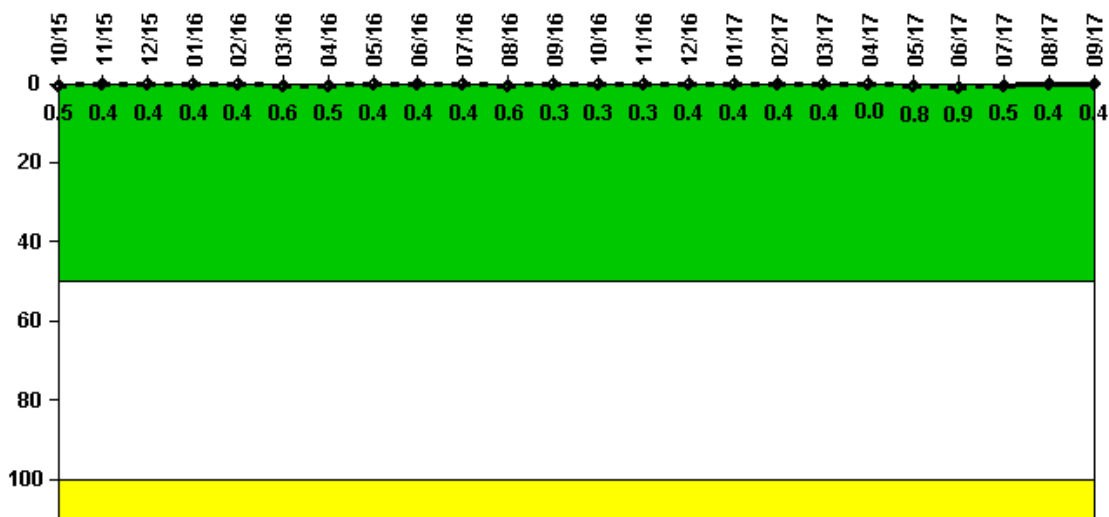
Notes

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	0.000127	0.000132	0.000130	0.000158	0.000142	0.000156	0.000144	0.000161	0.000158	0.000162	0.000170	0.000172
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	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	0.000176	0.000206	0.000203	0.000189	0.000214	0.000206	N/A	0.000286	0.000094	0.000100	0.000107	0.000119
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	N/A	0	0	0	0	0

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Licensee Comments: none

Reactor Coolant System Leakage



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	0.050	0.040	0.040	0.040	0.040	0.060	0.050	0.040	0.040	0.040	0.060	0.030
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 0.4 0.4 0.4 0.4 0.6 0.5 0.4 0.4 0.4 0.6 0.3**

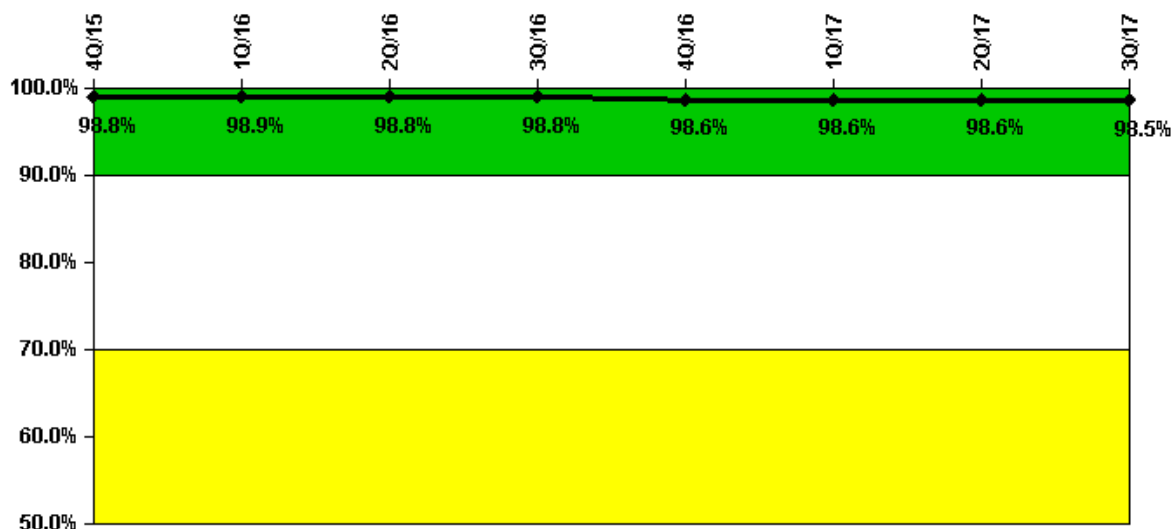
Reactor Coolant System Leakage	10/16	11/16	12/16	1/17	2/17	3/17	4/17	5/17	6/17	7/17	8/17	9/17
Maximum leakage	0.030	0.030	0.040	0.040	0.040	0.040	0	0.080	0.090	0.050	0.040	0.040
Technical specification limit	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0

Indicator value **0.3 0.3 0.4 0.4 0.4 0.4 0 0.8 0.9 0.5 0.4 0.4**

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Licensee Comments: none

Drill/Exercise Performance



Thresholds: White < 90.0% Yellow < 70.0%

Notes

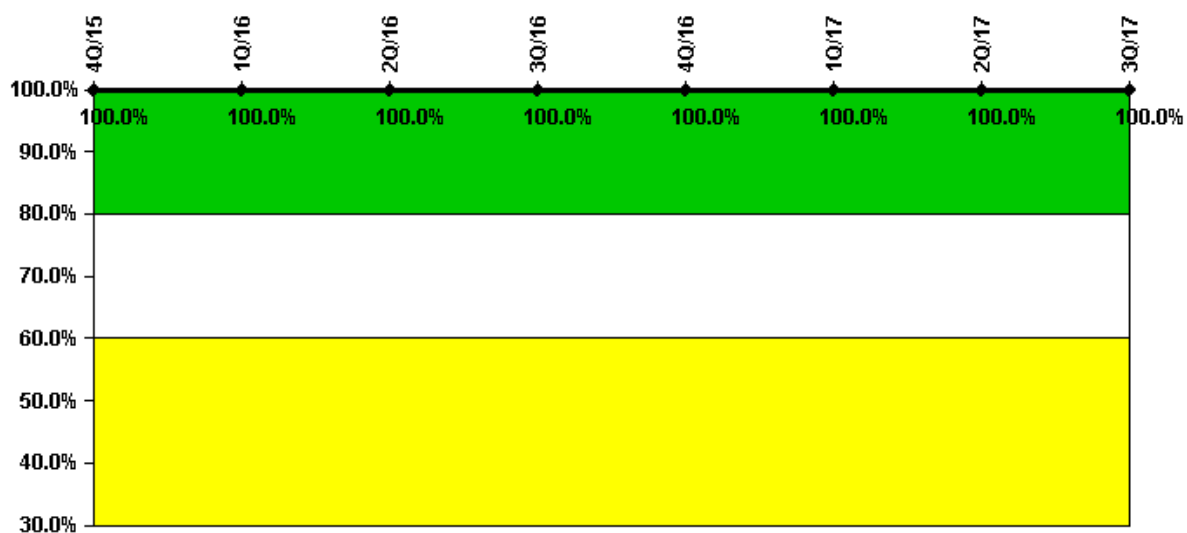
Drill/Exercise Performance	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17
Successful opportunities	28.0	26.0	62.0	103.0	93.0	23.0	18.0	98.0
Total opportunities	28.0	26.0	64.0	105.0	94.0	24.0	18.0	99.0

Indicator value **98.8% 98.9% 98.8% 98.8% 98.6% 98.6% 98.6% 98.5%**

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Licensee Comments: none

ERO Drill Participation



Thresholds: White < 80.0% Yellow < 60.0%

Notes

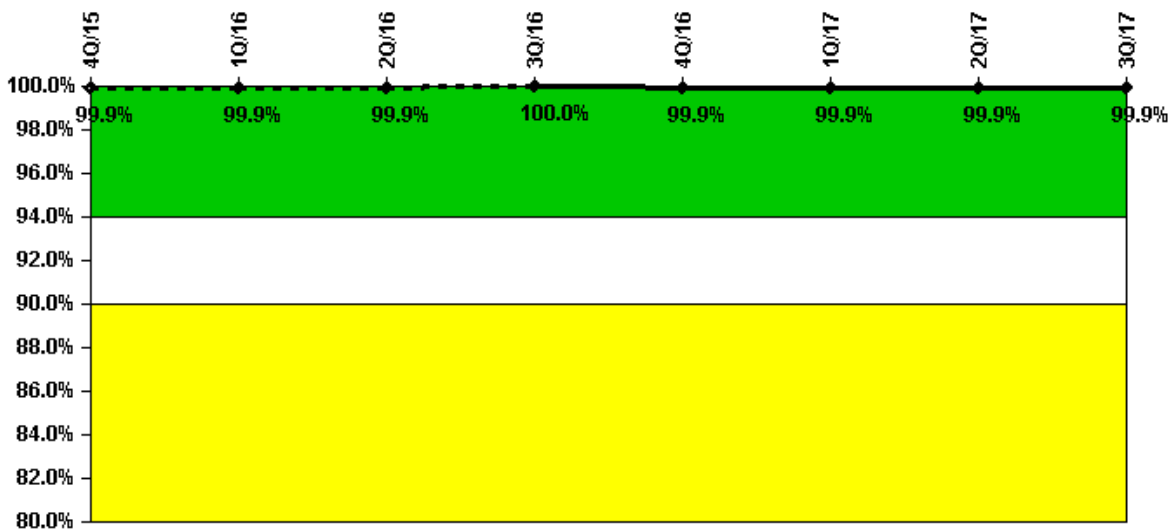
ERO Drill Participation	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17
Participating Key personnel	103.0	103.0	101.0	100.0	104.0	108.0	105.0	103.0
Total Key personnel	103.0	103.0	101.0	100.0	104.0	108.0	105.0	103.0

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

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Licensee Comments: none

Alert & Notification System



Thresholds: White < 94.0% Yellow < 90.0%

Notes

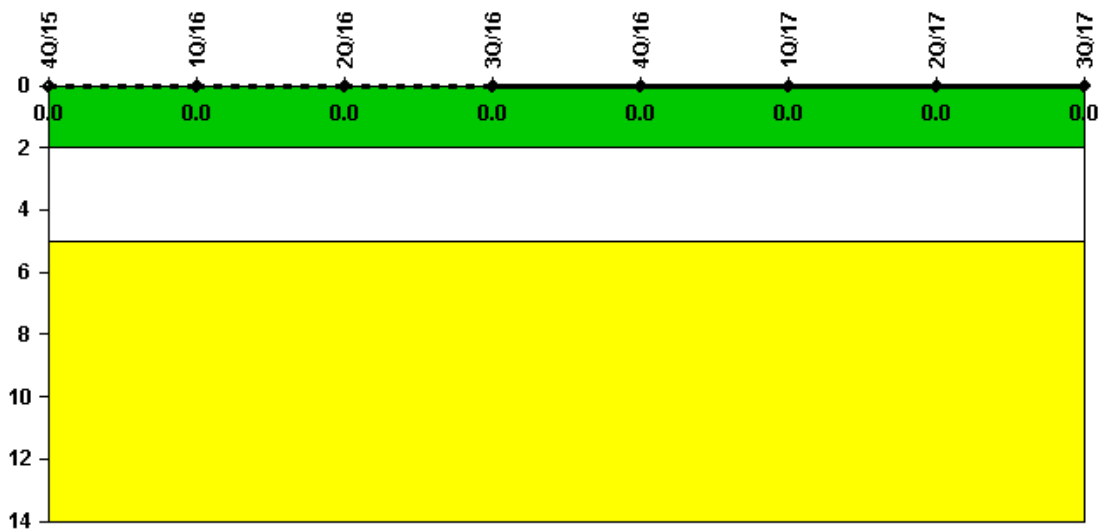
Alert & Notification System	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17
Successful siren-tests	1046	1188	1050	1081	1201	1203	1203	1203
Total sirens-tests	1046	1188	1050	1081	1204	1204	1204	1204

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

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Licensee Comments: none

Occupational Exposure Control Effectiveness



Thresholds: White > 2.0 Yellow > 5.0

Notes

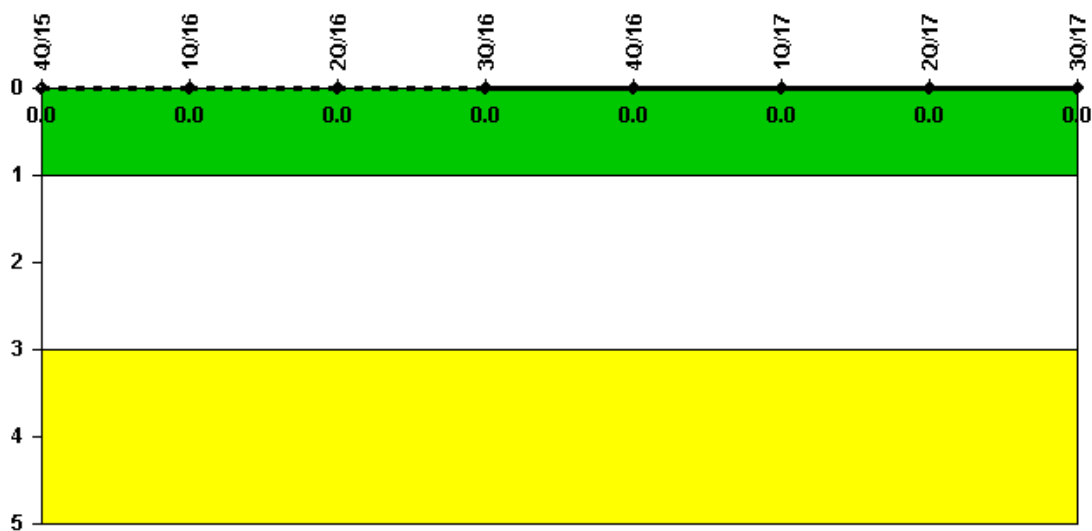
Occupational Exposure Control Effectiveness 4Q/15 1Q/16 2Q/16 3Q/16 4Q/16 1Q/17 2Q/17 3Q/17

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

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Licensee Comments: none

RETS/ODCM Radiological Effluent



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

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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

Page Last Reviewed/Updated Monday, November 06, 2017