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## Indian Point 3 – Quarterly Performance Indicators

### 2Q/2017 Performance Indicators

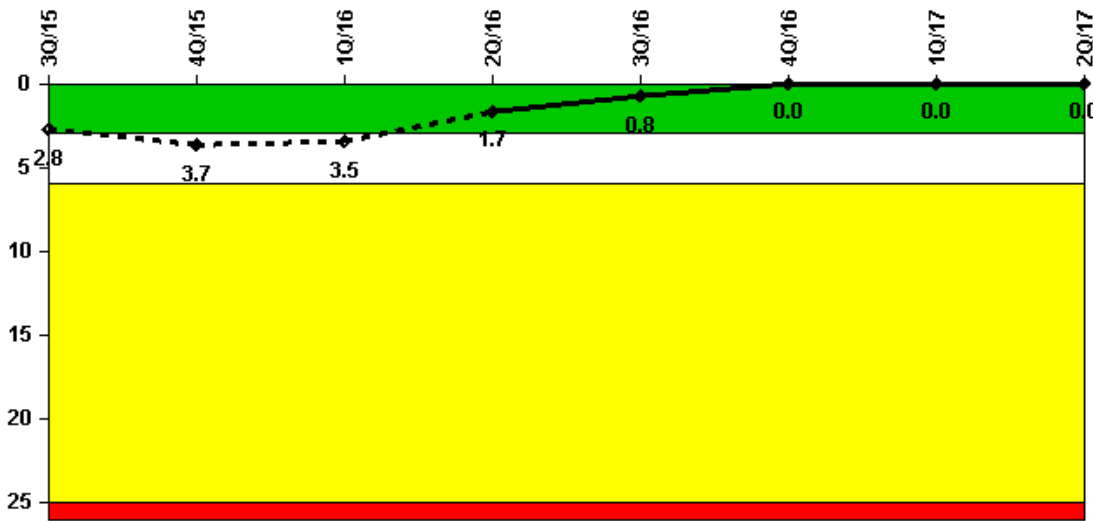
The solid trend line represents the current reporting period.

Licensee's General Comments: none

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- Unplanned Power Changes per 7000 Critical Hours (IE03)
- Unplanned Scrams with Complications (IE04)
- Safety System Functional Failures (MS05)
- Emergency AC Power Systems (MS06)
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- Reactor Coolant System Activity (BI01)
- Reactor Coolant System Leakage (BI02)
- Drill/Exercise Performance (EP01)
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- 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	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17
Unplanned scrams	1.0	1.0	0	0	0	0	0	0
Critical hours	1947.1	2157.5	2183.0	2184.0	2208.0	2209.0	1703.0	846.5

Indicator value	2.8	3.7	3.5	1.7	0.8	0	0	0
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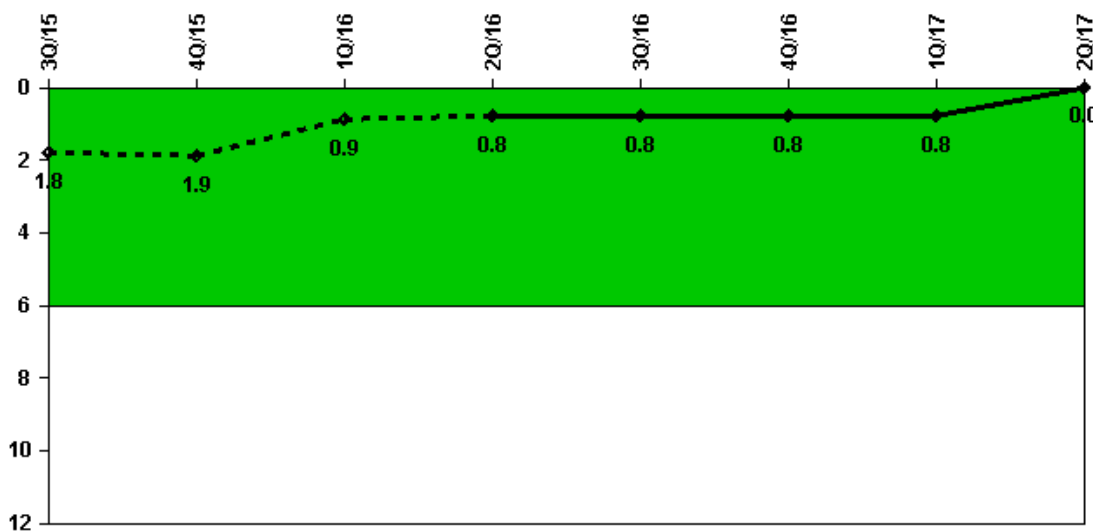
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Licensee Comments:

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 forth 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.

3Q/15: On July 8, 2015, the reactor was manually tripped due to decreasing steam generator levels caused by 31 main feedwater pump speed control locked-in at minimum speed. Direct cause was the 31 main feedwater pump entered a hold condition due to a mis-wired Track and Hold circuit board in the speed control system. LER-2015-007 reported the event.

### Unplanned Power Changes per 7000 Critical Hrs



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	1.0	0	0	0	0
Critical hours	1947.1	2157.5	2183.0	2184.0	2208.0	2209.0	1703.0	846.5

Indicator value	1.8	1.9	0.9	0.8	0.8	0.8	0.8	0
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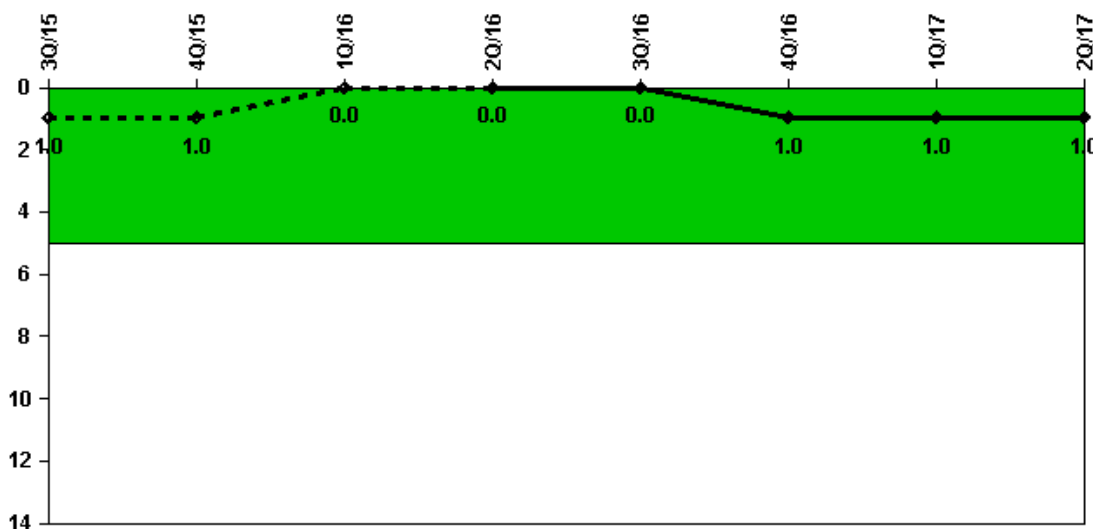
#### Licensee Comments:

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.

3Q/15: On September 15, 2015, a planned shutdown for maintenance was initiated to replace the reactor vessel O-rings due to leakage.



### Safety System Functional Failures (PWR)



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 0 0 0 1 0 0

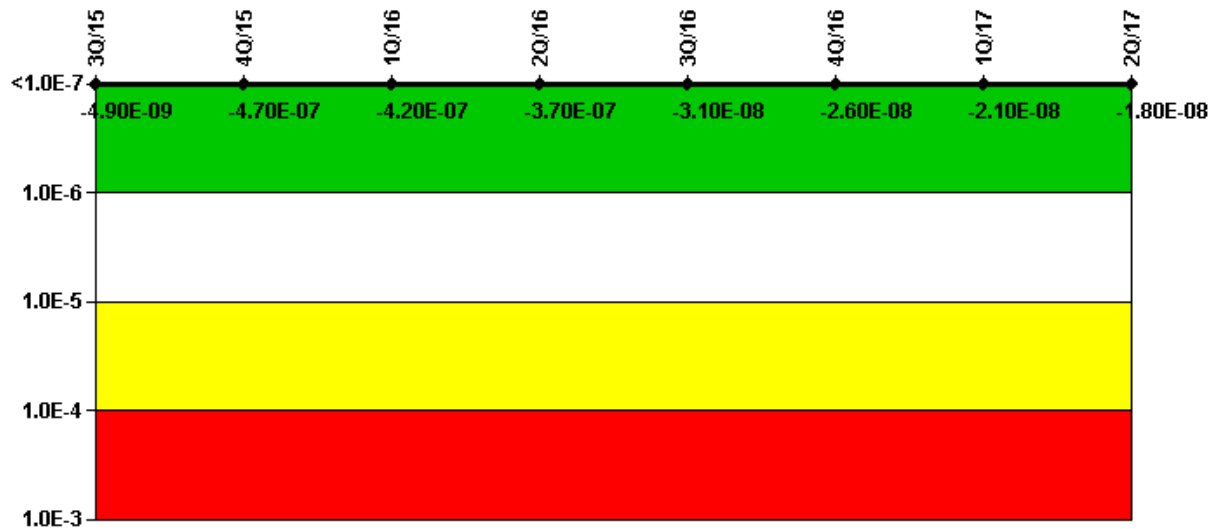
Indicator value 1 1 0 0 0 1 1 1

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Licensee Comments:

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**

	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17
UAI (ΔCDF)	3.79E-07	3.87E-07	3.33E-07	3.86E-07	5.59E-08	6.07E-08	6.71E-08	7.49E-08
URI (ΔCDF)	-3.84E-07	-8.59E-07	-7.52E-07	-7.53E-07	-8.71E-08	-8.70E-08	-8.81E-08	-9.25E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
<b>Indicator value</b>	<b>-4.90E-09</b>	<b>-4.70E-07</b>	<b>-4.20E-07</b>	<b>-3.70E-07</b>	<b>-3.10E-08</b>	<b>-2.60E-08</b>	<b>-2.10E-08</b>	<b>-1.80E-08</b>

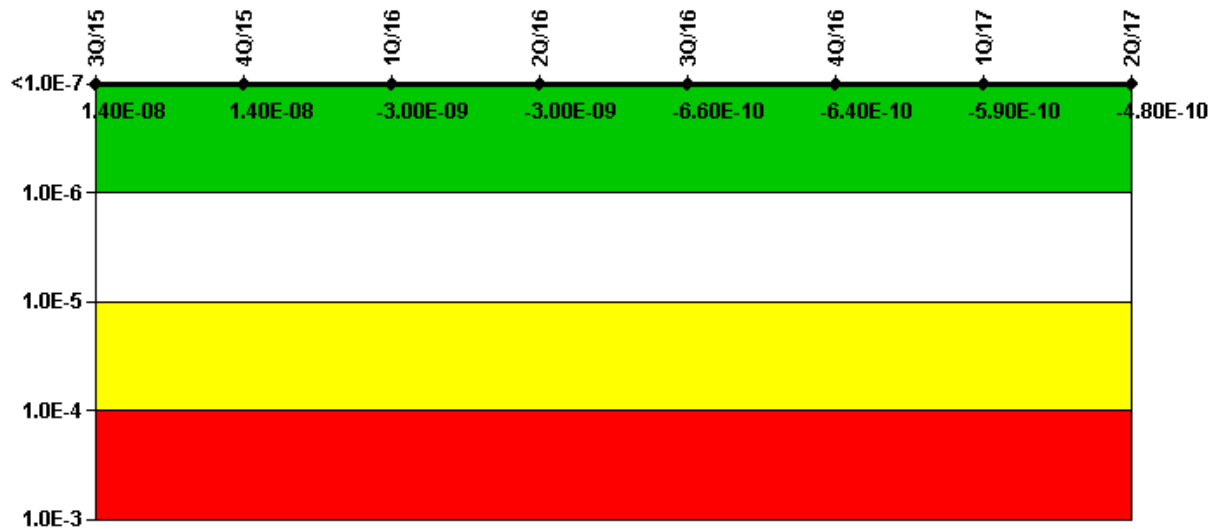
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Licensee Comments:

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**

	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17
UAI ( $\Delta$ CDF)	1.03E-09	3.55E-10	-1.11E-09	-1.08E-09	-2.19E-10	-2.04E-10	-1.48E-10	-4.85E-11
URI ( $\Delta$ CDF)	1.32E-08	1.32E-08	-1.92E-09	-1.95E-09	-4.39E-10	-4.34E-10	-4.39E-10	-4.28E-10
PLE	NO	NO	NO	NO	NO	NO	NO	NO
<b>Indicator value</b>	<b>1.40E-08</b>	<b>1.40E-08</b>	<b>-3.00E-09</b>	<b>-3.00E-09</b>	<b>-6.60E-10</b>	<b>-6.40E-10</b>	<b>-5.90E-10</b>	<b>-4.80E-10</b>

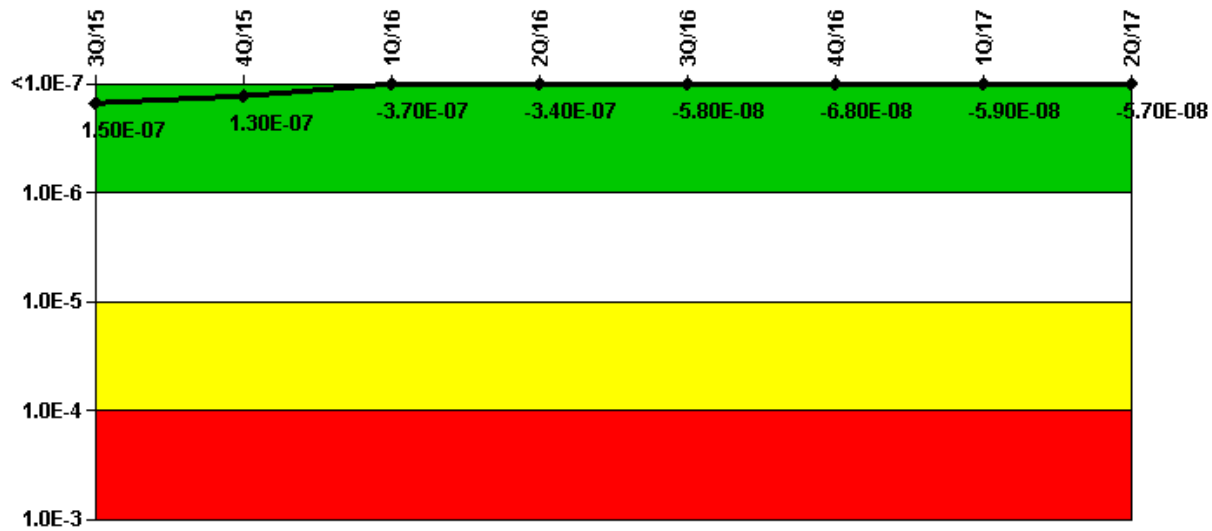
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Licensee Comments:

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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**

	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17
UAI (ΔCDF)	-2.56E-09	-2.17E-09	-3.83E-08	-3.16E-08	2.43E-09	-7.69E-09	2.46E-09	4.14E-09
URI (ΔCDF)	1.57E-07	1.33E-07	-3.29E-07	-3.10E-07	-6.06E-08	-6.04E-08	-6.13E-08	-6.14E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
<b>Indicator value</b>	<b>1.50E-07</b>	<b>1.30E-07</b>	<b>-3.70E-07</b>	<b>-3.40E-07</b>	<b>-5.80E-08</b>	<b>-6.80E-08</b>	<b>-5.90E-08</b>	<b>-5.70E-08</b>

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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.

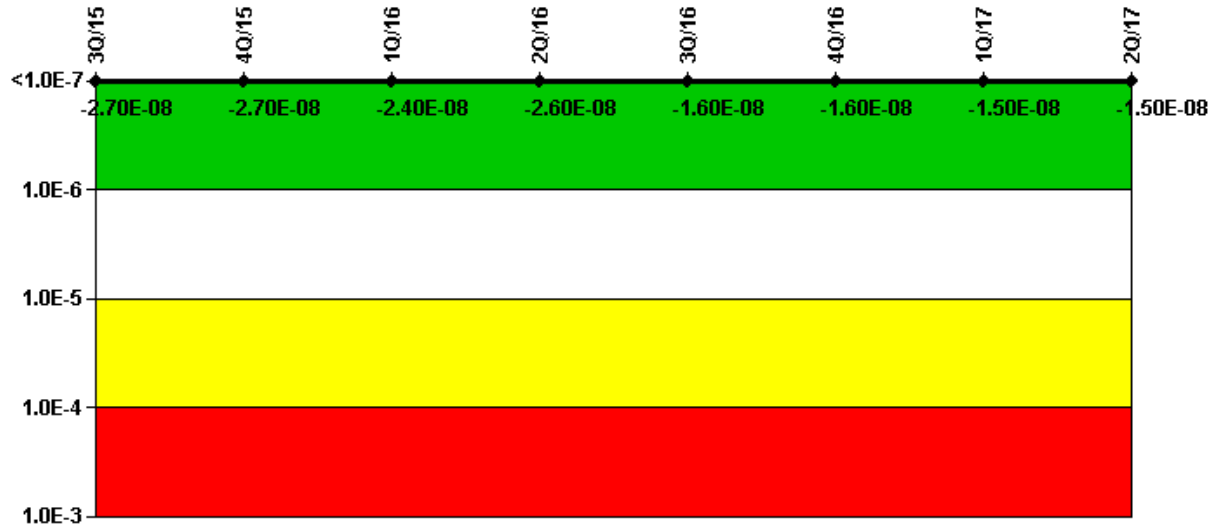
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4Q/15: Risk Cap Invoked.  
 4Q/15: Risk Cap Invoked.  
 3Q/15: Risk Cap Invoked.  
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### Mitigating Systems Performance Index, Residual Heat Removal System



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)	-1.14E-08	-1.14E-08	-1.21E-08	-1.44E-08	-8.78E-09	-8.78E-09	-8.59E-09	-7.96E-09
URI (ΔCDF)	-1.59E-08	-1.58E-08	-1.19E-08	-1.16E-08	-7.03E-09	-6.94E-09	-6.86E-09	-6.94E-09
PLE	NO	NO	NO	NO	NO	NO	NO	NO
<b>Indicator value</b>	<b>-2.70E-08</b>	<b>-2.70E-08</b>	<b>-2.40E-08</b>	<b>-2.60E-08</b>	<b>-1.60E-08</b>	<b>-1.60E-08</b>	<b>-1.50E-08</b>	<b>-1.50E-08</b>

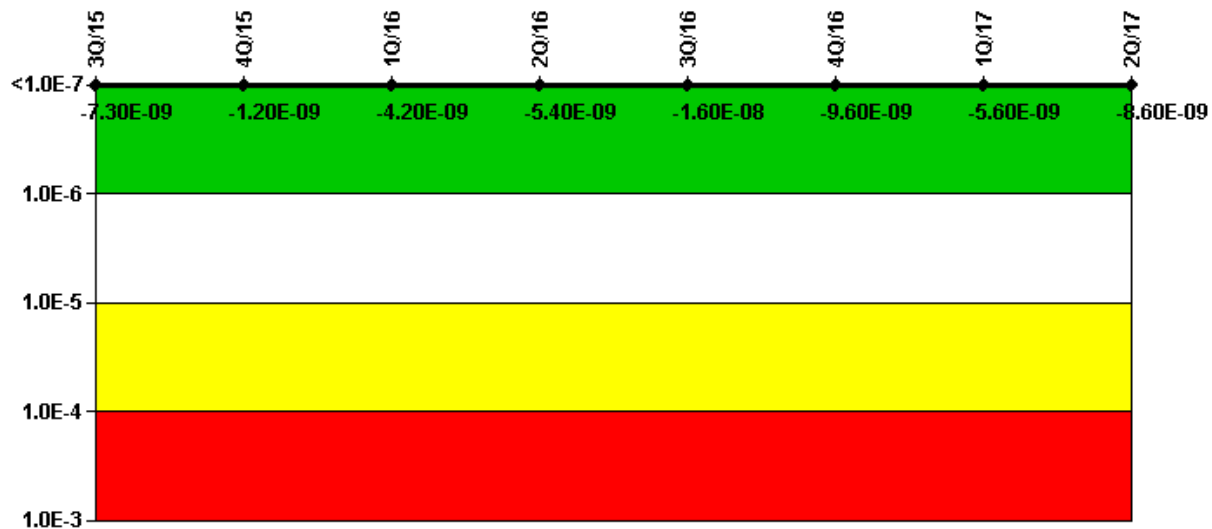
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Licensee Comments:

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### 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)	2.12E-08	2.74E-08	2.19E-08	2.01E-08	7.60E-09	1.39E-08	1.72E-08	1.45E-08
URI (ΔCDF)	-2.85E-08	-2.86E-08	-2.60E-08	-2.55E-08	-2.35E-08	-2.35E-08	-2.28E-08	-2.31E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
<b>Indicator value</b>	<b>-7.30E-09</b>	<b>-1.20E-09</b>	<b>-4.20E-09</b>	<b>-5.40E-09</b>	<b>-1.60E-08</b>	<b>-9.60E-09</b>	<b>-5.60E-09</b>	<b>-8.60E-09</b>

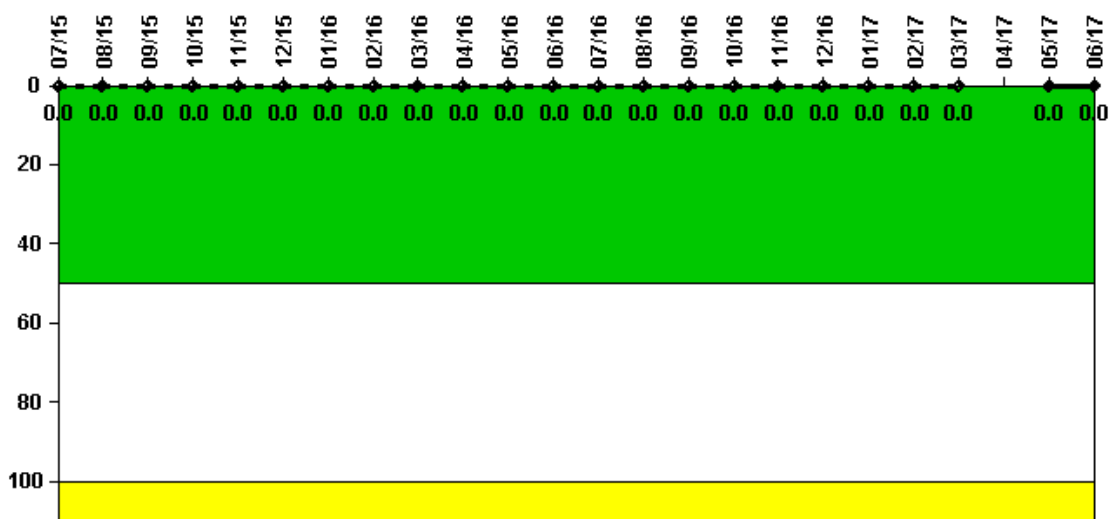
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### Reactor Coolant System Activity



Thresholds: White > 50.0 Yellow > 100.0

**Notes**

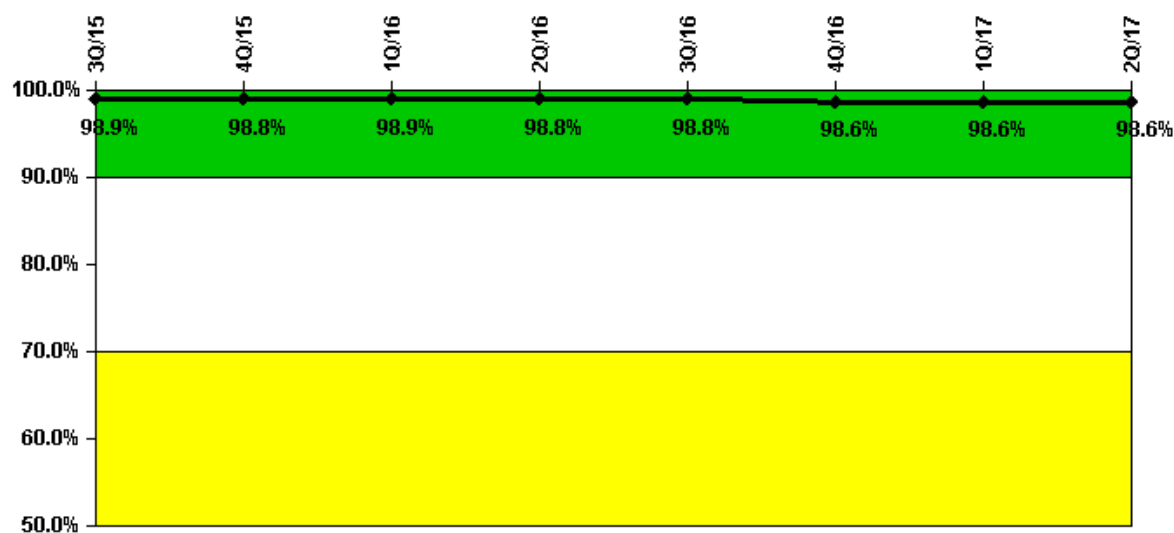
Reactor Coolant System Activity	7/15	8/15	9/15	10/15	11/15	12/15	1/16	2/16	3/16	4/16	5/16	6/16
Maximum activity	0.000109	0.000117	0.000121	0.000127	0.000132	0.000130	0.000158	0.000142	0.000156	0.000144	0.000161	0.000158
Technical specification limit	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Indicator 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	0.000162	0.000170	0.000172	0.000176	0.000206	0.000203	0.000189	0.000214	0.000206	N/A	0.000286	0.000094
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 N/A	0	0

TOP

Licensee Comments: none



### Drill/Exercise Performance



Thresholds: White < 90.0% Yellow < 70.0%

#### Notes

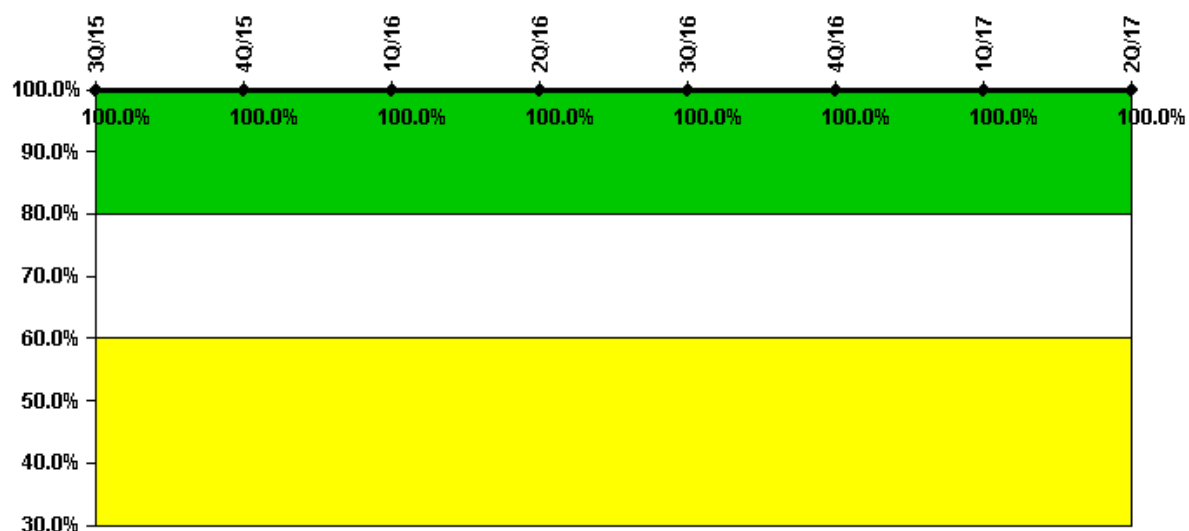
Drill/Exercise Performance	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17
Successful opportunities	146.0	28.0	26.0	62.0	103.0	93.0	23.0	18.0
Total opportunities	147.0	28.0	26.0	64.0	105.0	94.0	24.0	18.0

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

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Licensee Comments: none

### ERO Drill Participation



Thresholds: White < 80.0% Yellow < 60.0%

#### Notes

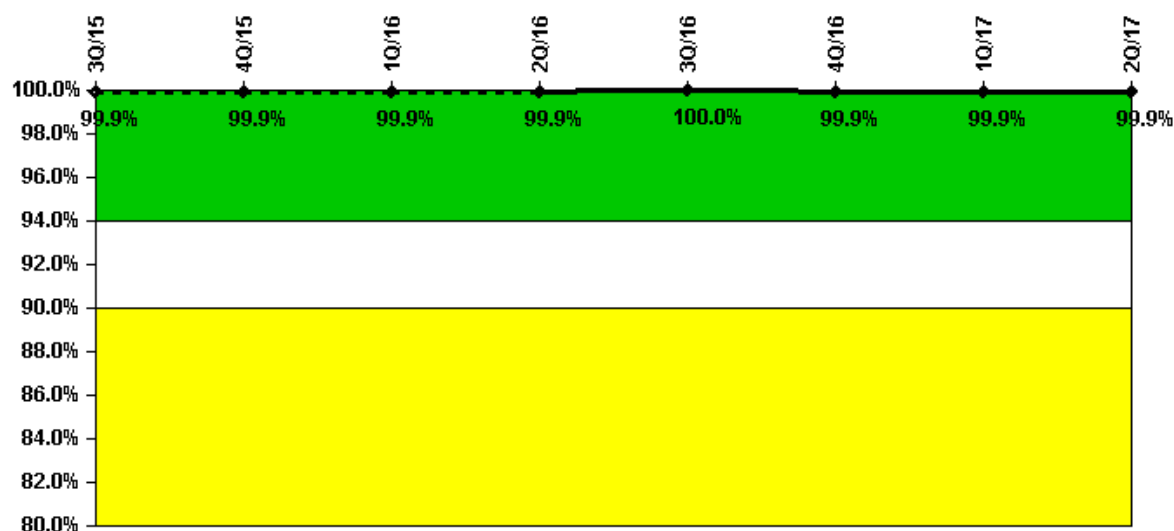
ERO Drill Participation	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17
Participating Key personnel	105.0	103.0	103.0	101.0	100.0	104.0	108.0	105.0
Total Key personnel	105.0	103.0	103.0	101.0	100.0	104.0	108.0	105.0

**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

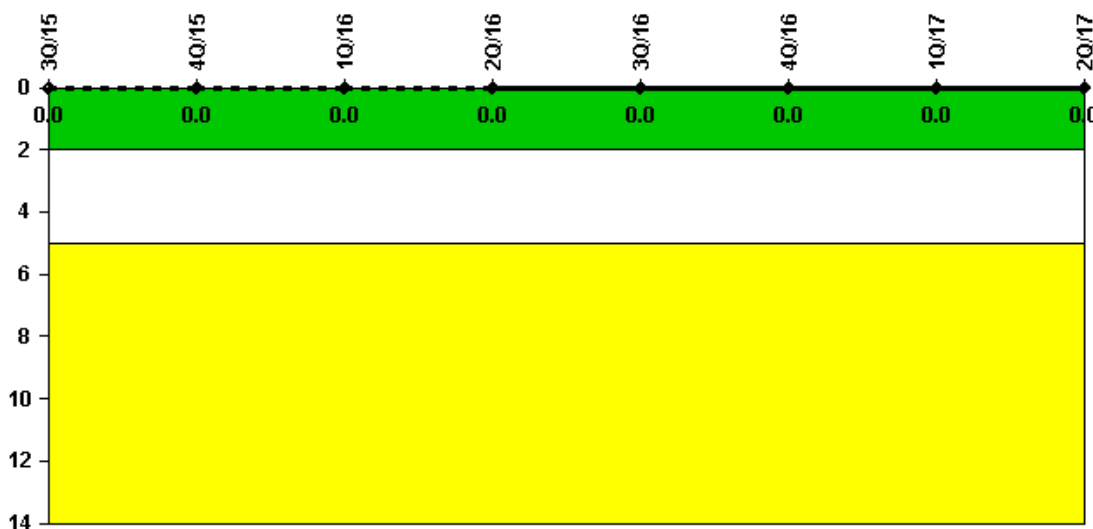
Alert & Notification System	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17
Successful siren-tests	1105	1046	1188	1050	1081	1201	1203	1203
Total sirens-tests	1109	1046	1188	1050	1081	1204	1204	1204

**Indicator value**                    **99.9% 99.9% 99.9% 99.9% 100.0% 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** 3Q/15 4Q/15 1Q/16 2Q/16 3Q/16 4Q/16 1Q/17 2Q/17

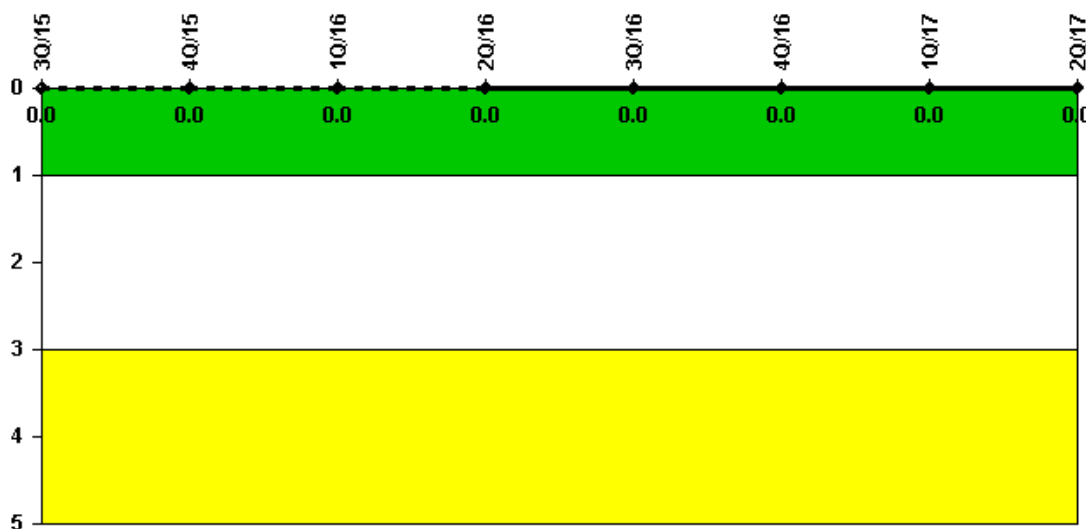
High radiation area occurrences	0	0	0	0	0	0	0	0
Very high radiation area occurrences	0	0	0	0	0	0	0	0
Unintended exposure occurrences	0	0	0	0	0	0	0	0
<b>Indicator value</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

TOP

Licensee Comments: none



### RETS/ODCM Radiological Effluent



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*