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## Watts Bar 2 – Quarterly Performance Indicators

### 4Q/2017 Performance Indicators

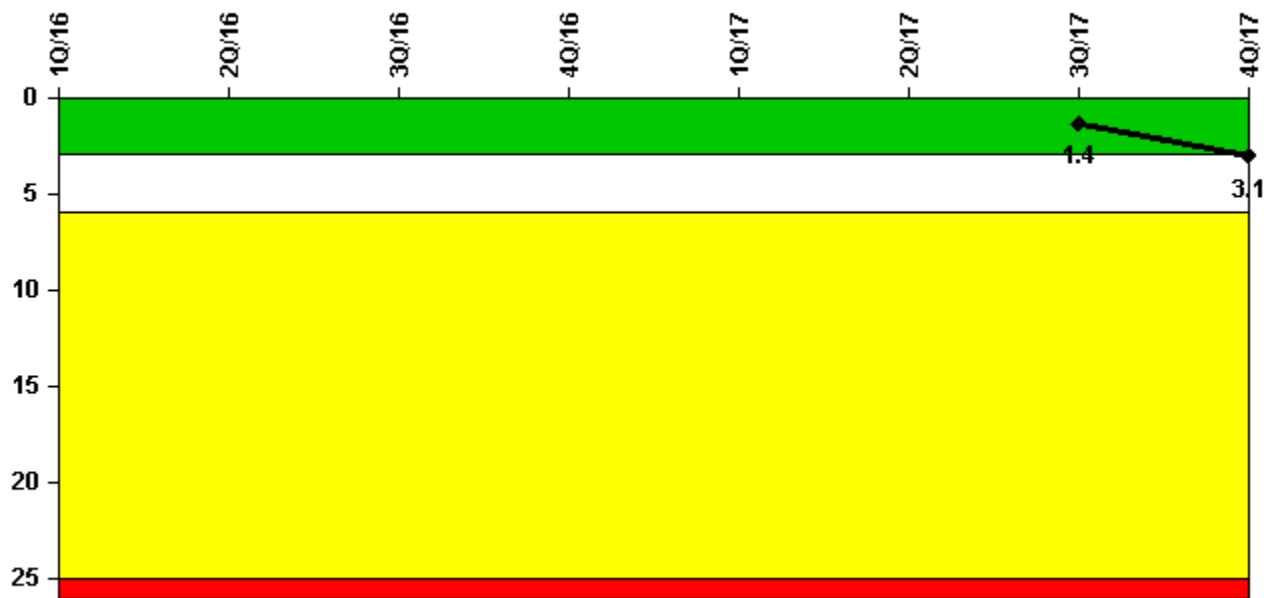
The solid trend line represents the current reporting period.

Licensee's General Comments: none

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- Unplanned Power Changes per 7000 Critical Hours (IE03)
- Unplanned Scrams with Complications (IE04)
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- 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

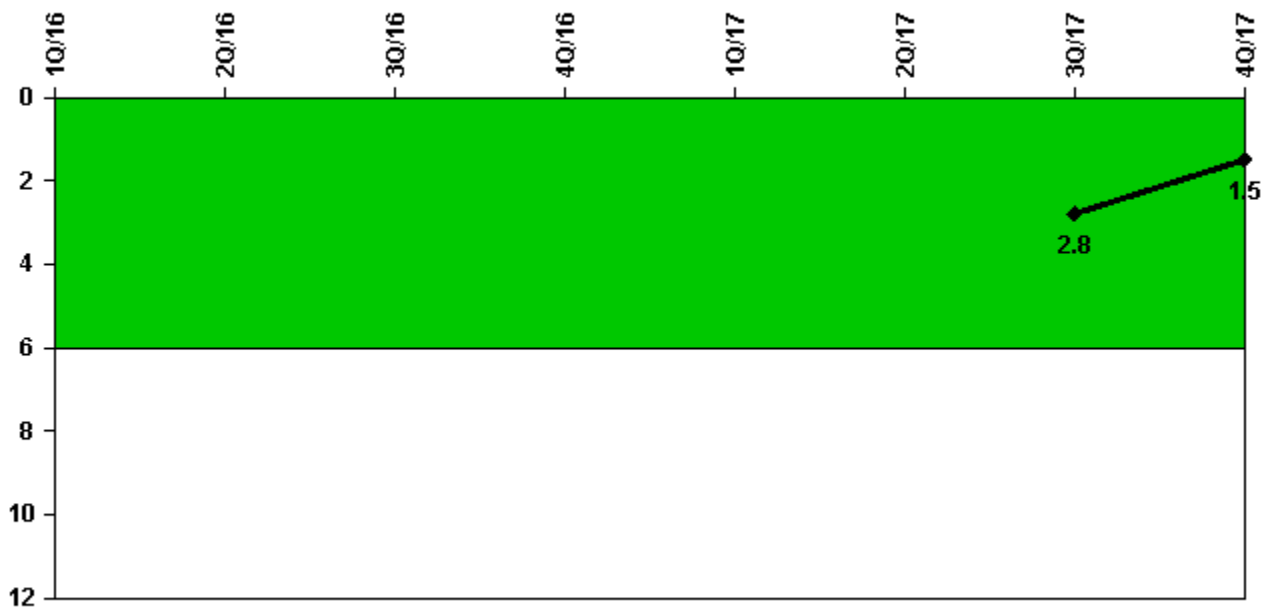
Unplanned Scrams per 7000 Critical Hrs	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17	4Q/17
Unplanned scrams				0	1.0	0	0	1.0
Critical hours				1612.7	1894.1	0	1496.9	1197.5

**Indicator value** 1.4 3.1

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Licensee Comments: none

### Unplanned Power Changes per 7000 Critical Hrs



Thresholds: White > 6.0

#### Notes

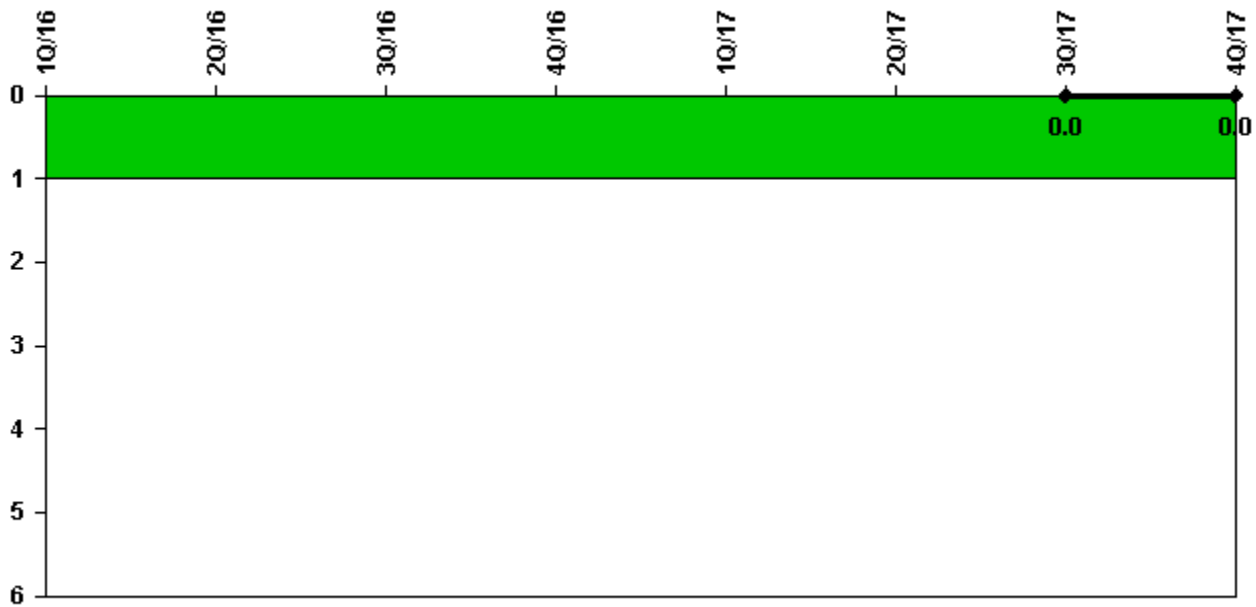
Unplanned Power Changes per 7000 Critical Hrs	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17	4Q/17
Unplanned power changes				1.0	0	0	1.0	0
Critical hours				1612.7	1894.1	0	1496.9	1197.5

Indicator value 2.8    1.5

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Licensee Comments: none

### Unplanned Scrams with Complications



Thresholds: White > 1.0

#### Notes

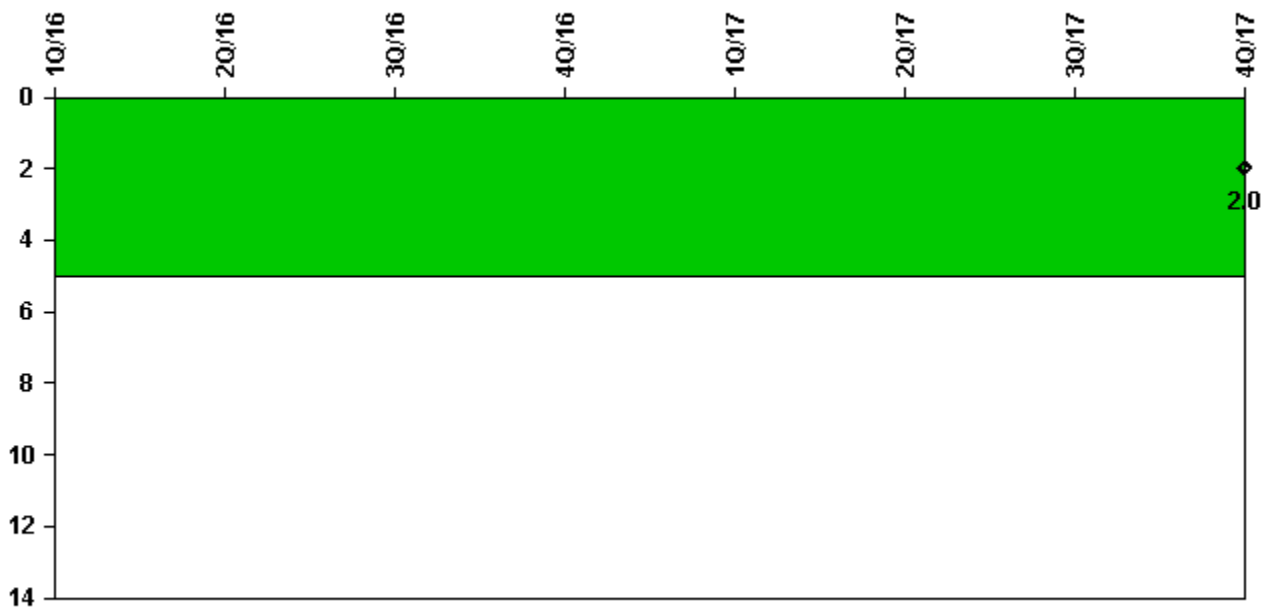
Unplanned Scrams with Complications 1Q/16 2Q/16 3Q/16 4Q/16 1Q/17 2Q/17 3Q/17 4Q/17  
 Scrams with complications 0 0 0 0 0 0

Indicator value 0.0 0.0

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Licensee Comments: none

### Safety System Functional Failures (PWR)



Thresholds: White > 5.0

#### Notes

Safety System Functional Failures (PWR) 1Q/16 2Q/16 3Q/16 4Q/16 1Q/17 2Q/17 3Q/17 4Q/17

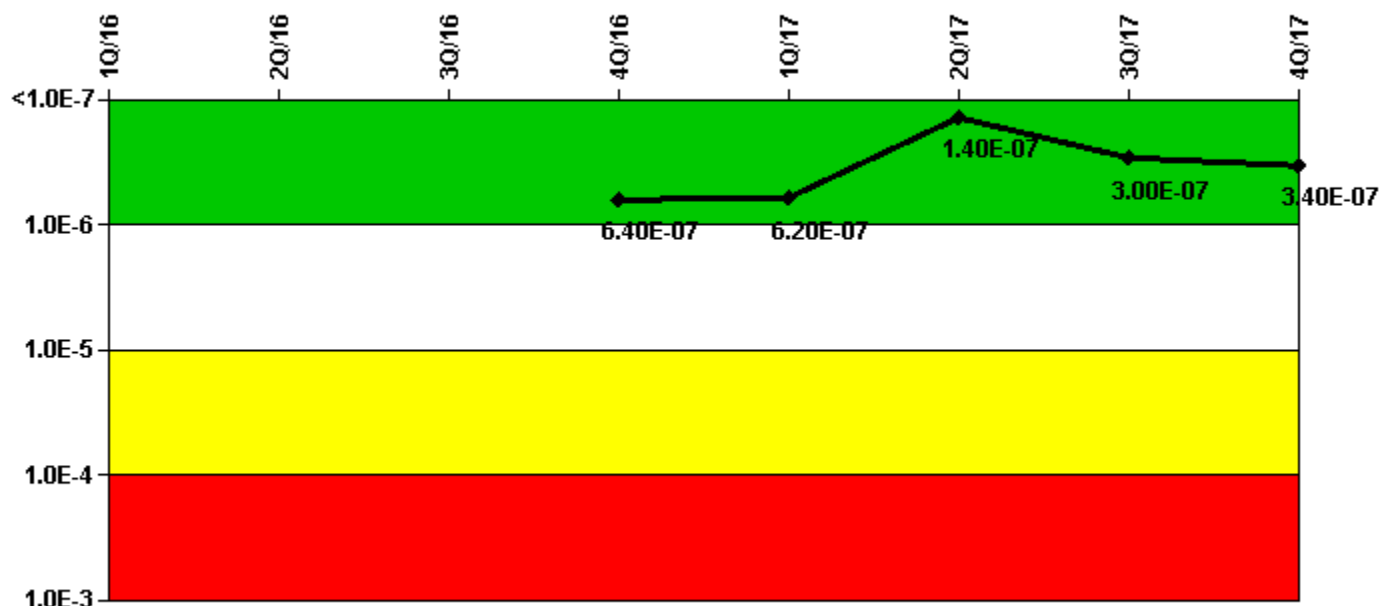
Safety System Functional Failures 0 0 1 1

Indicator value 2

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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

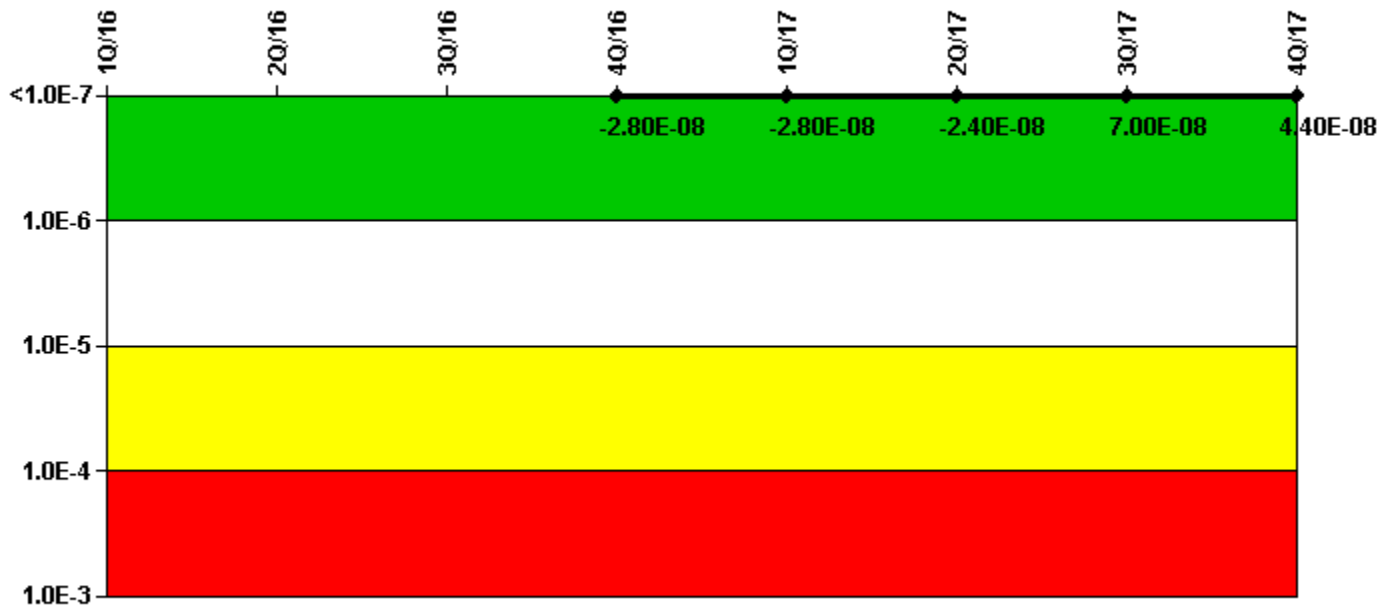
	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17	4Q/17
UAI (ΔCDF)				1.14E-07	9.45E-08	4.05E-08	1.86E-07	1.62E-07
URI (ΔCDF)				5.23E-07	5.23E-07	9.66E-08	1.10E-07	1.76E-07
PLE				NO	NO	NO	NO	NO
<b>Indicator value</b>				<b>6.40E-07</b>	<b>6.20E-07</b>	<b>1.40E-07</b>	<b>3.00E-07</b>	<b>3.40E-07</b>

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#### Licensee Comments:

- 4Q/17: Changed PRA Parameter(s).
- 2Q/17: Changed PRA Parameter(s).
- 1Q/17: Risk Cap Invoked.
- 4Q/16: Risk Cap Invoked. Changed PRA Parameter(s).
- 4Q/16: Changed PRA Parameter(s).

### 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

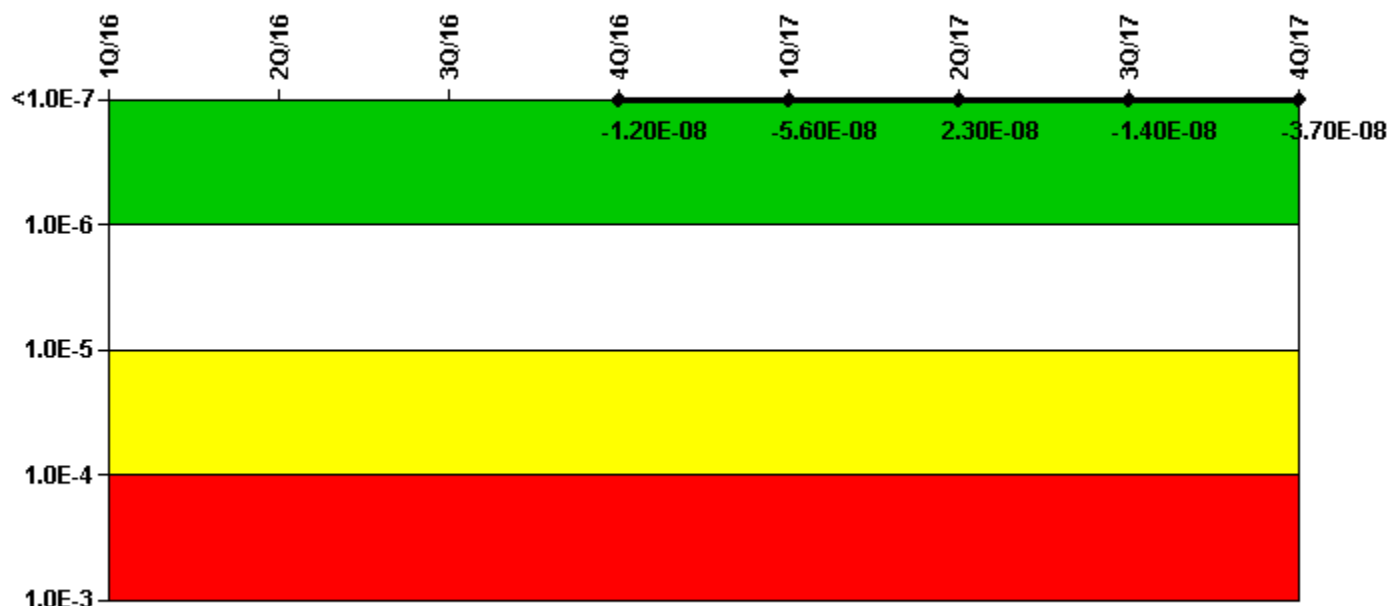
	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17	4Q/17
UAI ( $\Delta$ CDF)				-2.78E-08	-2.72E-08	-2.36E-08	7.07E-08	4.54E-08
URI ( $\Delta$ CDF)					-5.79E-10	-6.96E-10	-9.18E-10	-1.24E-09
PLE				NO	NO	NO	NO	NO
Indicator value				-2.80E-08	-2.80E-08	-2.40E-08	7.00E-08	4.40E-08

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#### Licensee Comments:

- 4Q/17: Changed PRA Parameter(s).
- 2Q/17: Changed PRA Parameter(s).
- 4Q/16: Changed PRA Parameter(s).

### 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

	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17	4Q/17
UAI (ΔCDF)						6.41E-08	4.10E-08	3.16E-08
URI (ΔCDF)					-1.14E-07	-4.13E-08	-5.48E-08	-6.85E-08
PLE				NO	NO	NO	NO	NO
Indicator value				-1.20E-08	-5.60E-08	2.30E-08	-1.40E-08	-3.70E-08

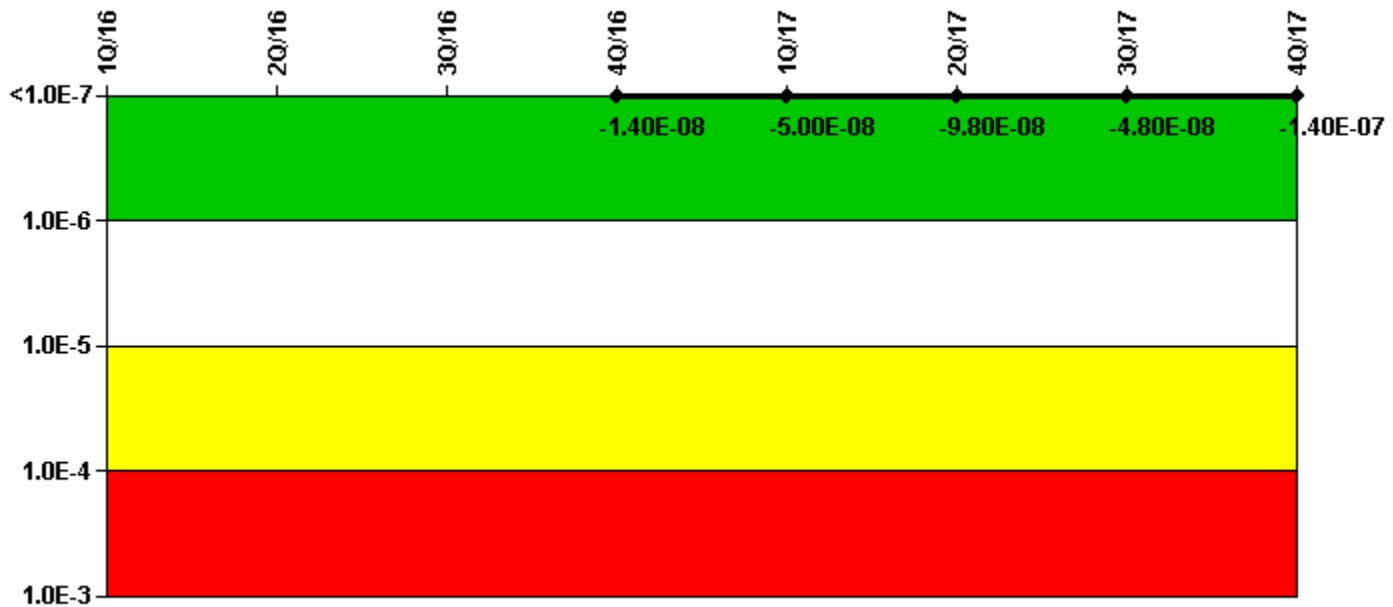
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#### Licensee Comments:

- 4Q/17: Changed PRA Parameter(s).
- 2Q/17: Changed PRA Parameter(s).
- 4Q/16: Changed PRA Parameter(s).



### 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

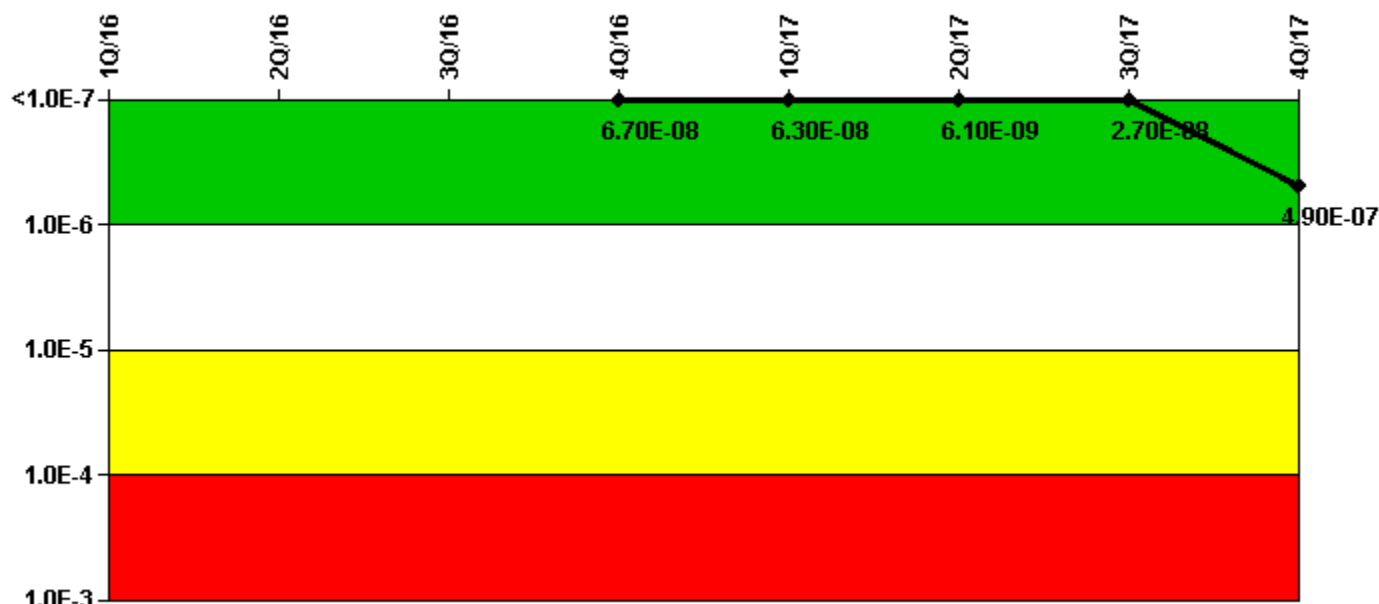
	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17	4Q/17
UAI ( $\Delta$ CDF)				-1.42E-08	-1.42E-08	-1.38E-08	5.55E-08	3.39E-08
URI ( $\Delta$ CDF)					-3.62E-08	-8.44E-08	-1.04E-07	-1.77E-07
PLE				NO	NO	NO	NO	NO
Indicator value				-1.40E-08	-5.00E-08	-9.80E-08	-4.80E-08	-1.40E-07

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#### Licensee Comments:

- 4Q/17: Changed PRA Parameter(s).
- 2Q/17: Changed PRA Parameter(s).
- 4Q/16: Changed PRA Parameter(s).

### 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

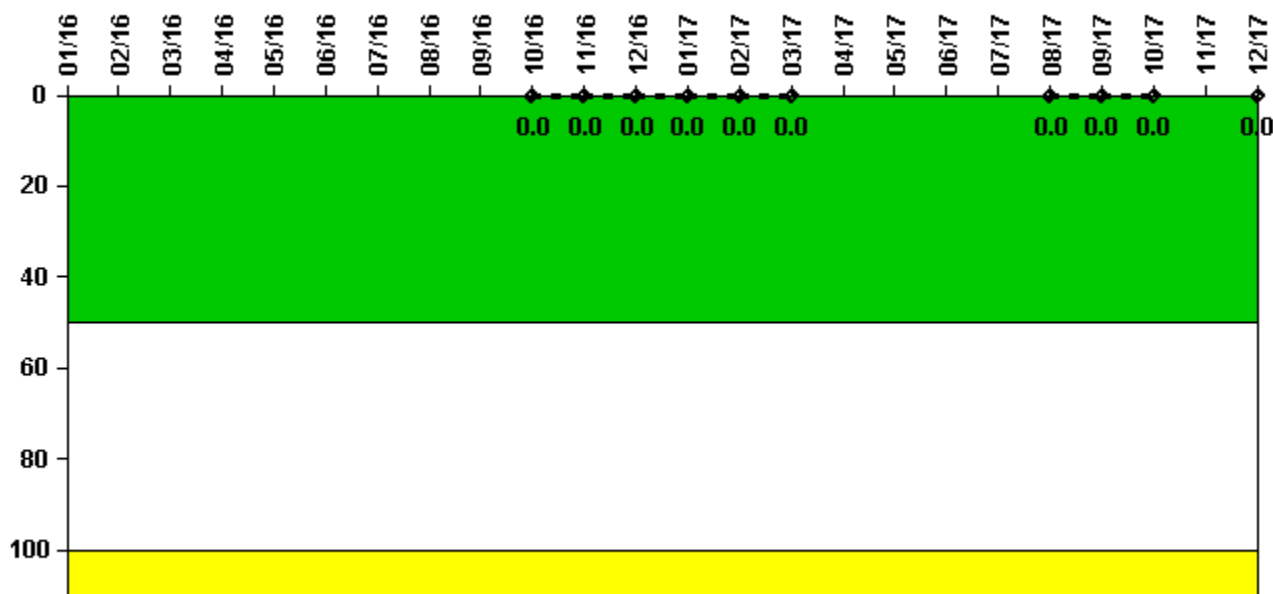
	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17	4Q/17
UAI (ΔCDF)								4.59E-07
URI (ΔCDF)				6.67E-08	6.26E-08	6.07E-09	2.74E-08	2.96E-08
PLE				NO	NO	NO	NO	NO
Indicator value				6.70E-08	6.30E-08	6.10E-09	2.70E-08	4.90E-07

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#### Licensee Comments:

- 4Q/17: Changed PRA Parameter(s).
- 3Q/17: Changed PRA Parameter(s).
- 2Q/17: Changed PRA Parameter(s).
- 2Q/17: Changed PRA Parameter(s).
- 1Q/17: Changed PRA Parameter(s).
- 4Q/16: Changed PRA Parameter(s).
- 4Q/16: Changed PRA Parameter(s).

### Reactor Coolant System Activity



Thresholds: White > 50.0 Yellow > 100.0

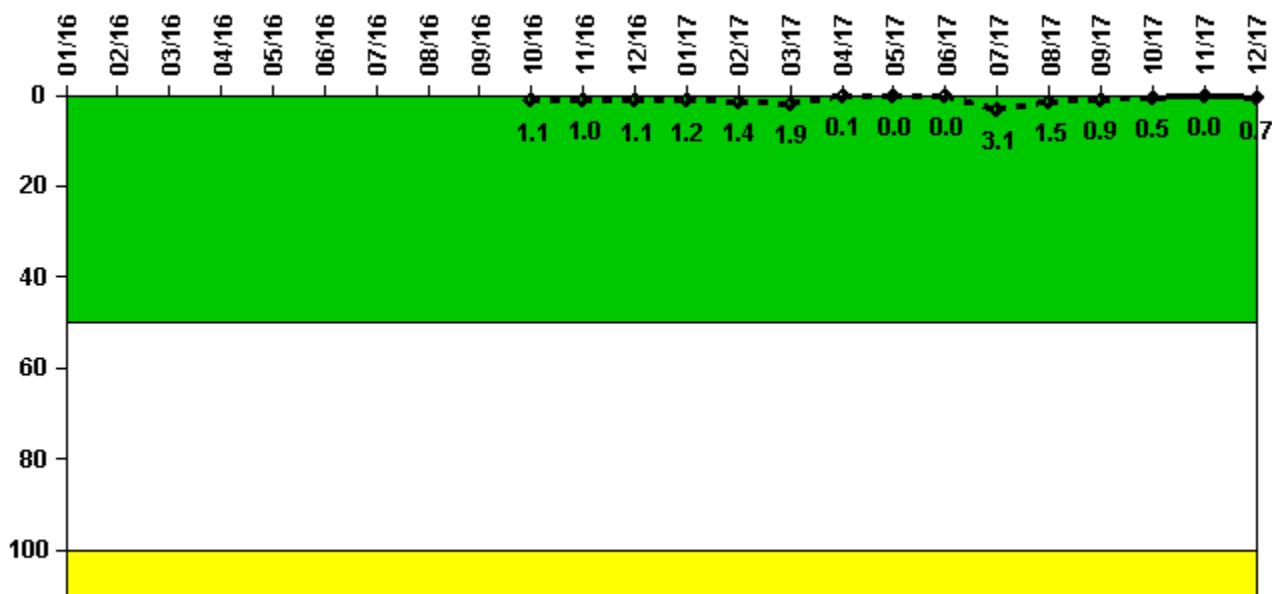
#### Notes

Reactor Coolant System Activity	1/16	2/16	3/16	4/16	5/16	6/16	7/16	8/16	9/16	10/16	11/16	12/16
Maximum activity								0.000036	0.000050	0.000064		
Technical specification limit								0.3	0.3	0.3		
Indicator value								0	0	0		
Reactor Coolant System Activity	1/17	2/17	3/17	4/17	5/17	6/17	7/17	8/17	9/17	10/17	11/17	12/17
Maximum activity	0.000066	0.000080	0.000075	N/A	N/A	N/A	N/A	0.000077	0.000083	0.000083	N/A	0.000060
Technical specification limit	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Indicator value	0	0	0	N/A	N/A	N/A	N/A	0	0	0	N/A	0

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Licensee Comments: none

### Reactor Coolant System Leakage



Thresholds: White > 50.0 Yellow > 100.0

#### Notes

**Reactor Coolant System Leakage** 1/16 2/16 3/16 4/16 5/16 6/16 7/16 8/16 9/16 10/16 11/16 12/16

Maximum leakage 0.110 0.100 0.110

Technical specification limit 10.0 10.0 10.0

**Indicator value** 1.1 1.0 1.1

**Reactor Coolant System Leakage** 1/17 2/17 3/17 4/17 5/17 6/17 7/17 8/17 9/17 10/17 11/17 12/17

Maximum leakage 0.120 0.140 0.190 0.010 0 0 0.310 0.150 0.090 0.050 0 0.070

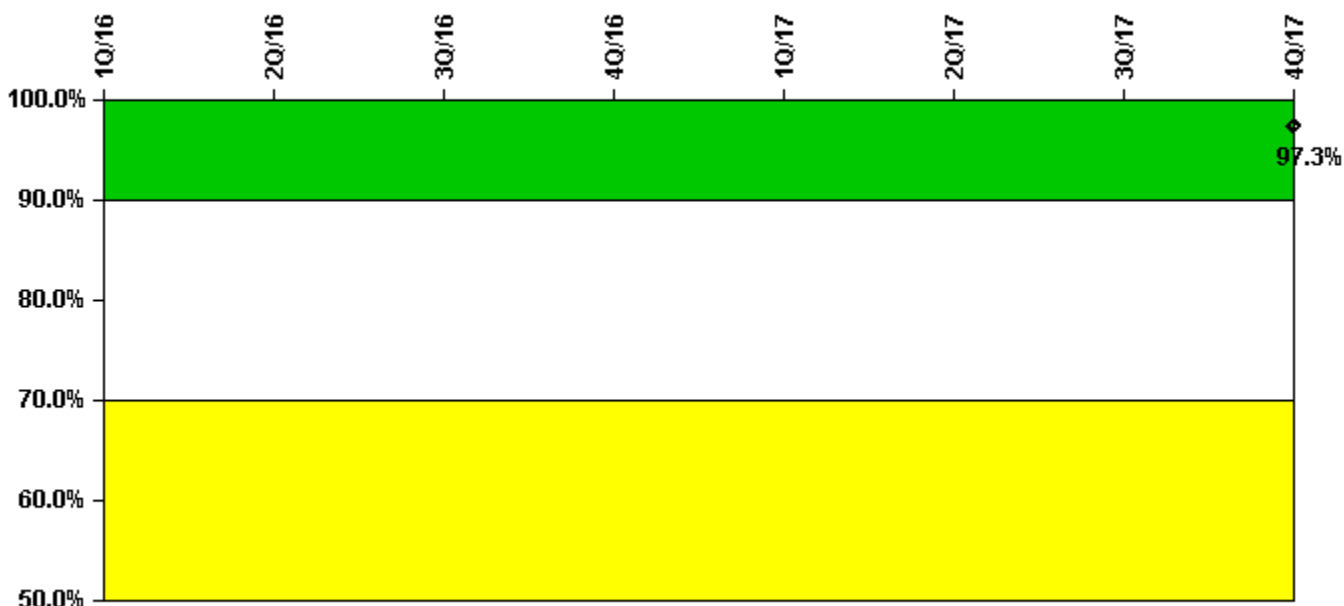
Technical specification limit 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0

**Indicator value** 1.2 1.4 1.9 0.1 0 0 3.1 1.5 0.9 0.5 0 0.7

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Licensee Comments: none

### Drill/Exercise Performance



Thresholds: White < 90.0% Yellow < 70.0%

#### Notes

#### Drill/Exercise Performance 1Q/16 2Q/16 3Q/16 4Q/16 1Q/17 2Q/17 3Q/17 4Q/17

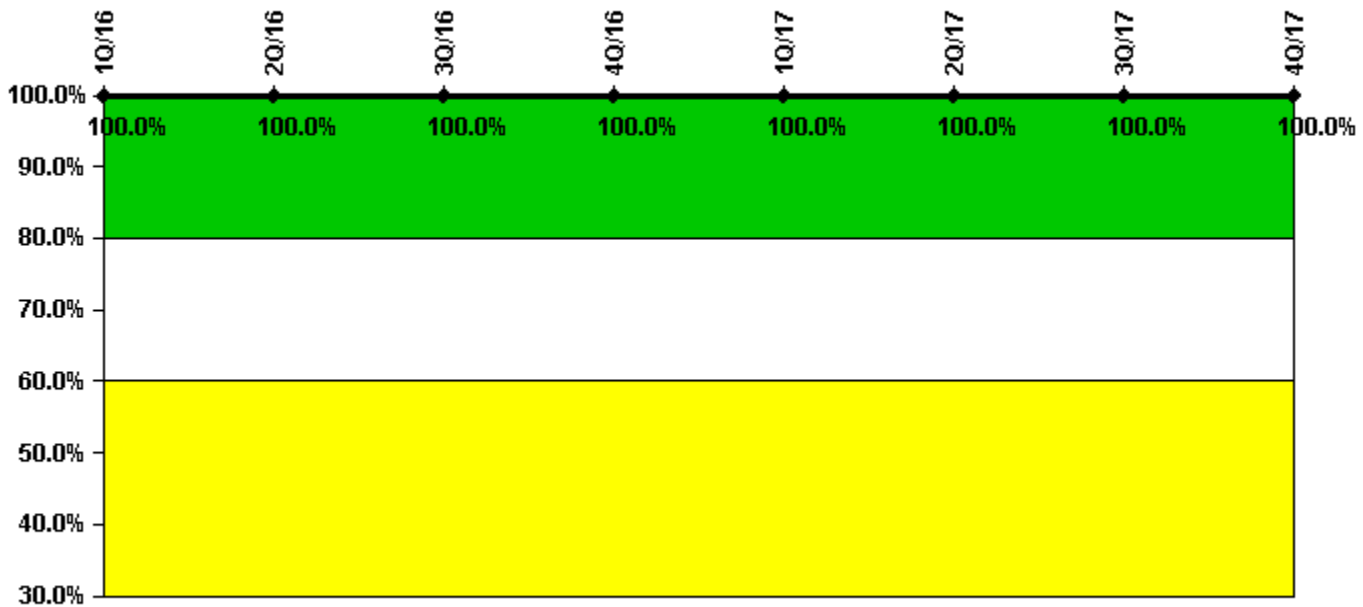
Successful opportunities	34.0	52.0	14.0	42.0	32.0	24.0	85.0	8.0
Total opportunities	36.0	52.0	14.0	44.0	32.0	24.0	89.0	8.0

Indicator value 97.3%

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Licensee Comments: none

### ERO Drill Participation



Thresholds: White < 80.0% Yellow < 60.0%

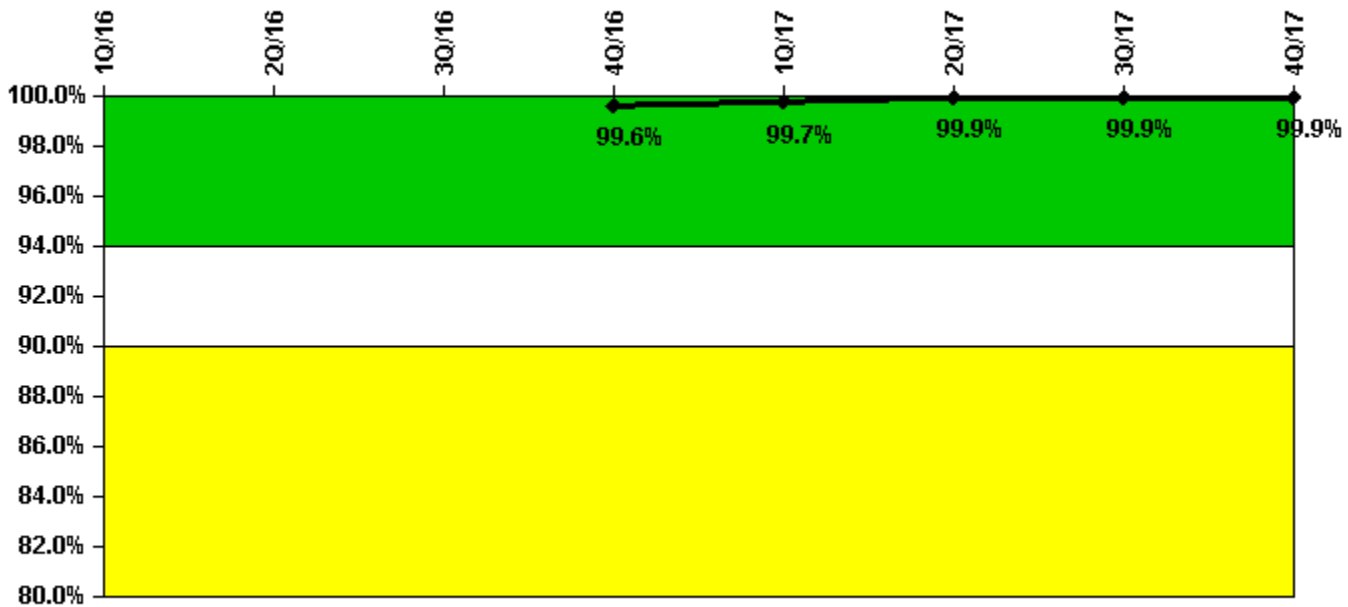
#### Notes

ERO Drill Participation	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17	4Q/17
Participating Key personnel	74.0	76.0	82.0	81.0	77.0	77.0	80.0	74.0
Total Key personnel	74.0	76.0	82.0	81.0	77.0	77.0	80.0	74.0
<b>Indicator value</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

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Licensee Comments: none

### Alert & Notification System



Thresholds: White < 94.0% Yellow < 90.0%

#### Notes

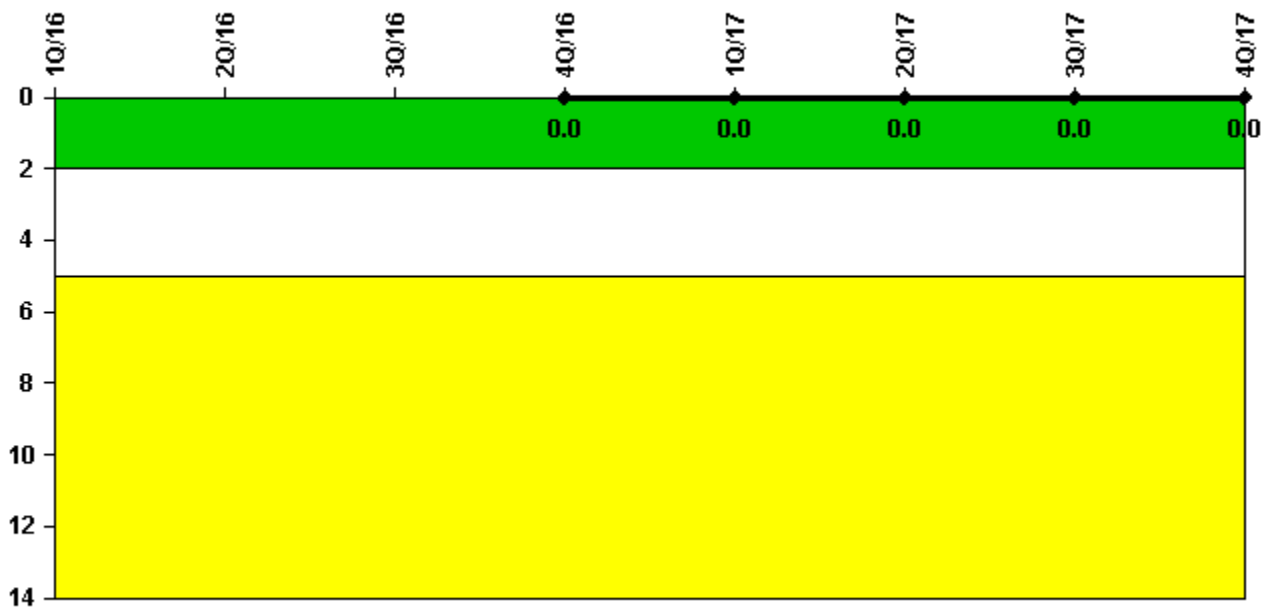
Alert & Notification System	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17	4Q/17
Successful siren-tests	906	699	805	808	909	807	807	807
Total sirens-tests	909	707	808	808	909	808	808	808

**Indicator value** 99.6% 99.7% 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

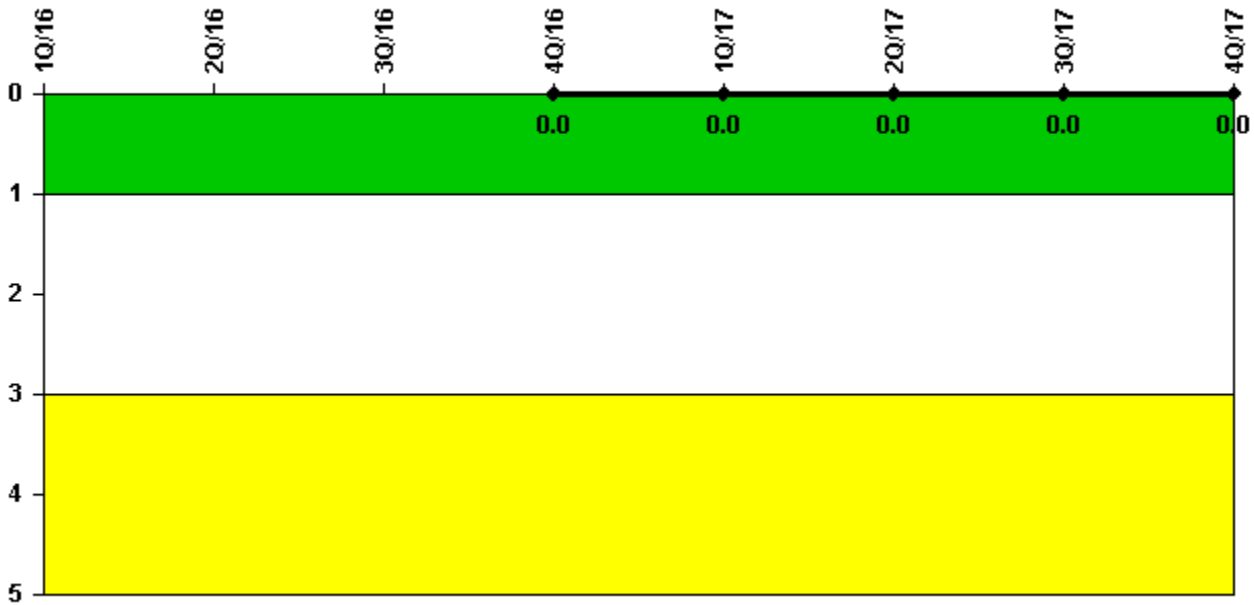
Occupational Exposure Control Effectiveness	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17	4Q/17
High radiation area occurrences	0	0	0	0	0	0	0	0
Very high radiation area occurrences	0	0	0	0	0	0	0	0
Unintended exposure occurrences	0	0	0	0	0	0	0	0
<b>Indicator value</b>					<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

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Licensee Comments: none



### RETS/ODCM Radiological Effluent



Thresholds: White > 1.0 Yellow > 3.0

#### Notes

**RETS/ODCM Radiological Effluent** 1Q/16 2Q/16 3Q/16 4Q/16 1Q/17 2Q/17 3Q/17 4Q/17

RETS/ODCM occurrences 0 0 0 0 0 0 0 0

**Indicator value** 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: February 1, 2018*

*Page Last Reviewed/Updated Monday, November 06, 2017*