



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

## River Bend 1 – Quarterly Performance Indicators

### 4Q/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)



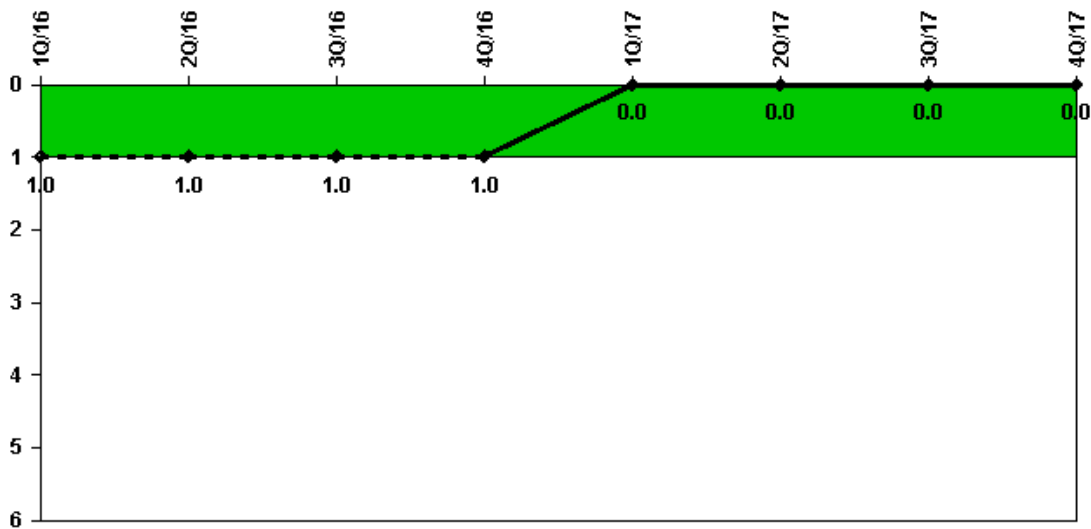
**Notes**

<b>Unplanned Power Changes per 7000 Critical Hrs</b>	<b>1Q/16</b>	<b>2Q/16</b>	<b>3Q/16</b>	<b>4Q/16</b>	<b>1Q/17</b>	<b>2Q/17</b>	<b>3Q/17</b>	<b>4Q/17</b>
Unplanned power changes	1.0	0	0	0	0	0	0	0
Critical hours	1320.4	1867.5	2208.0	2209.0	1174.3	2136.3	2163.4	2209.0
<b>Indicator value</b>	<b>0.9</b>	<b>0.9</b>	<b>0.9</b>	<b>0.9</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

▲ TOP

Licensee Comments: none

**Unplanned Scrams with Complications**



Thresholds: White > 1.0

**Notes**

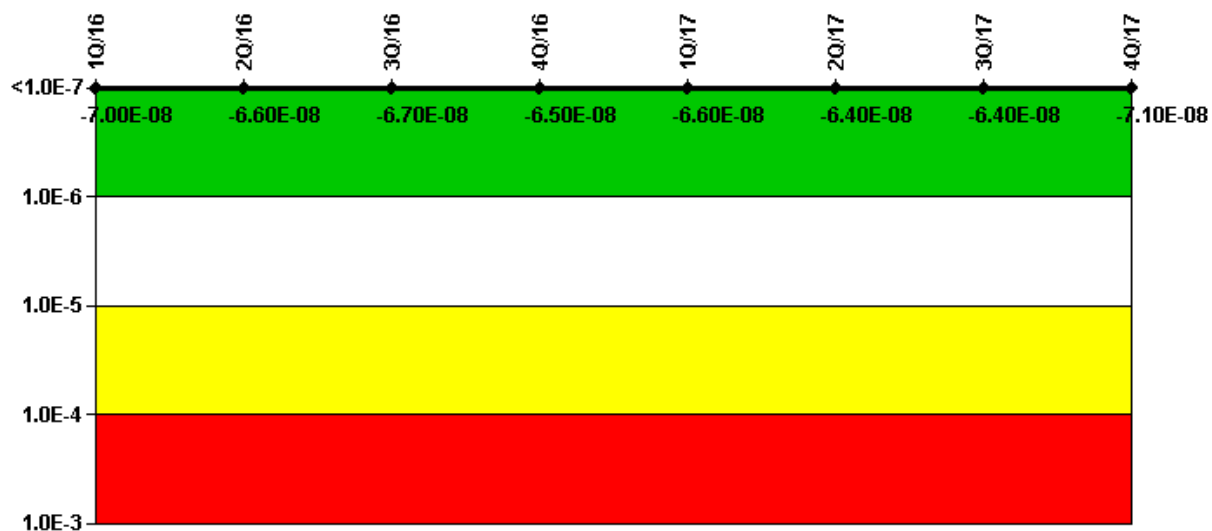
<b>Unplanned Scrams with Complications</b>	<b>1Q/16</b>	<b>2Q/16</b>	<b>3Q/16</b>	<b>4Q/16</b>	<b>1Q/17</b>	<b>2Q/17</b>	<b>3Q/17</b>	<b>4Q/17</b>
Scrams with complications	1.0	0	0	0	0	0	0	0
<b>Indicator value</b>	<b>1.0</b>	<b>1.0</b>	<b>1.0</b>	<b>1.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>

▲ 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

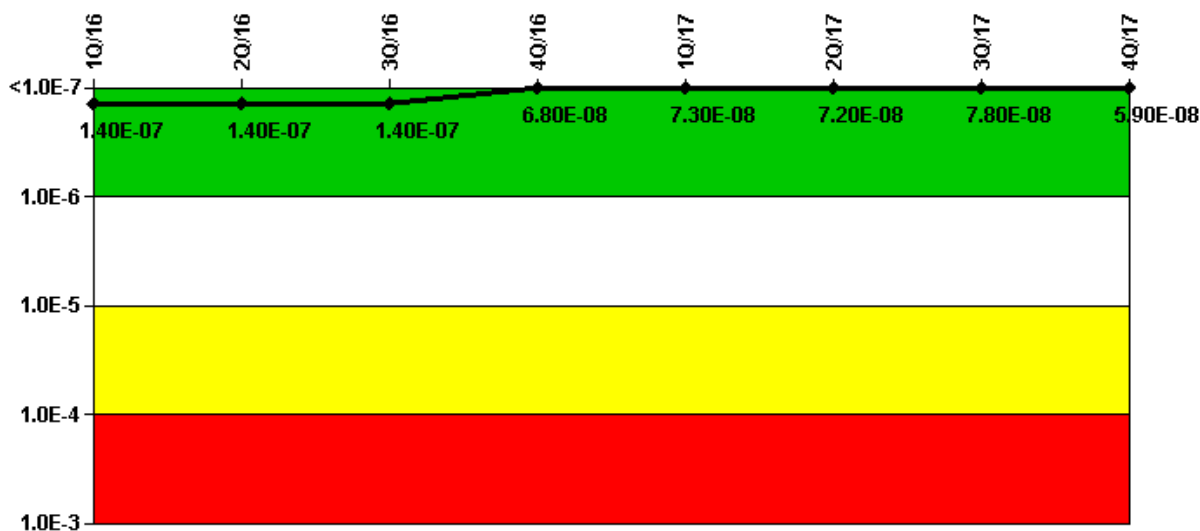
#### Mitigating Systems Performance Index, Emergency AC Power System

	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17	4Q/17
UAI (ΔCDF)	1.47E-09	2.90E-09	1.16E-09	2.16E-09	1.43E-09	8.03E-09	8.01E-09	7.10E-09
URI (ΔCDF)	-7.14E-08	-6.90E-08	-6.85E-08	-6.70E-08	-6.77E-08	-7.22E-08	-7.20E-08	-7.80E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-7.00E-08	-6.60E-08	-6.70E-08	-6.50E-08	-6.60E-08	-6.40E-08	-6.40E-08	-7.10E-08

▲ TOP

Licensee Comments: none

### Mitigating Systems Performance Index, High Pressure Injection System



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

**Notes**

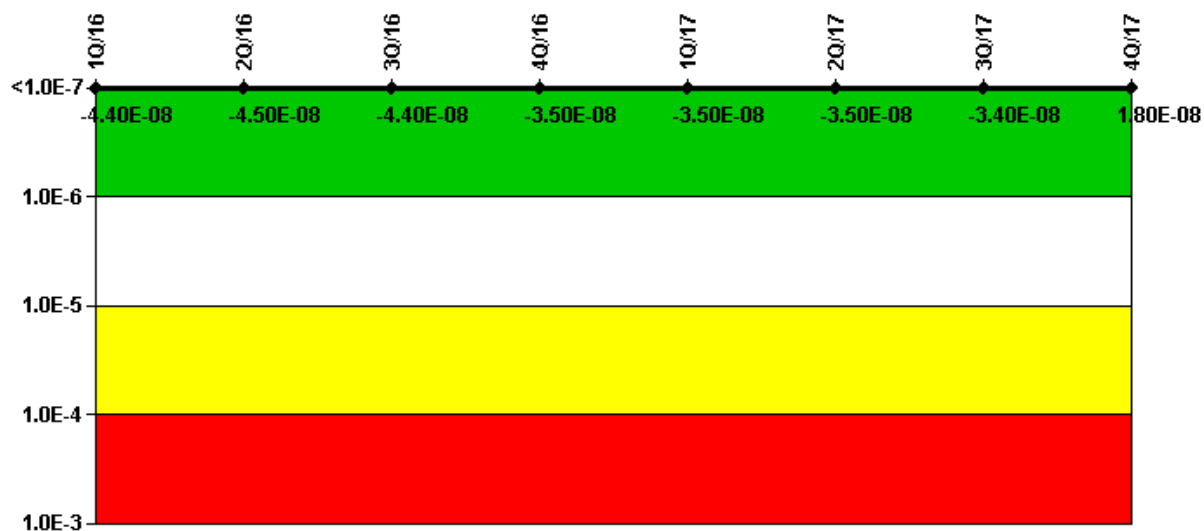
**Mitigating Systems Performance Index, High Pressure Injection System**

	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17	4Q/17
UAI (ΔCDF)	1.34E-08	1.11E-08	8.57E-09	2.56E-09	8.18E-09	9.92E-09	2.91E-08	9.20E-09
URI (ΔCDF)	1.25E-07	1.33E-07	1.33E-07	6.56E-08	6.52E-08	6.17E-08	4.85E-08	4.99E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
<b>Indicator value</b>	<b>1.40E-07</b>	<b>1.40E-07</b>	<b>1.40E-07</b>	<b>6.80E-08</b>	<b>7.30E-08</b>	<b>7.20E-08</b>	<b>7.80E-08</b>	<b>5.90E-08</b>

▲ 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

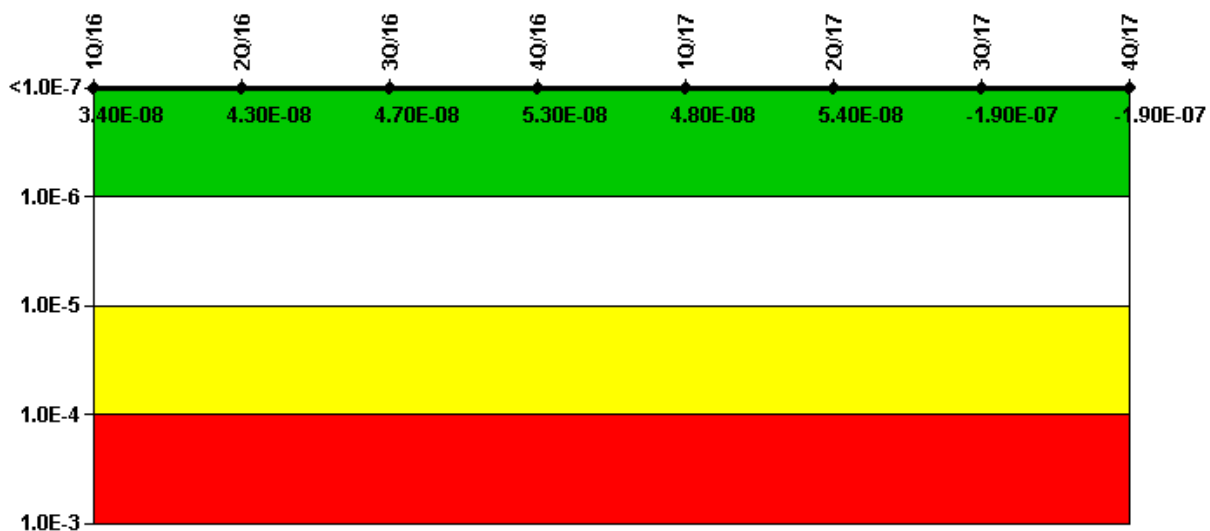
#### Mitigating Systems Performance Index, Heat Removal System

	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17	4Q/17
UAI ( $\Delta$ CDF)	-1.05E-08	-1.05E-08	-1.05E-08	-1.34E-09	-4.21E-09	-4.35E-09	-5.11E-09	1.01E-08
URI ( $\Delta$ CDF)	-3.34E-08	-3.50E-08	-3.31E-08	-3.39E-08	-3.07E-08	-3.06E-08	-2.89E-08	8.31E-09
PLE	NO	NO	NO	NO	NO	NO	NO	NO
<b>Indicator value</b>	<b>-4.40E-08</b>	<b>-4.50E-08</b>	<b>-4.40E-08</b>	<b>-3.50E-08</b>	<b>-3.50E-08</b>	<b>-3.50E-08</b>	<b>-3.40E-08</b>	<b>1.80E-08</b>

▲ 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**

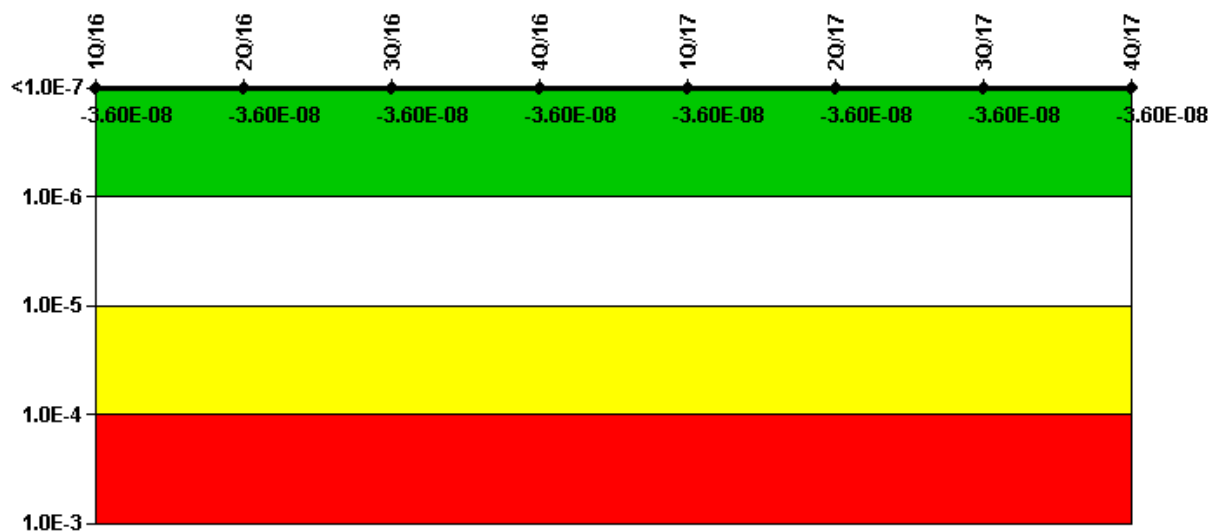
	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17	4Q/17
UAI ( $\Delta$ CDF)	-1.20E-08	-1.61E-09	8.05E-10	8.59E-09	1.21E-08	1.86E-08	-1.43E-08	-1.47E-08
URI ( $\Delta$ CDF)	4.56E-08	4.41E-08	4.58E-08	4.48E-08	3.59E-08	3.53E-08	-1.73E-07	-1.73E-07
PLE	NO	NO	NO	NO	NO	NO	NO	NO
<b>Indicator value</b>	<b>3.40E-08</b>	<b>4.30E-08</b>	<b>4.70E-08</b>	<b>5.30E-08</b>	<b>4.80E-08</b>	<b>5.40E-08</b>	<b>-1.90E-07</b>	<b>-1.90E-07</b>

▲ 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

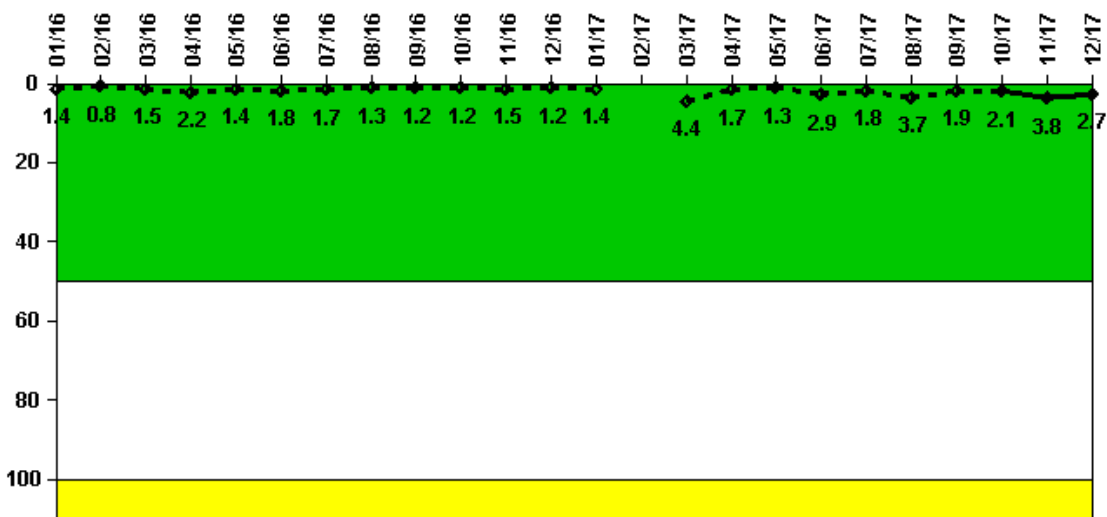
#### Mitigating Systems Performance Index, Cooling Water Systems

	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17	4Q/17
UAI ( $\Delta$ CDF)	-2.31E-09	-2.31E-09	-2.31E-09	-2.31E-09	-2.31E-09	-2.31E-09	-2.31E-09	-2.31E-09
URI ( $\Delta$ CDF)	-3.39E-08	-3.39E-08	-3.39E-08	-3.39E-08	-3.39E-08	-3.39E-08	-3.39E-08	-3.39E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
<b>Indicator value</b>	<b>-3.60E-08</b>	<b>-3.60E-08</b>	<b>-3.60E-08</b>	<b>-3.60E-08</b>	<b>-3.60E-08</b>	<b>-3.60E-08</b>	<b>-3.60E-08</b>	<b>-3.60E-08</b>

▲ TOP

Licensee Comments: none

### Reactor Coolant System Activity



Thresholds: White > 50.0 Yellow > 100.0

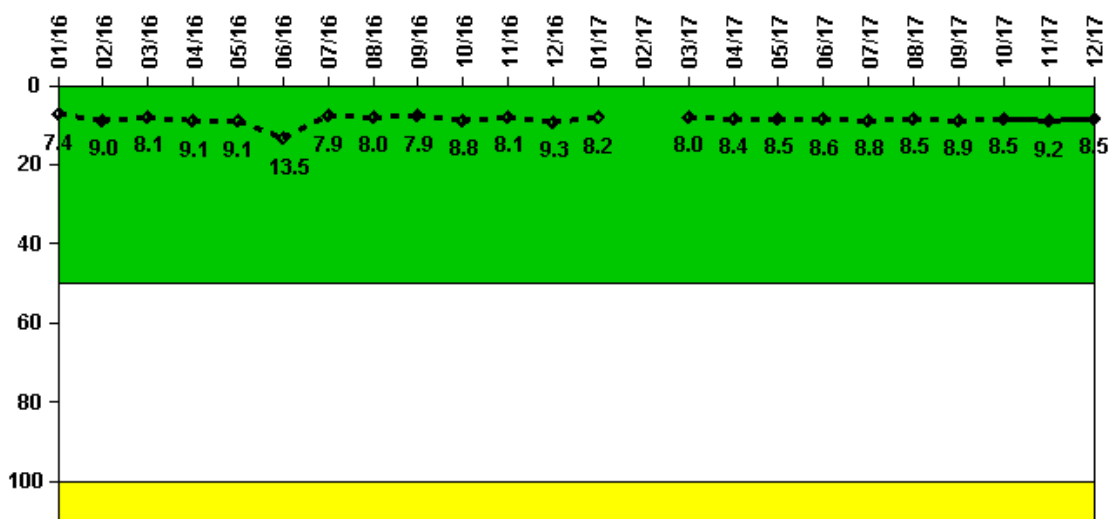
**Notes**

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	0.002747	0.001582	0.002948	0.004346	0.002886	0.003587	0.003331	0.002647	0.002376	0.002487	0.002930	0.002487
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
<b>Indicator value</b>	<b>1.4</b>	<b>0.8</b>	<b>1.5</b>	<b>2.2</b>	<b>1.4</b>	<b>1.8</b>	<b>1.7</b>	<b>1.3</b>	<b>1.2</b>	<b>1.2</b>	<b>1.5</b>	<b>1.2</b>
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	0.002848	N/A	0.008736	0.003487	0.002610	0.005880	0.003518	0.007453	0.003804	0.004238	0.007671	0.005353
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
<b>Indicator value</b>	<b>1.4</b>	<b>N/A</b>	<b>4.4</b>	<b>1.7</b>	<b>1.3</b>	<b>2.9</b>	<b>1.8</b>	<b>3.7</b>	<b>1.9</b>	<b>2.1</b>	<b>3.8</b>	<b>2.7</b>

TOP

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	2.230	2.700	2.420	2.740	2.720	4.040	2.370	2.410	2.360	2.630	2.420	2.800
Technical specification limit	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0

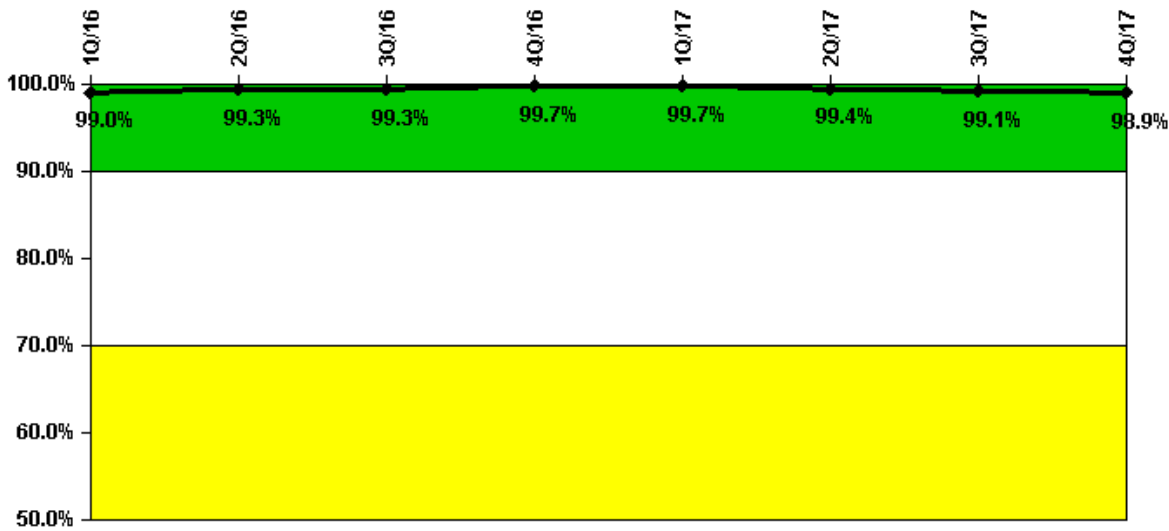
Indicator value	7.4	9.0	8.1	9.1	9.1	13.5	7.9	8.0	7.9	8.8	8.1	9.3
Reactor Coolant System Leakage	1/17	2/17	3/17	4/17	5/17	6/17	7/17	8/17	9/17	10/17	11/17	12/17
Maximum leakage	2.470	N/A	2.390	2.530	2.560	2.590	2.630	2.550	2.660	2.560	2.750	2.540
Technical specification limit	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0

Indicator value	8.2	N/A	8.0	8.4	8.5	8.6	8.8	8.5	8.9	8.5	9.2	8.5
-----------------	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

▲ TOP

Licensee Comments: none

### Drill/Exercise Performance



Thresholds: White < 90.0% Yellow < 70.0%

#### Notes

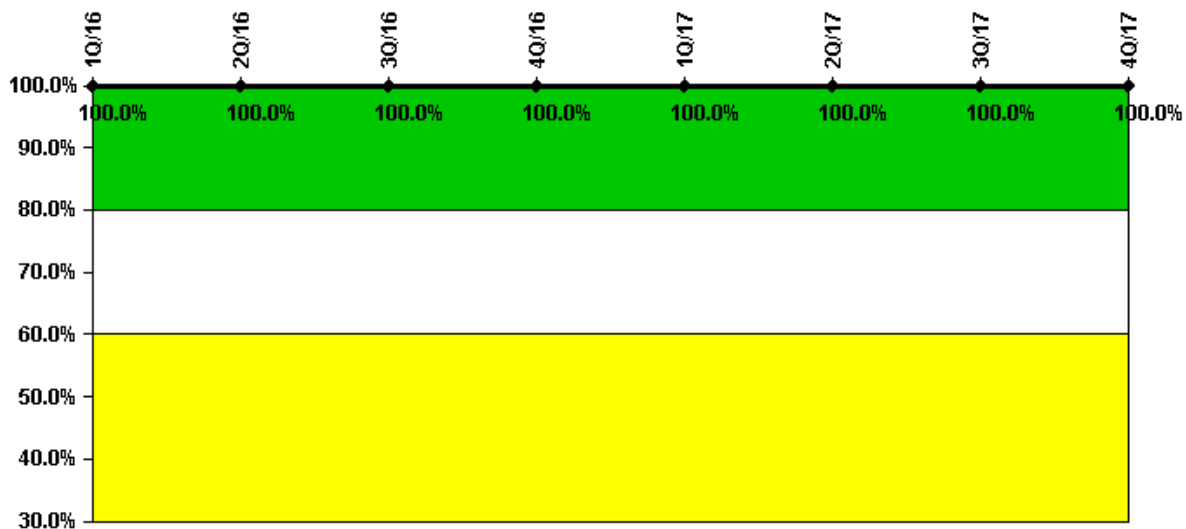
Drill/Exercise Performance	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17	4Q/17
Successful opportunities	12.0	34.0	39.0	45.0	32.0	47.0	47.0	24.0
Total opportunities	13.0	34.0	39.0	45.0	32.0	48.0	48.0	24.0

**Indicator value**                    **99.0% 99.3% 99.3% 99.7% 99.7% 99.4% 99.1% 98.9%**

▲ TOP

Licensee Comments: none

### ERO Drill Participation



Thresholds: White < 80.0% Yellow < 60.0%

**Notes**

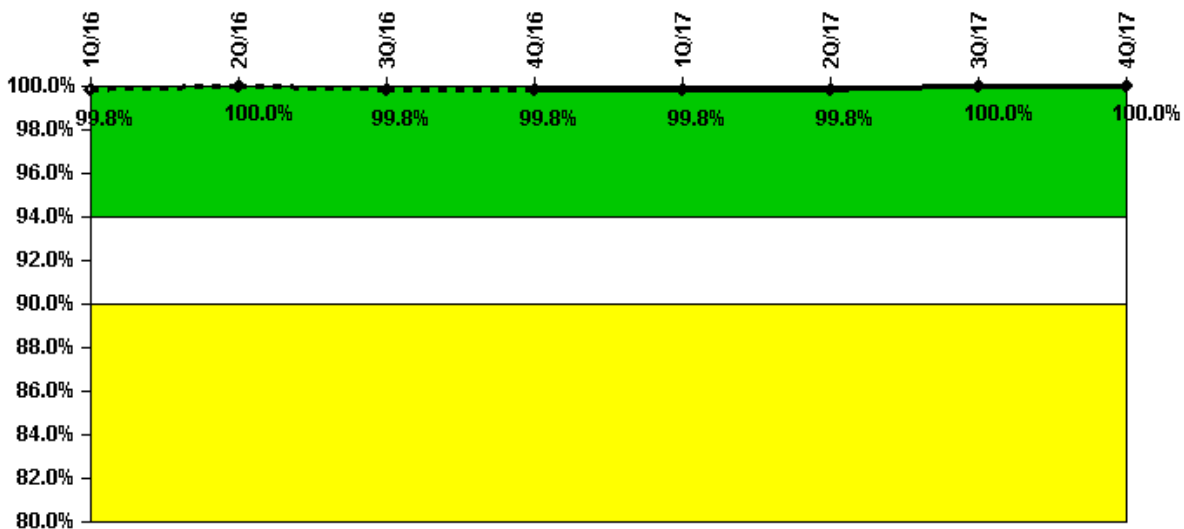
ERO Drill Participation	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17	4Q/17
Participating Key personnel	79.0	81.0	78.0	82.0	88.0	92.0	96.0	94.0
Total Key personnel	79.0	81.0	78.0	82.0	88.0	92.0	96.0	94.0

**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**

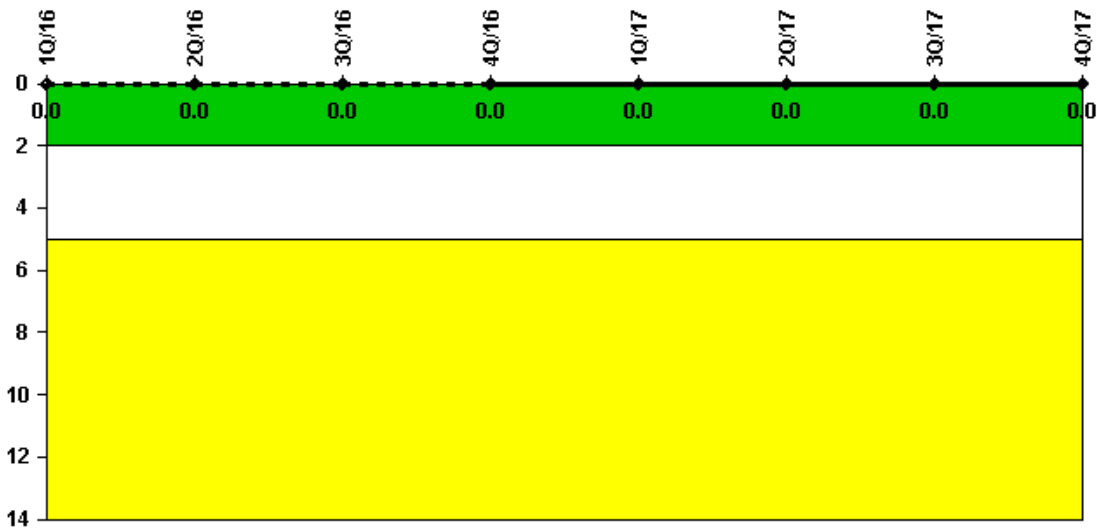
Alert & Notification System	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17	4Q/17
Successful siren-tests	911	910	916	923	923	923	923	923
Total sirens-tests	911	910	922	923	923	923	923	923

**Indicator value**                    **99.8% 100.0% 99.8% 99.8% 99.8% 99.8% 100.0% 100.0%**

▲ TOP

Licensee Comments: none

### Occupational Exposure Control Effectiveness



Thresholds: White > 2.0 Yellow > 5.0

**Notes**

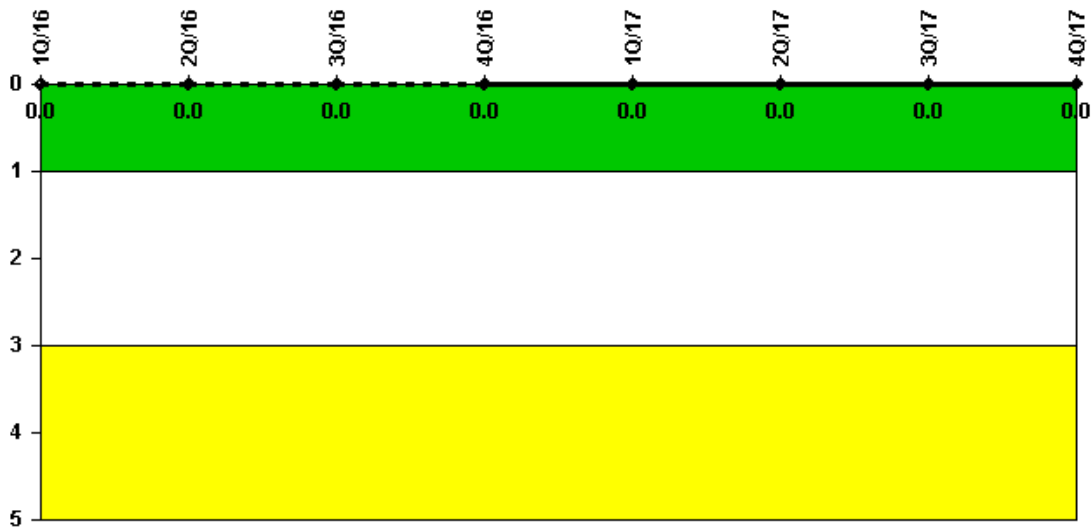
**Occupational Exposure Control Effectiveness** 1Q/16 2Q/16 3Q/16 4Q/16 1Q/17 2Q/17 3Q/17 4Q/17

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>	<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 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
<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

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