



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

## **Salem 1 – Quarterly Performance Indicators**

### **1Q/2017 Performance Indicators**

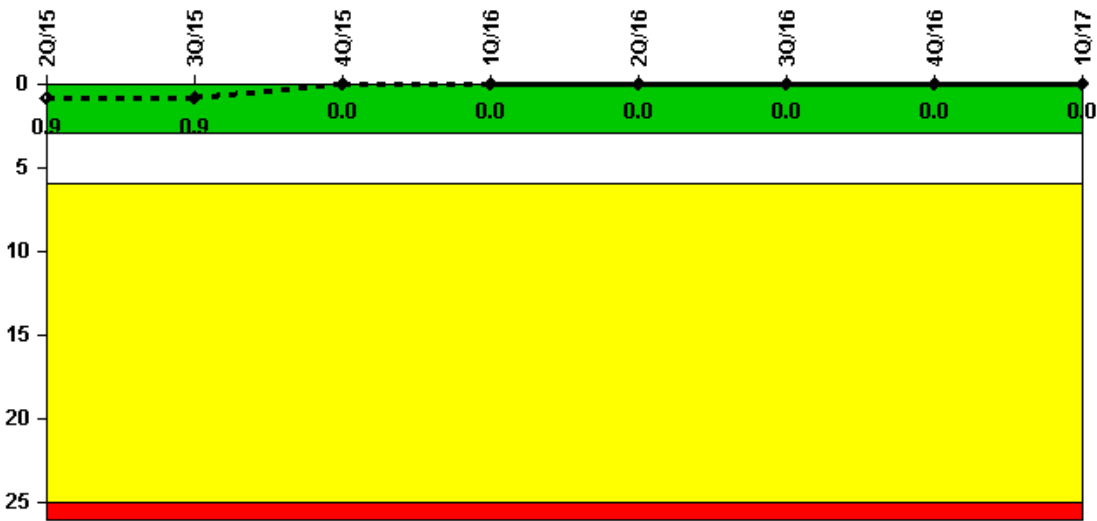
The solid trend line represents the current reporting period.

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)

### Unplanned Scrams per 7000 Critical Hrs



Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

#### Notes

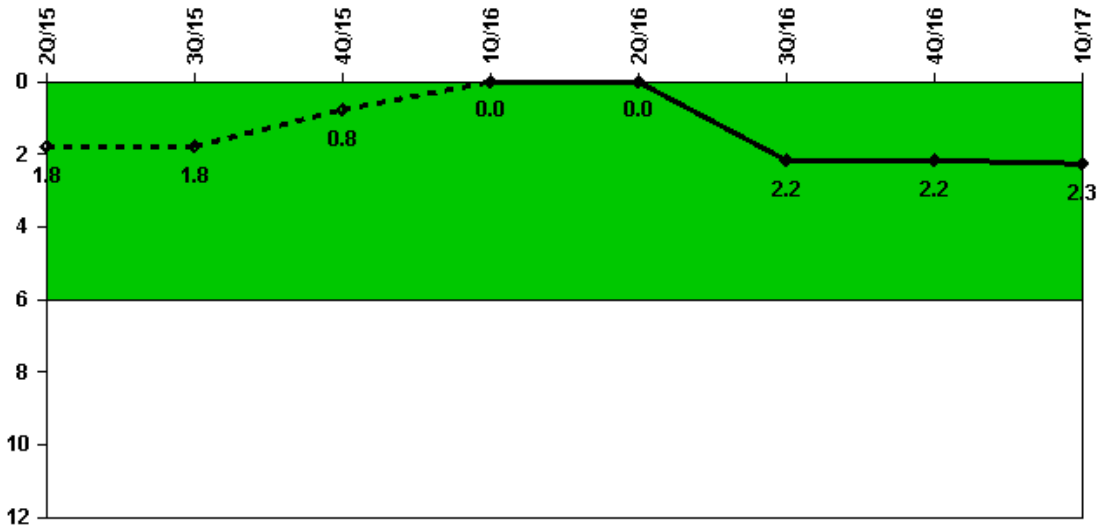
Unplanned Scrams per 7000 Critical Hrs	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17
Unplanned scrams	0	0	0	0	0	0	0	0
Critical hours	2184.0	2208.0	2209.0	2183.0	332.0	1531.6	2209.0	2115.4

Indicator value	0.9	0.9	0	0	0	0	0	0
-----------------	-----	-----	---	---	---	---	---	---

TOP

Licensee Comments: none

### Unplanned Power Changes per 7000 Critical Hrs



Thresholds: White > 6.0

**Notes**

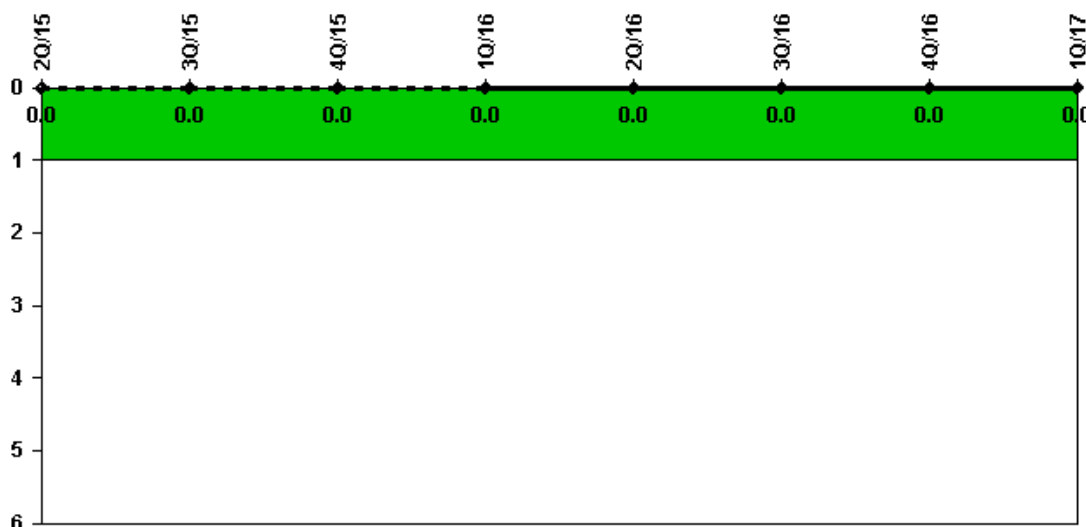
Unplanned Power Changes per 7000 Critical Hrs	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17
Unplanned power changes	0	0	0	0	0	2.0	0	0
Critical hours	2184.0	2208.0	2209.0	2183.0	332.0	1531.6	2209.0	2115.4
<b>Indicator value</b>	<b>1.8</b>	<b>1.8</b>	<b>0.8</b>	<b>0</b>	<b>0</b>	<b>2.2</b>	<b>2.2</b>	<b>2.3</b>

▲ TOP

Licensee Comments:

3Q/15: On 9/4/15, NRC issued Emergency License Amendment Request (LAR) No. 310, which removed the pressurizer power operated relief valve position indication from the accident monitoring instrumentation tech specs. Issuance of this emergency LAR eliminated the need to perform a tech spec required shutdown due to a PART 21 issue associated with position indication limit switches.

**Unplanned Scrams with Complications**



Thresholds: White > 1.0

**Notes**

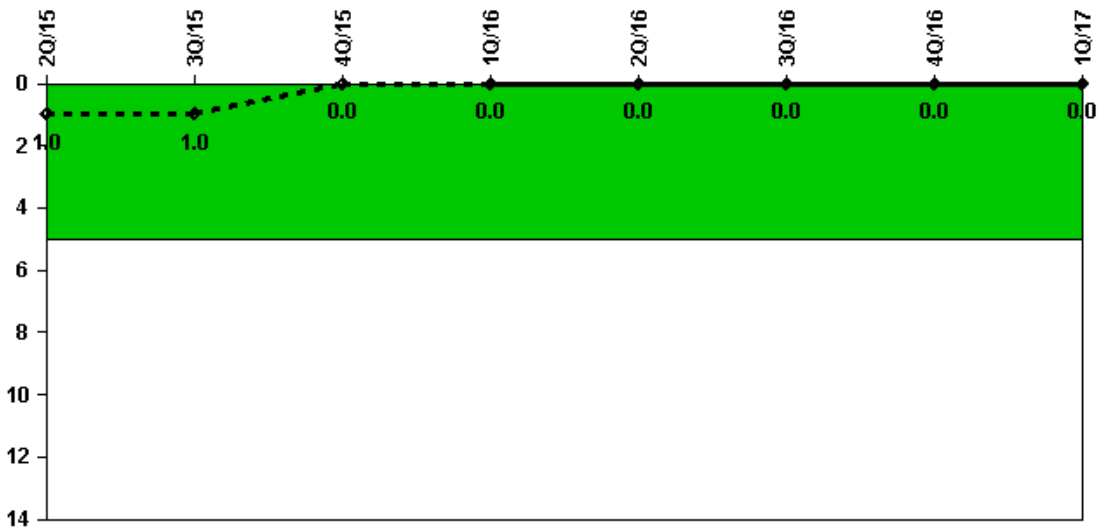
Unplanned Scrams with Complications	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17
Scrams with complications	0	0	0	0	0	0	0	0

<b>Indicator value</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
------------------------	------------	------------	------------	------------	------------	------------	------------	------------

▲ TOP

Licensee Comments: none

### Safety System Functional Failures (PWR)



Thresholds: White > 5.0

#### Notes

Safety System Functional Failures (PWR) 2Q/15 3Q/15 4Q/15 1Q/16 2Q/16 3Q/16 4Q/16 1Q/17

Safety System Functional Failures 0 0 0 0 0 0 0 0 0

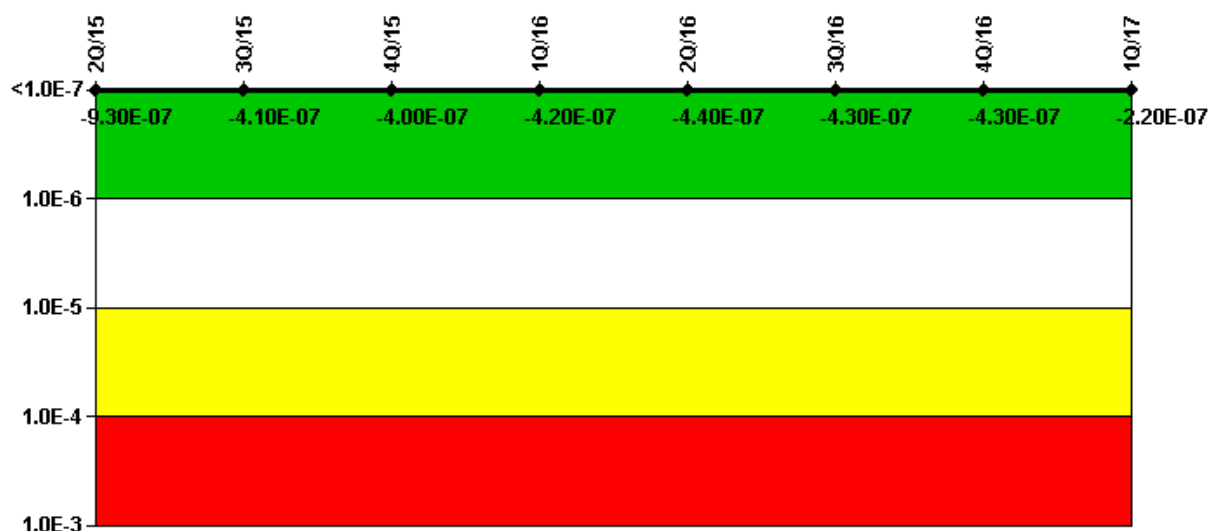
Indicator value 1 1 0 0 0 0 0 0 0

▲ TOP

Licensee Comments:

3Q/15: LER 272/2015-001-002 - Evaluation determined that a SSFF did not occur, therefore PSEG is removing the 10 CFR 50.73(a)(2) (v)(C) reporting criterion from the LER, and has removed the 1Q15 SSFF from the MS05 Performance Indicator. This change does not cause a change in PI color, which remains green.

### 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**

	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17
UAI (ΔCDF)	-1.66E-07	-1.42E-07	-1.42E-07	-1.42E-07	-1.41E-07	-1.40E-07	-1.40E-07	-7.62E-08
URI (ΔCDF)	-7.60E-07	-2.65E-07	-2.63E-07	-2.76E-07	-2.96E-07	-2.93E-07	-2.94E-07	-1.45E-07
PLE	NO	NO	NO	NO	NO	NO	NO	NO
<b>Indicator value</b>	<b>-9.30E-07</b>	<b>-4.10E-07</b>	<b>-4.00E-07</b>	<b>-4.20E-07</b>	<b>-4.40E-07</b>	<b>-4.30E-07</b>	<b>-4.30E-07</b>	<b>-2.20E-07</b>

▲ TOP

Licensee Comments:

1Q/17: Changed PRA Parameter(s).

4Q/16: Risk Cap Invoked.

3Q/16: Risk Cap Invoked.

2Q/16: Risk Cap Invoked.

1Q/16: Risk Cap Invoked.

4Q/15: Risk Cap Invoked.

3Q/15: Risk Cap Invoked.

2Q/15: 2Q12 Through 4Q14 data was revised due to an error in the demand and run time calculations. Following the changes, this PI remained green during all time periods, however the risk cap was invoked from 2Q12 through 3Q13.

### 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**

	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17
UAI ( $\Delta$ CDF)	-3.00E-10	-4.19E-10	-4.20E-10	-4.30E-10	-4.14E-10	-4.03E-10	-3.56E-10	-7.76E-10
URI ( $\Delta$ CDF)	-1.30E-09	-1.29E-09	-1.28E-09	-1.25E-09	-1.22E-09	-1.19E-09	-1.14E-09	-7.37E-10
PLE	NO	NO	NO	NO	NO	NO	NO	NO
<b>Indicator value</b>	<b>-1.60E-09</b>	<b>-1.70E-09</b>	<b>-1.70E-09</b>	<b>-1.70E-09</b>	<b>-1.60E-09</b>	<b>-1.60E-09</b>	<b>-1.50E-09</b>	<b>-1.50E-09</b>

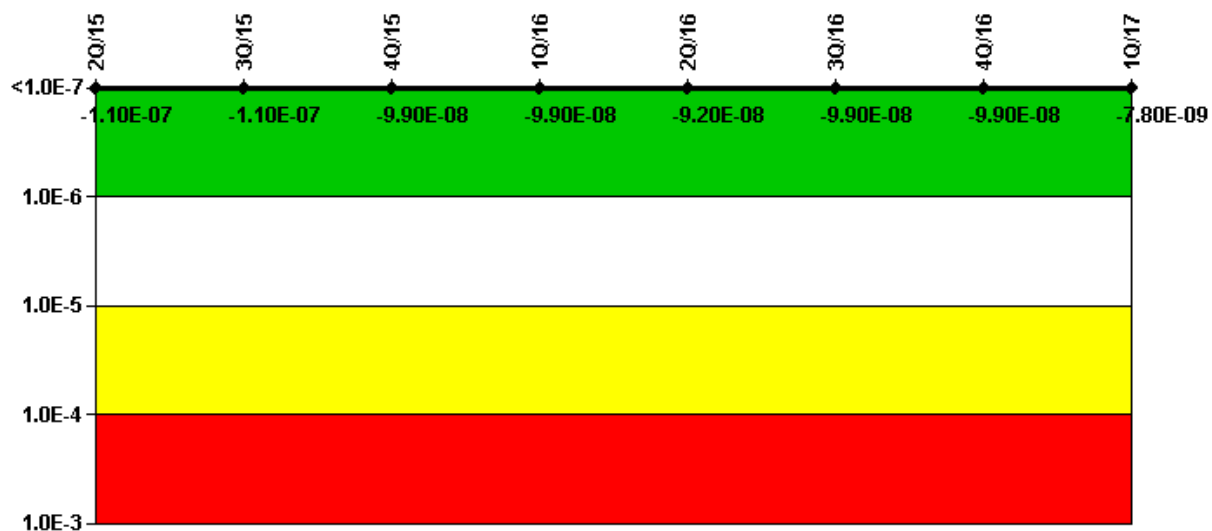
▲ TOP

Licensee Comments:

1Q/17: Changed PRA Parameter(s).

2Q/15: 1Q13 through 4Q14 data was revised due to an error in the demand and run time calculations. This PI remained green during all time periods following the changes,

### 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**

	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17
UAI (ΔCDF)	-1.72E-08	-1.72E-08	-1.72E-08	-1.72E-08	-1.72E-08	-1.72E-08	-1.72E-08	-1.40E-09
URI (ΔCDF)	-9.15E-08	-8.85E-08	-8.18E-08	-8.18E-08	-7.46E-08	-8.19E-08	-8.19E-08	-6.41E-09
PLE	NO	NO	NO	NO	NO	NO	NO	NO
<b>Indicator value</b>	<b>-1.10E-07</b>	<b>-1.10E-07</b>	<b>-9.90E-08</b>	<b>-9.90E-08</b>	<b>-9.20E-08</b>	<b>-9.90E-08</b>	<b>-9.90E-08</b>	<b>-7.80E-09</b>

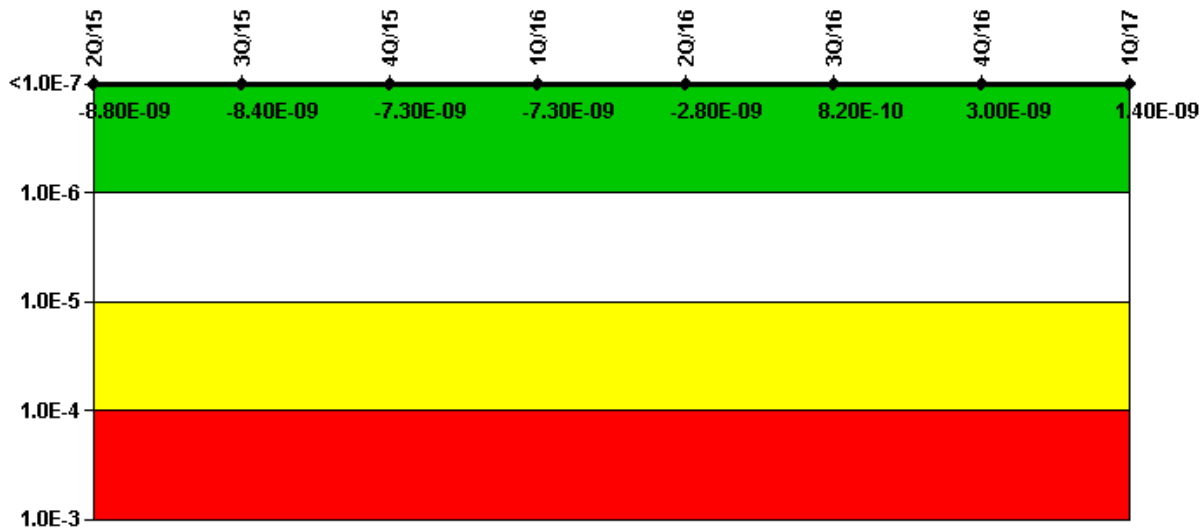
▲ TOP

Licensee Comments:

1Q/17: Changed PRA Parameter(s).

2Q/15: 3Q13 through 4Q14 data was revised due to an error in the demand and run time calculations. This PI remained green during all time periods following the changes,

### 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

	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17
UAI ( $\Delta$ CDF)	9.12E-09	9.12E-09	1.03E-08	1.02E-08	1.39E-08	1.88E-08	2.11E-08	1.41E-08
URI ( $\Delta$ CDF)	-1.79E-08	-1.76E-08	-1.76E-08	-1.76E-08	-1.67E-08	-1.80E-08	-1.81E-08	-1.27E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-8.80E-09	-8.40E-09	-7.30E-09	-7.30E-09	-2.80E-09	8.20E-10	3.00E-09	1.40E-09

▲ TOP

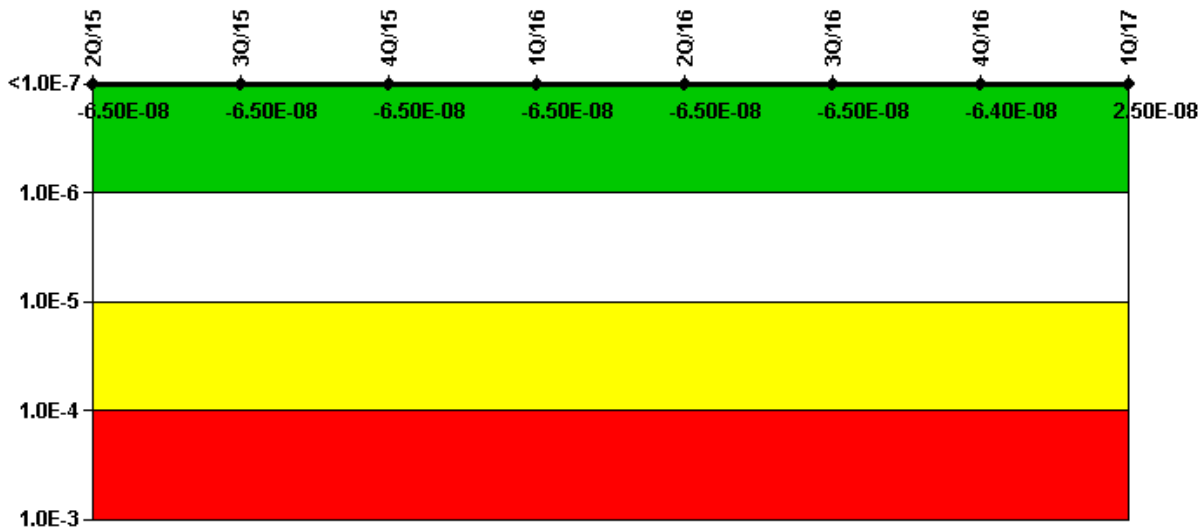
Licensee Comments:

1Q/17: Changed PRA Parameter(s).

2Q/15: 2Q14 through 4Q14 data was revised due to an error in the demand and run time calculations. This PI remained green during all time periods following the changes,



### 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**

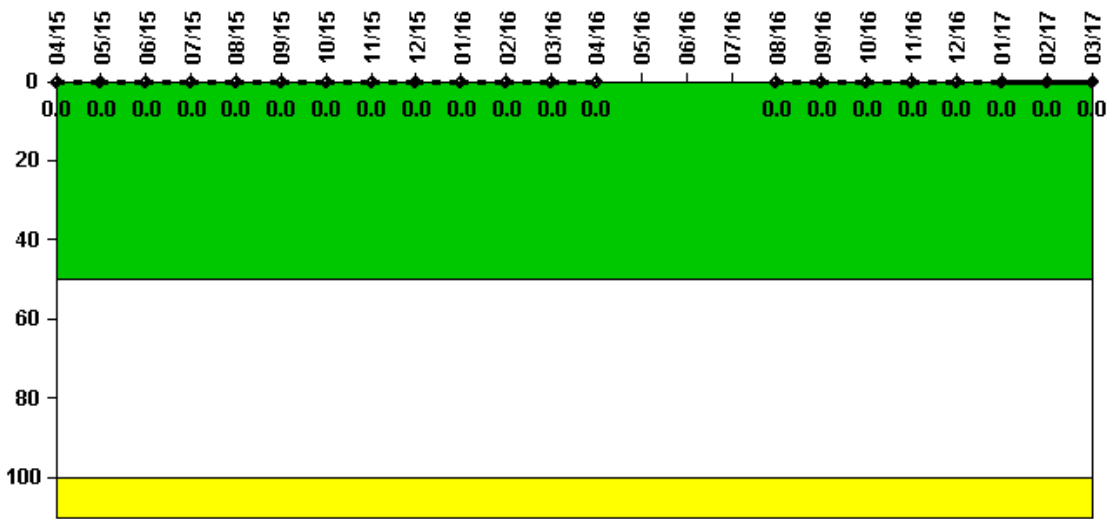
	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17
UAI ( $\Delta$ CDF)	-2.82E-08	-2.81E-08	-2.81E-08	-2.81E-08	-2.81E-08	-2.81E-08	-2.78E-08	6.15E-08
URI ( $\Delta$ CDF)	-3.66E-08	-3.66E-08	-3.66E-08	-3.66E-08	-3.66E-08	-3.66E-08	-3.66E-08	-3.67E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
<b>Indicator value</b>	<b>-6.50E-08</b>	<b>-6.50E-08</b>	<b>-6.50E-08</b>	<b>-6.50E-08</b>	<b>-6.50E-08</b>	<b>-6.50E-08</b>	<b>-6.40E-08</b>	<b>2.50E-08</b>

▲ TOP

Licensee Comments:

1Q/17: Changed PRA Parameter(s).

### Reactor Coolant System Activity



Thresholds: White > 50.0 Yellow > 100.0

**Notes**

Reactor Coolant System Activity	4/15	5/15	6/15	7/15	8/15	9/15	10/15	11/15	12/15	1/16	2/16	3/16
Maximum activity	0.000069	0.000135	0.000074	0.000216	0.000077	0.000084	0.000101	0.000148	0.000102	0.000187	0.000142	0.000097
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

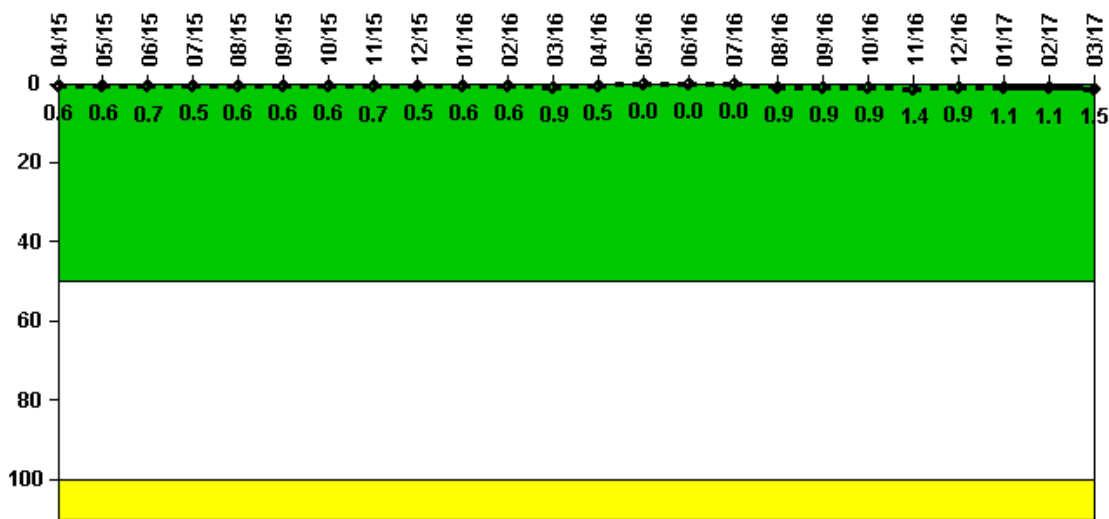
Reactor Coolant System Activity	4/16	5/16	6/16	7/16	8/16	9/16	10/16	11/16	12/16	1/17	2/17	3/17
Maximum activity	0.000183	N/A	N/A	N/A	0.000050	0.000100	0.000046	0.000048	0.000049	0.000054	0.000052	0.000055
Technical specification limit	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Indicator value	0	N/A	N/A	N/A	0	0	0	0	0	0	0	0

▲ TOP

Licensee Comments:

6/15: Revised 11/2014 RCS activity PI to N/A. Required Steady State conditions did not occur during the month. There was no impact on PI color as a result of this change.

### Reactor Coolant System Leakage



Thresholds: White > 50.0 Yellow > 100.0

**Notes**

Reactor Coolant System Leakage	4/15	5/15	6/15	7/15	8/15	9/15	10/15	11/15	12/15	1/16	2/16	3/16
Maximum leakage	0.062	0.057	0.068	0.050	0.057	0.055	0.058	0.071	0.052	0.058	0.055	0.090
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

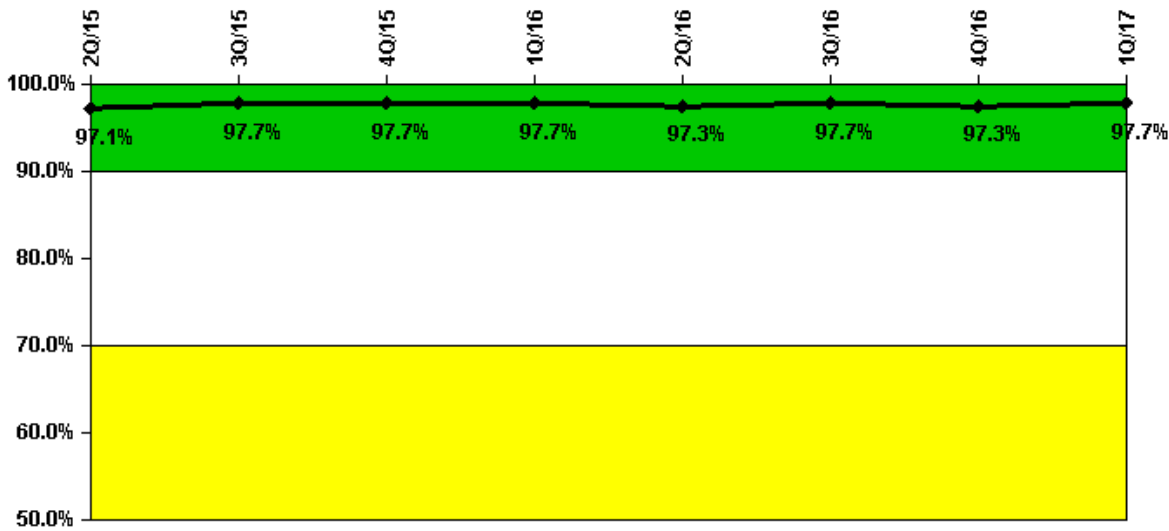
Indicator value	0.6	0.6	0.7	0.5	0.6	0.6	0.6	0.7	0.5	0.6	0.6	0.9
Reactor Coolant System Leakage	4/16	5/16	6/16	7/16	8/16	9/16	10/16	11/16	12/16	1/17	2/17	3/17
Maximum leakage	0.051	0	0	0	0.088	0.085	0.088	0.144	0.087	0.114	0.107	0.151
Technical specification limit	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0

Indicator value	0.5	0	0	0	0.9	0.9	0.9	1.4	0.9	1.1	1.1	1.5
-----------------	-----	---	---	---	-----	-----	-----	-----	-----	-----	-----	-----

▲ TOP

Licensee Comments: none

### Drill/Exercise Performance



Thresholds: White < 90.0% Yellow < 70.0%

#### Notes

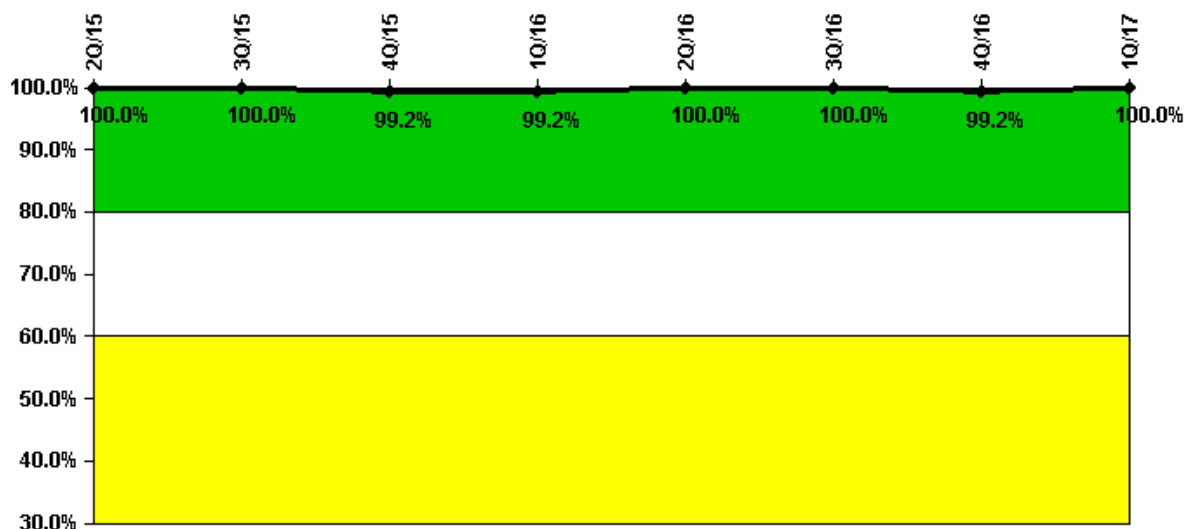
Drill/Exercise Performance	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17
Successful opportunities	29.0	41.0	31.0	38.0	34.0	64.0	16.0	42.0
Total opportunities	30.0	41.0	32.0	39.0	36.0	64.0	17.0	43.0

Indicator value                    97.1% 97.7% 97.7% 97.7% 97.3% 97.7% 97.3% 97.7%

▲ TOP

Licensee Comments: none

### ERO Drill Participation



Thresholds: White < 80.0% Yellow < 60.0%

**Notes**

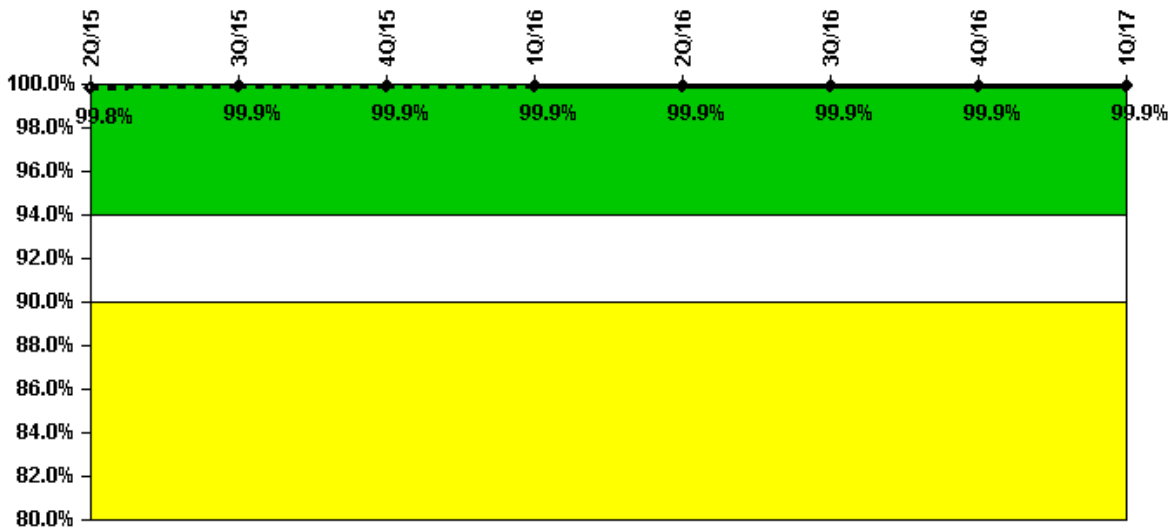
ERO Drill Participation	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17
Participating Key personnel	119.0	125.0	119.0	119.0	118.0	126.0	129.0	124.0
Total Key personnel	119.0	125.0	120.0	120.0	118.0	126.0	130.0	124.0

**Indicator value**                **100.0% 100.0% 99.2% 99.2% 100.0% 100.0% 99.2% 100.0%**

▲ TOP

Licensee Comments: none

### Alert & Notification System



Thresholds: White < 94.0% Yellow < 90.0%

#### Notes

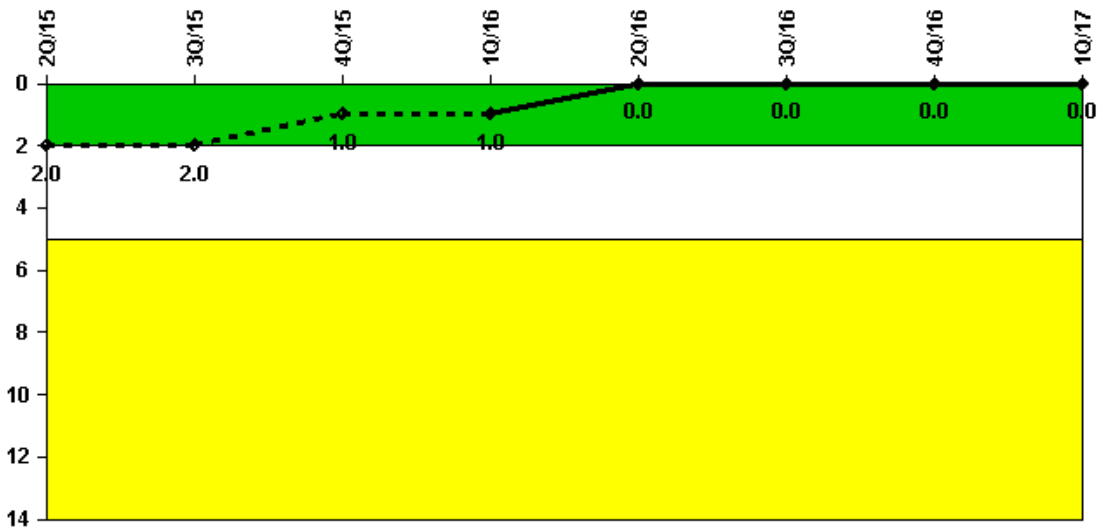
Alert & Notification System	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17
Successful siren-tests	497	496	496	497	497	496	497	497
Total sirens-tests	497	497	497	497	497	497	497	497

Indicator value                    99.8% 99.9% 99.9% 99.9% 99.9% 99.9% 99.9% 99.9%

▲ TOP

Licensee Comments: none

### Occupational Exposure Control Effectiveness



Thresholds: White > 2.0 Yellow > 5.0

**Notes**

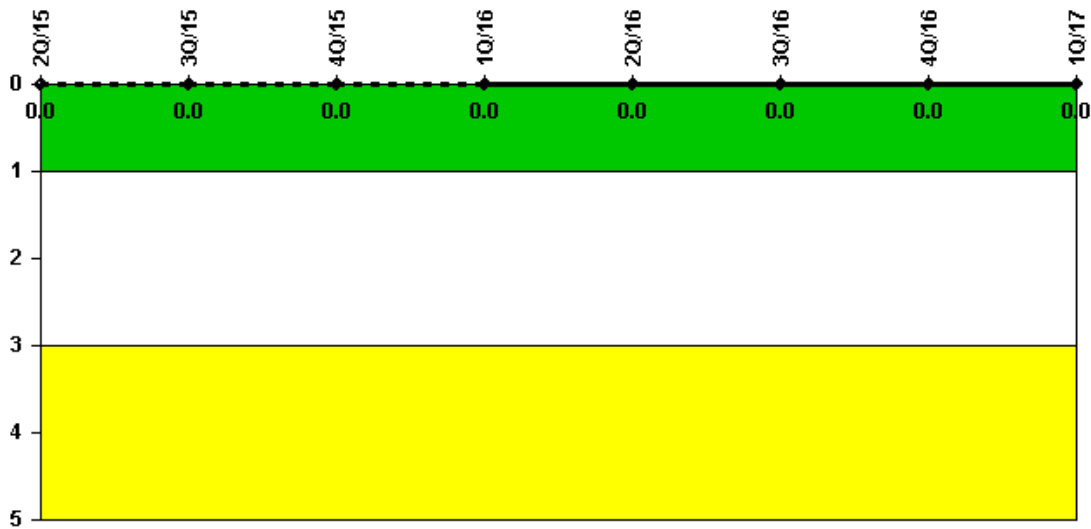
**Occupational Exposure Control Effectiveness** 2Q/15 3Q/15 4Q/15 1Q/16 2Q/16 3Q/16 4Q/16 1Q/17

High radiation area occurrences	1	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>2</b>	<b>2</b>	<b>1</b>	<b>1</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 2Q/15 3Q/15 4Q/15 1Q/16 2Q/16 3Q/16 4Q/16 1Q/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: May 5, 2017

Page Last Reviewed/Updated Wednesday, June 07, 2017