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Salem 1 – Quarterly Performance Indicators

3Q/2017 Performance Indicators

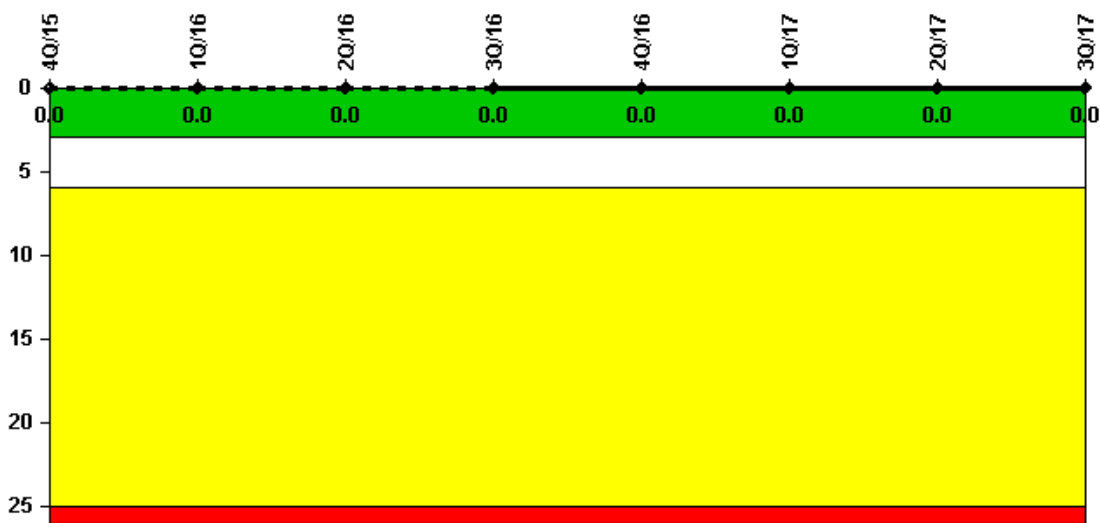
The solid trend line represents the current reporting period.

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)
- 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)
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- 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

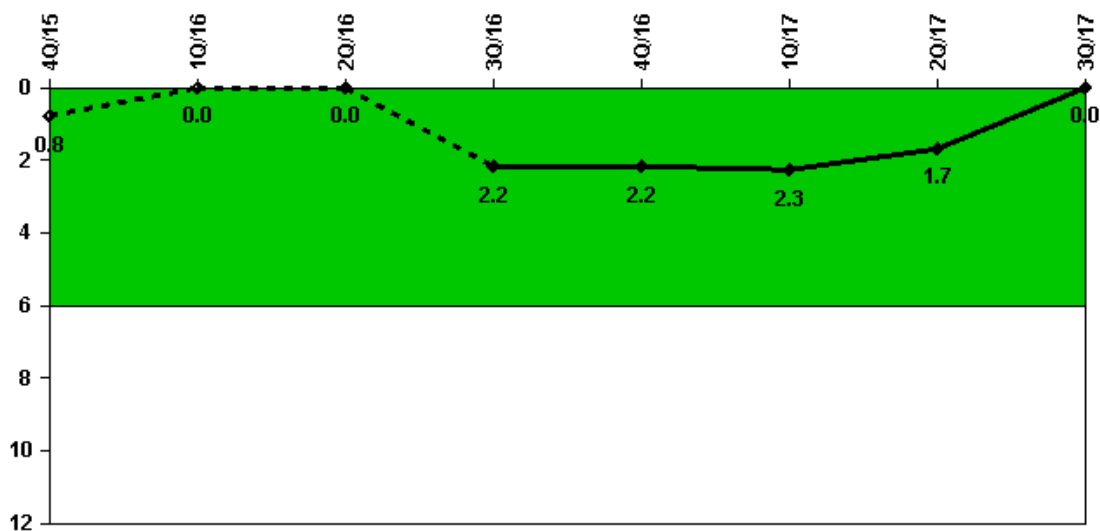
Unplanned Scrams per 7000 Critical Hrs	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17
Unplanned scrams	0	0	0	0	0	0	0	0
Critical hours	2209.0	2183.0	332.0	1531.6	2209.0	2115.4	2184.0	2208.0

Indicator value	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17
Indicator value	0	0	0	0	0	0	0	0

TOP

Licensee Comments: none

Unplanned Power Changes per 7000 Critical Hrs



Thresholds: White > 6.0

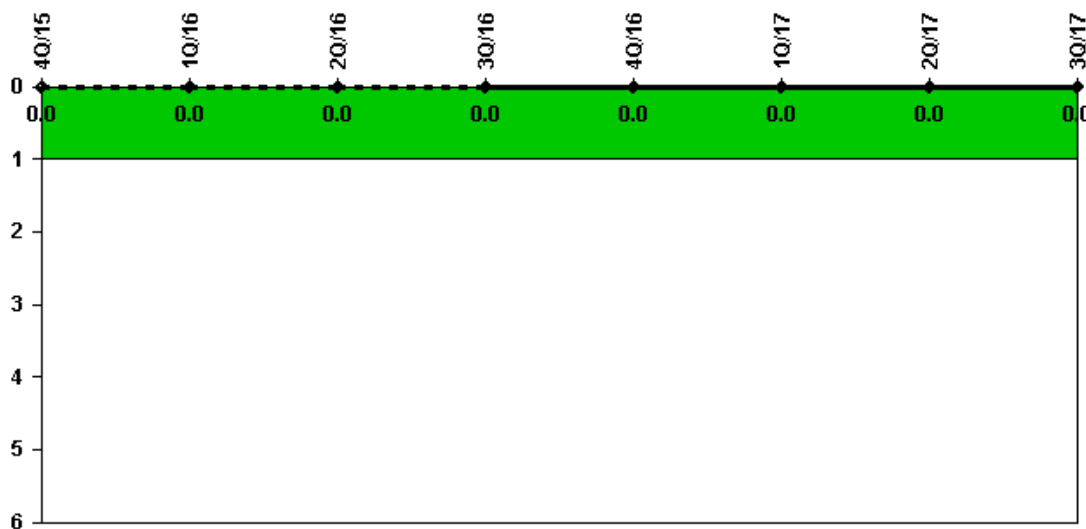
Notes

Unplanned Power Changes per 7000 Critical Hrs	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17
Unplanned power changes	0	0	0	2.0	0	0	0	0
Critical hours	2209.0	2183.0	332.0	1531.6	2209.0	2115.4	2184.0	2208.0
Indicator value	0.8	0	0	2.2	2.2	2.3	1.7	0

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Licensee Comments: none

Unplanned Scrams with Complications



Thresholds: White > 1.0

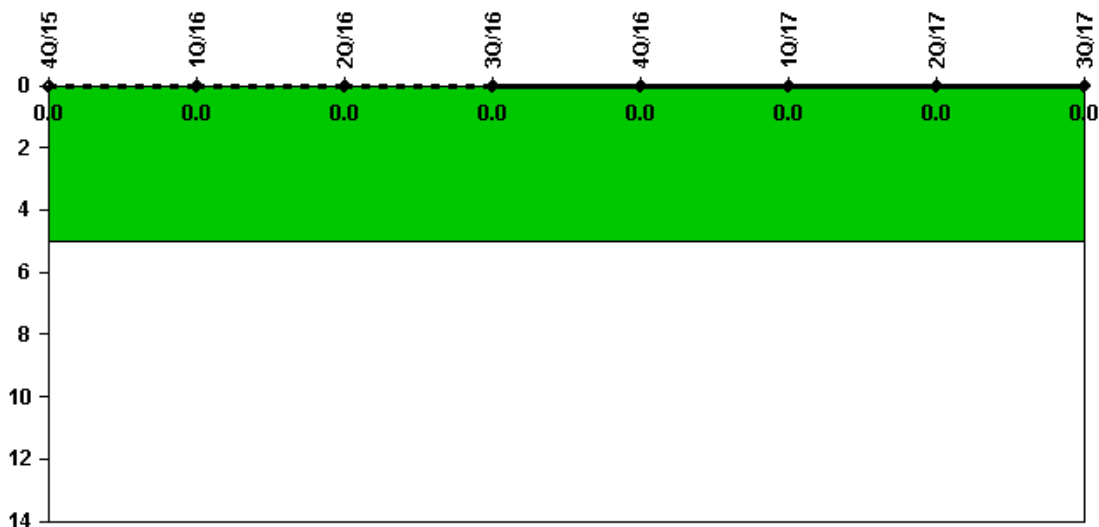
Notes

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

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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

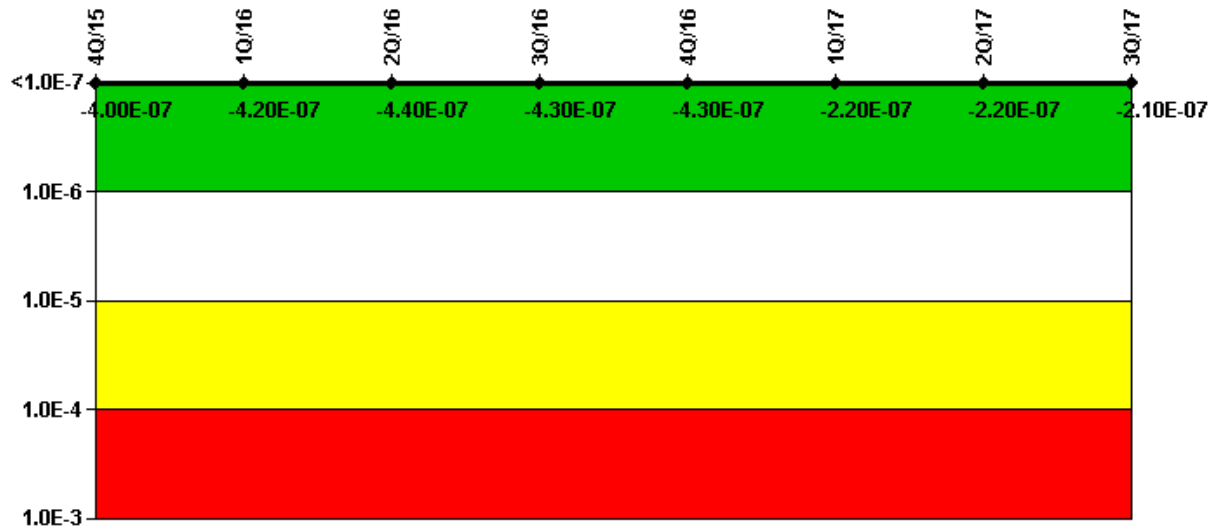
Safety System Functional Failures 0 0 0 0 0 0 0 0

Indicator value 0 0 0 0 0 0 0 0

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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

	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17
UAI (ΔCDF)	-1.42E-07	-1.42E-07	-1.41E-07	-1.40E-07	-1.40E-07	-7.62E-08	-7.63E-08	-7.63E-08
URI (ΔCDF)	-2.63E-07	-2.76E-07	-2.96E-07	-2.93E-07	-2.94E-07	-1.45E-07	-1.44E-07	-1.35E-07
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-4.00E-07	-4.20E-07	-4.40E-07	-4.30E-07	-4.30E-07	-2.20E-07	-2.20E-07	-2.10E-07

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Licensee Comments:

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

4Q/16: Risk Cap Invoked.

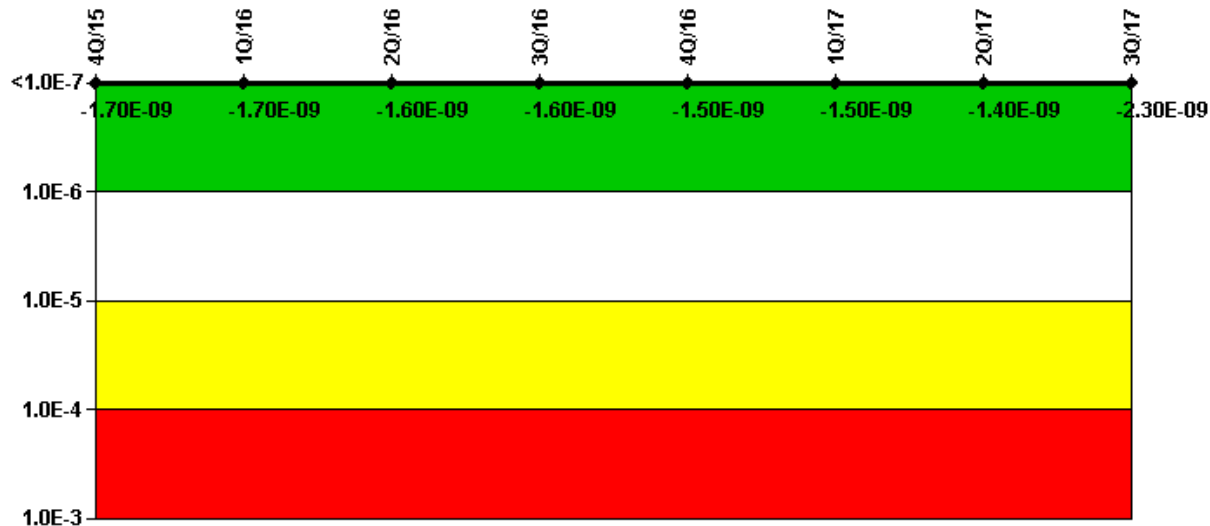
3Q/16: Risk Cap Invoked.

2Q/16: Risk Cap Invoked.

1Q/16: Risk Cap Invoked.

4Q/15: Risk Cap Invoked.

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

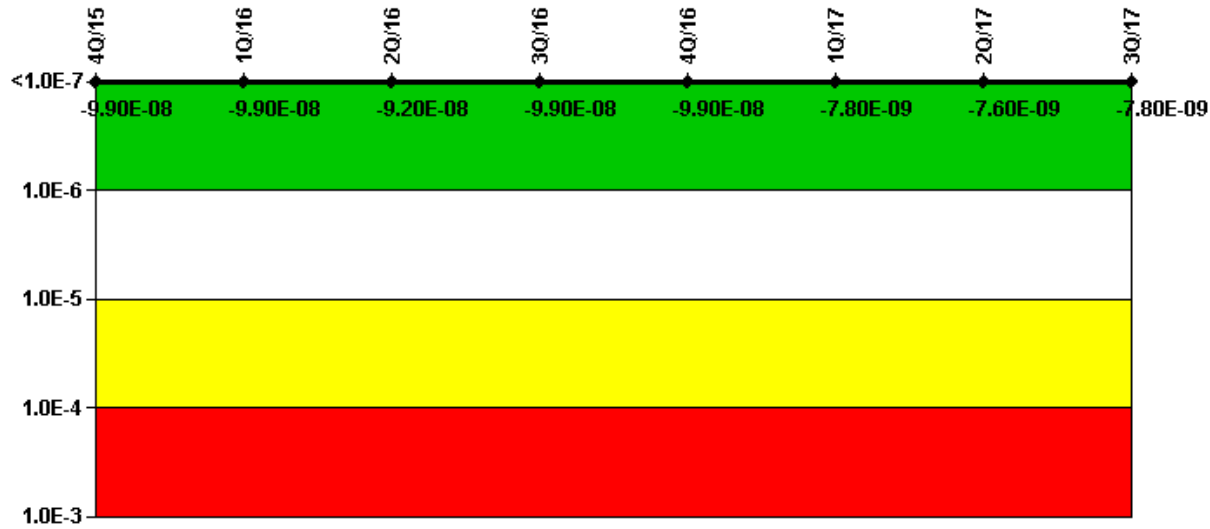
	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17
UAI (ΔCDF)	-4.20E-10	-4.30E-10	-4.14E-10	-4.03E-10	-3.56E-10	-7.76E-10	-7.80E-10	-8.71E-10
URI (ΔCDF)	-1.28E-09	-1.25E-09	-1.22E-09	-1.19E-09	-1.14E-09	-7.37E-10	-6.66E-10	-1.43E-09

PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-1.70E-09	-1.70E-09	-1.60E-09	-1.60E-09	-1.50E-09	-1.50E-09	-1.40E-09	-2.30E-09

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Licensee Comments:
1Q/17: 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

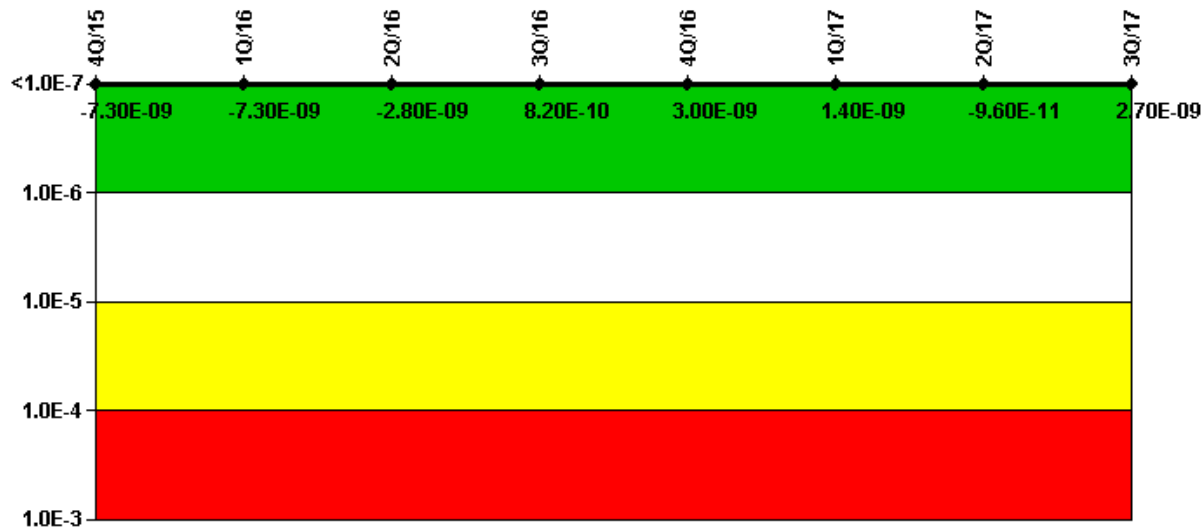
Mitigating Systems Performance Index, Heat Removal System

	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17
UAI (ΔCDF)	-1.72E-08	-1.72E-08	-1.72E-08	-1.72E-08	-1.72E-08	-1.40E-09	-1.40E-09	-1.40E-09
URI (ΔCDF)	-8.18E-08	-8.18E-08	-7.46E-08	-8.19E-08	-8.19E-08	-6.41E-09	-6.23E-09	-6.36E-09
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-9.90E-08	-9.90E-08	-9.20E-08	-9.90E-08	-9.90E-08	-7.80E-09	-7.60E-09	-7.80E-09

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Licensee Comments:
1Q/17: 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

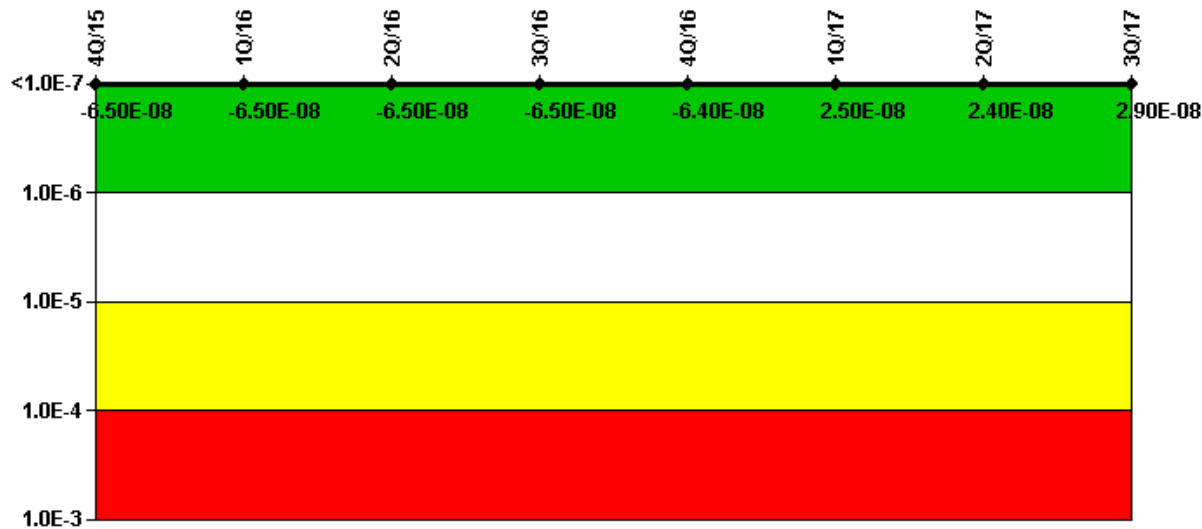
	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17
UAI (ΔCDF)	1.03E-08	1.02E-08	1.39E-08	1.88E-08	2.11E-08	1.41E-08	1.26E-08	1.54E-08
URI (ΔCDF)	-1.76E-08	-1.76E-08	-1.67E-08	-1.80E-08	-1.81E-08	-1.27E-08	-1.27E-08	-1.27E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-7.30E-09	-7.30E-09	-2.80E-09	8.20E-10	3.00E-09	1.40E-09	-9.60E-11	2.70E-09

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Licensee Comments:

1Q/17: 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

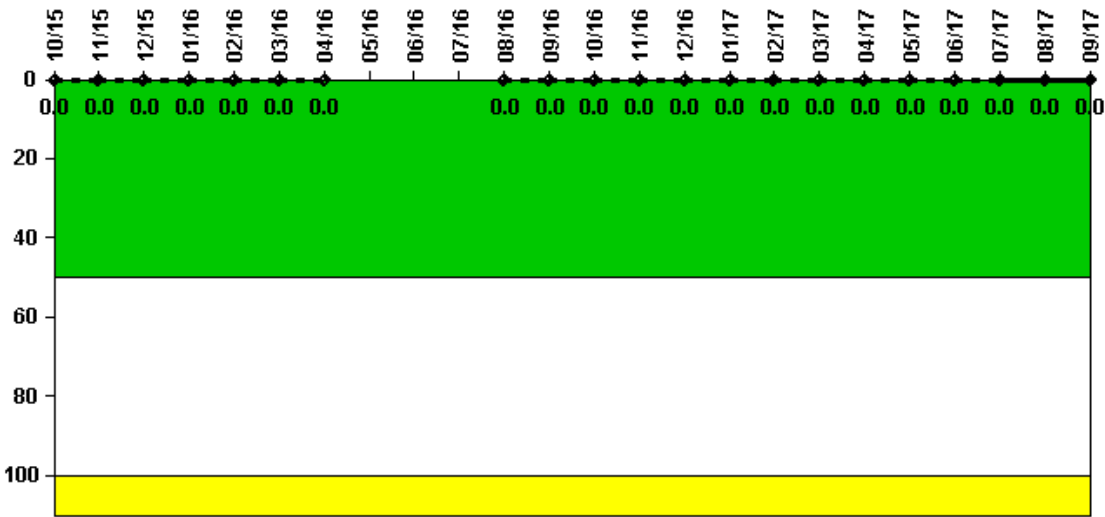
	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17
UAI (Δ CDF)	-2.81E-08	-2.81E-08	-2.81E-08	-2.81E-08	-2.78E-08	6.15E-08	6.08E-08	6.55E-08
URI (Δ CDF)	-3.66E-08	-3.66E-08	-3.66E-08	-3.66E-08	-3.66E-08	-3.67E-08	-3.67E-08	-3.67E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-6.50E-08	-6.50E-08	-6.50E-08	-6.50E-08	-6.40E-08	2.50E-08	2.40E-08	2.90E-08

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Licensee Comments:

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

Reactor Coolant System Activity



Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System

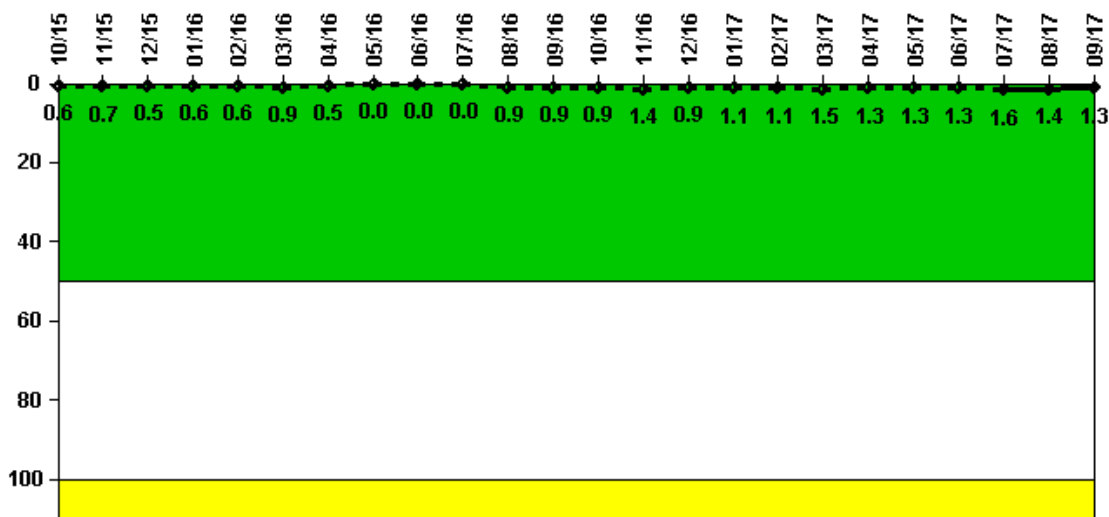
Activity	10/15	11/15	12/15	1/16	2/16	3/16	4/16	5/16	6/16	7/16	8/16	9/16	
Maximum activity	0.000101	0.000148	0.000102	0.000187	0.000142	0.000097	0.000183	N/A	N/A	N/A	0.000050	0.000100	
Technical specification limit	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Indicator value	0	0	0	0	0	0	0	0	N/A	N/A	N/A	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	0.000046	0.000048	0.000049	0.000054	0.000052	0.000055	0.000059	0.000065	0.000061	0.000063	0.000063	0.000064
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

TOP

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	0.058	0.071	0.052	0.058	0.055	0.090	0.051	0	0	0	0.088	0.085
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

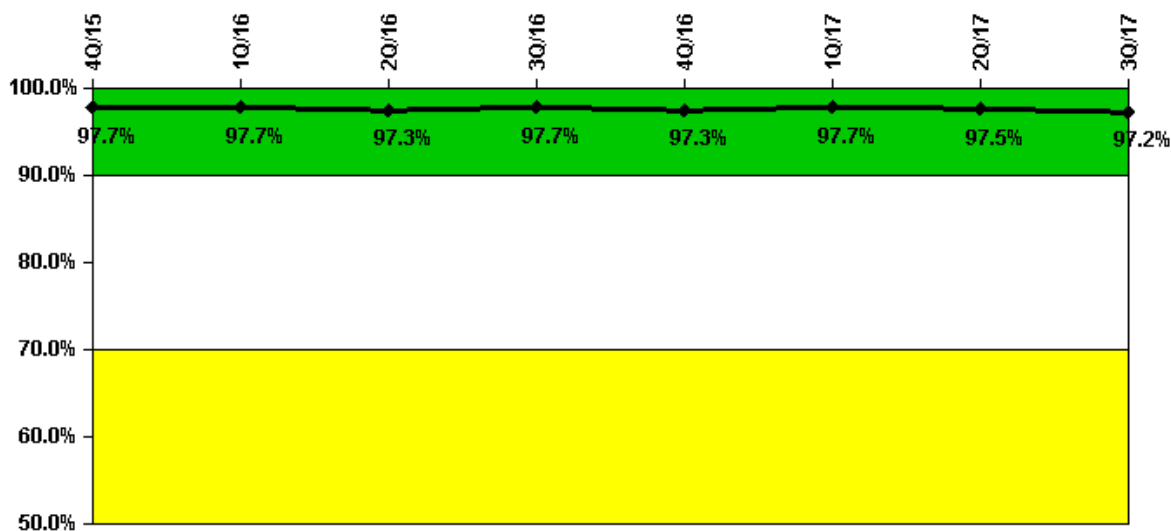
Indicator value	0.6	0.7	0.5	0.6	0.6	0.9	0.5	0	0	0	0.9	0.9
Reactor Coolant System Leakage	10/16	11/16	12/16	1/17	2/17	3/17	4/17	5/17	6/17	7/17	8/17	9/17
Maximum leakage	0.088	0.144	0.087	0.114	0.107	0.151	0.129	0.127	0.131	0.158	0.144	0.127
Technical specification limit	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0

Indicator value	0.9	1.4	0.9	1.1	1.1	1.5	1.3	1.3	1.3	1.6	1.4	1.3
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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	31.0	38.0	34.0	66.0	19.0	42.0	38.0	45.0
Total opportunities	32.0	39.0	36.0	66.0	20.0	43.0	40.0	46.0

Indicator value **97.7% 97.7% 97.3% 97.7% 97.3% 97.7% 97.5% 97.2%**

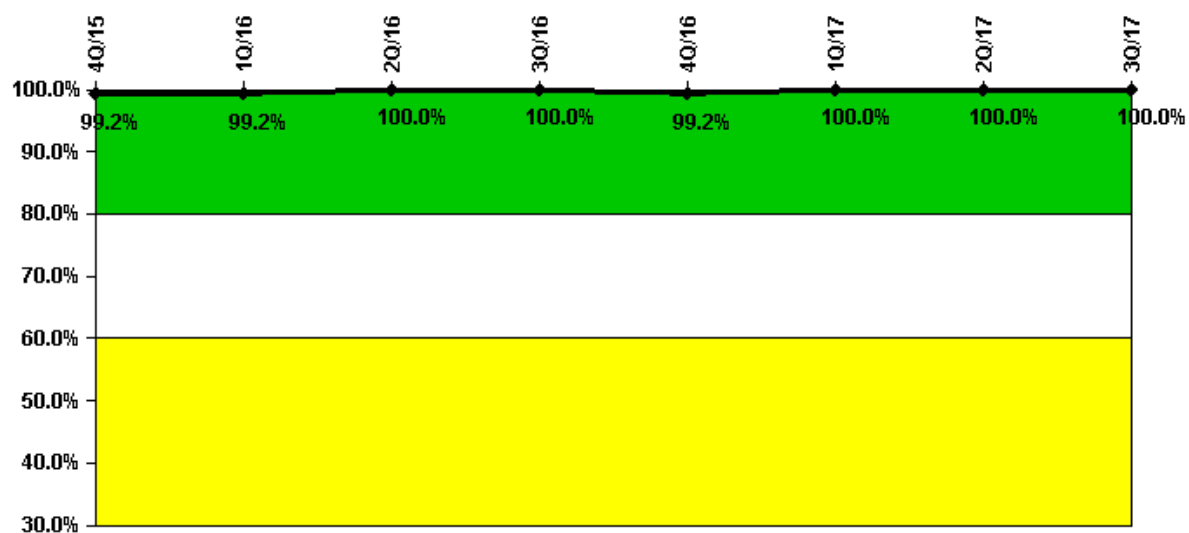
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Licensee Comments:

4Q/16: Reported opportunities differ from documented opportunities due to Licensed Operator Requalification Training Exam Security process. No failures related to the opportunities. No color change.

3Q/16: Reported opportunities differ from documented opportunities due to Licensed Operator Requalification Training Exam Security process. No failures related to the opportunities. No color change.

ERO Drill Participation



Thresholds: White < 80.0% Yellow < 60.0%

Notes

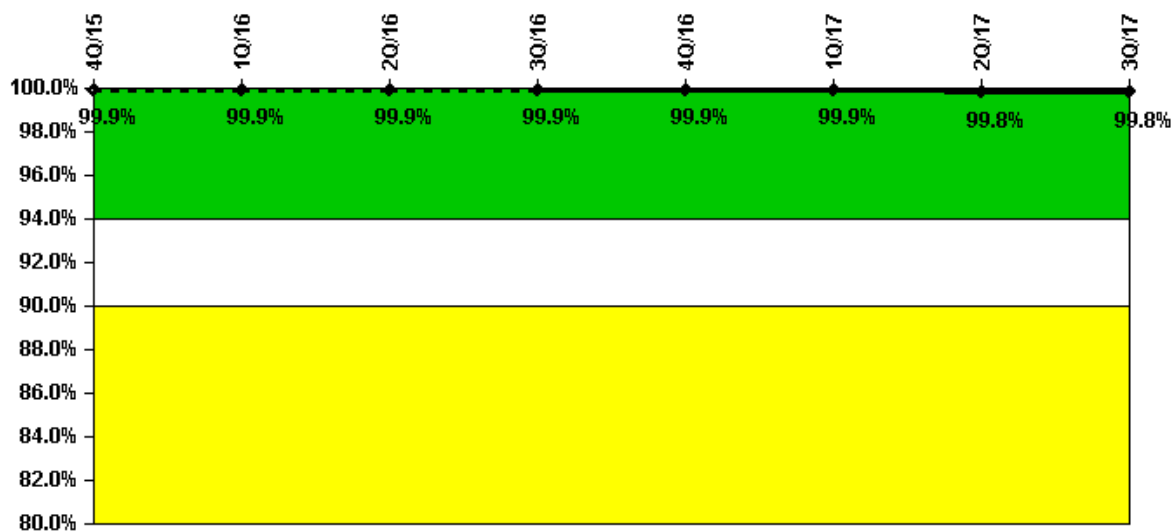
ERO Drill Participation	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17
Participating Key personnel	119.0	119.0	118.0	126.0	129.0	124.0	124.0	125.0
Total Key personnel	120.0	120.0	118.0	126.0	130.0	124.0	124.0	125.0

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

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Licensee Comments: none

Alert & Notification System



Thresholds: White < 94.0% Yellow < 90.0%

Notes

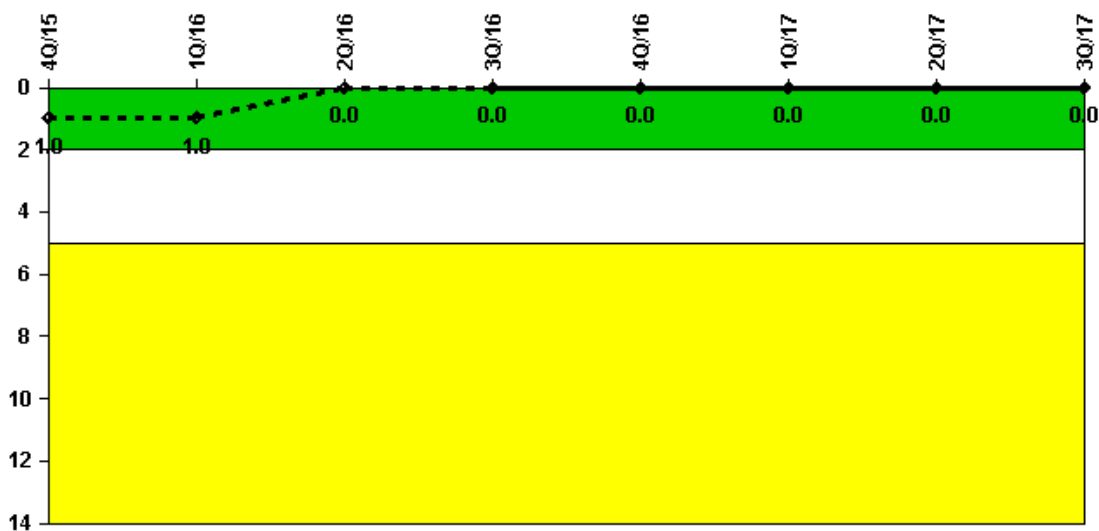
Alert & Notification System	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17
Successful siren-tests	496	497	497	496	497	497	495	495
Total sirens-tests	497	497	497	497	497	497	497	497

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

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Licensee Comments: none

Occupational Exposure Control Effectiveness



Thresholds: White > 2.0 Yellow > 5.0

Notes

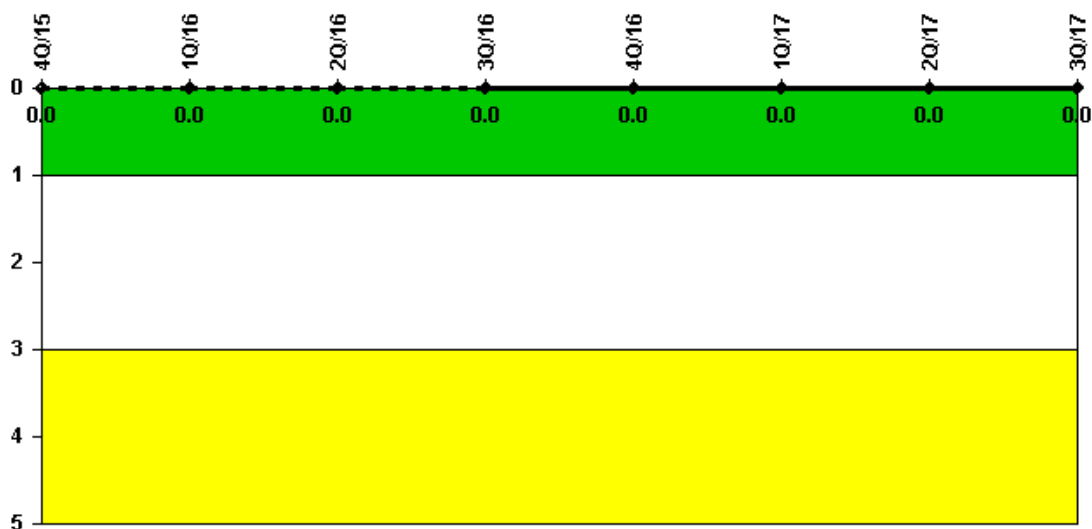
Occupational Exposure Control Effectiveness 4Q/15 1Q/16 2Q/16 3Q/16 4Q/16 1Q/17 2Q/17 3Q/17

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	1	1	0	0	0	0	0	0

TOP

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