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Sequoyah 1 – Quarterly Performance Indicators

3Q/2017 Performance Indicators

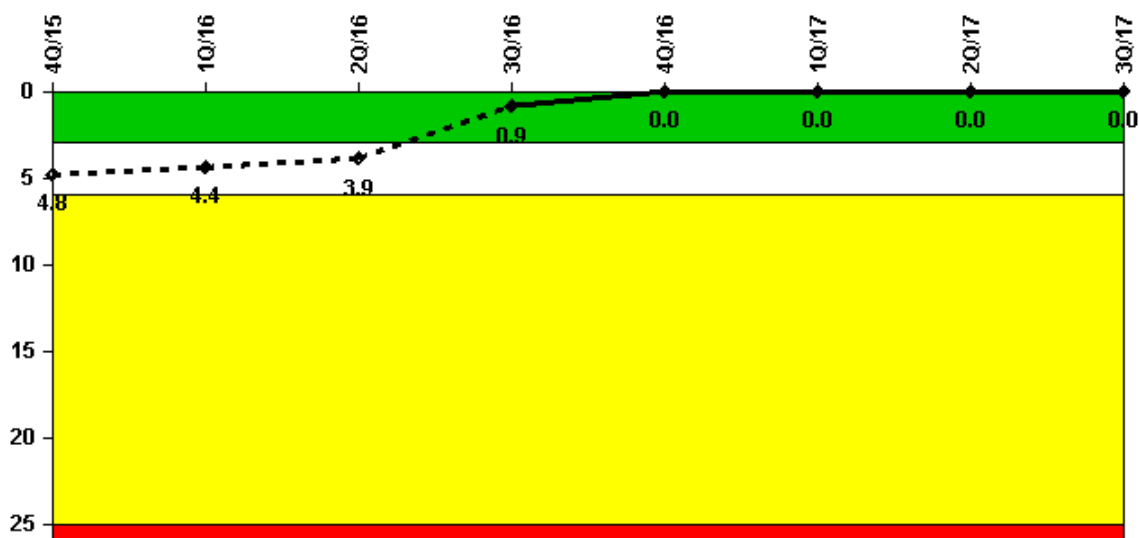
The solid trend line represents the current reporting period.

Licensee's General Comments: none

On this page:

- Unplanned Scrams (IE01)
- Unplanned Power Changes per 7000 Critical Hours (IE03)
- Unplanned Scrams with Complications (IE04)
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- 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

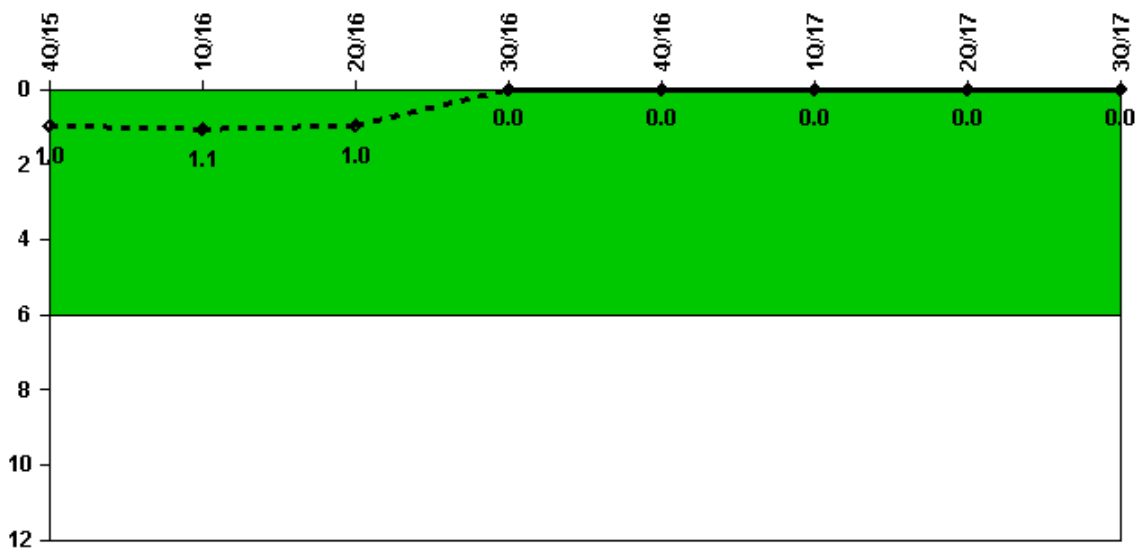
Unplanned Scrams per 7000 Critical Hrs	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17
Unplanned scrams	1.0	0	0	0	0	0	0	0
Critical hours	2041.5	1121.2	2184.0	2208.0	1345.4	2159.0	2184.0	2208.0

Indicator value	4.8	4.4	3.9	0.9	0	0	0	0
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Licensee Comments: none

Unplanned Power Changes per 7000 Critical Hrs



Thresholds: White > 6.0

Notes

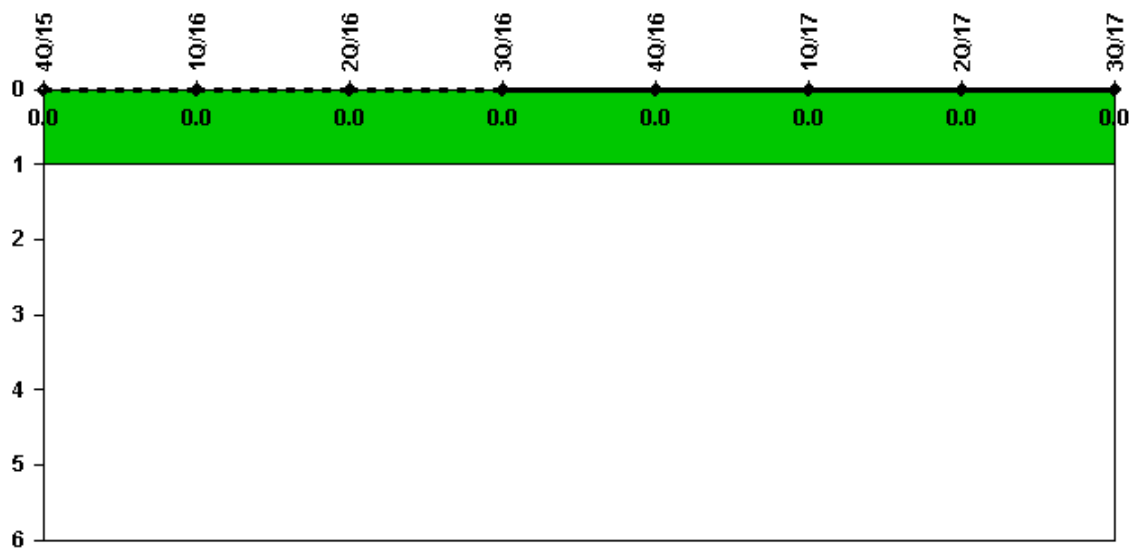
Unplanned Power Changes per 7000 Critical Hrs	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17
Unplanned power changes	0	0	0	0	0	0	0	0
Critical hours	2041.5	1121.2	2184.0	2208.0	1345.4	2159.0	2184.0	2208.0

Indicator value	1.0	1.1	1.0	0	0	0	0	0
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Licensee Comments: none

Unplanned Scrams with Complications



Thresholds: White > 1.0

Notes

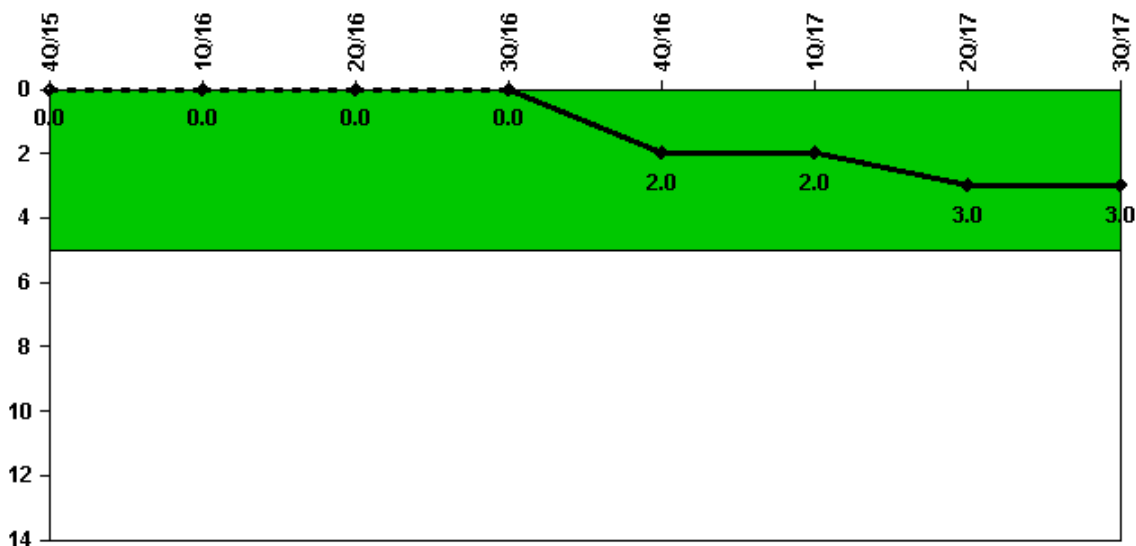
Unplanned Scrams with Complications	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17
Scrams with complications	0	0	0	0	0	0	0	0

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 2 0 1 0

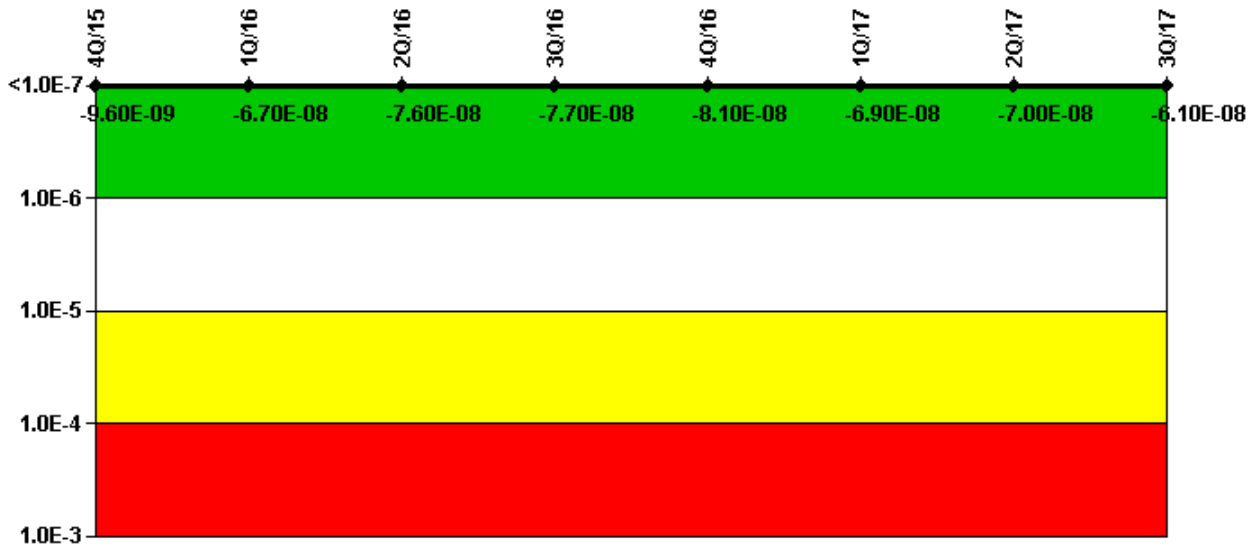
Indicator value 0 0 0 0 2 2 3 3

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Licensee Comments:

2Q/17: LER 327/2017-001, Breached Door Renders Both Trains of the Auxiliary Building Gas Treatment System Inoperable
 4Q/16: LER 327/2016-007 Unanalyzed Condition Due to Emergency Gas Treatment System not Meeting Single Failure Criteria.
 LER 327/2016-008 Closed Fire Damper Renders Both Trains of the Control Room Emergency Ventilation System Inoperable

Mitigating Systems Performance Index, Emergency AC Power System



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

Notes

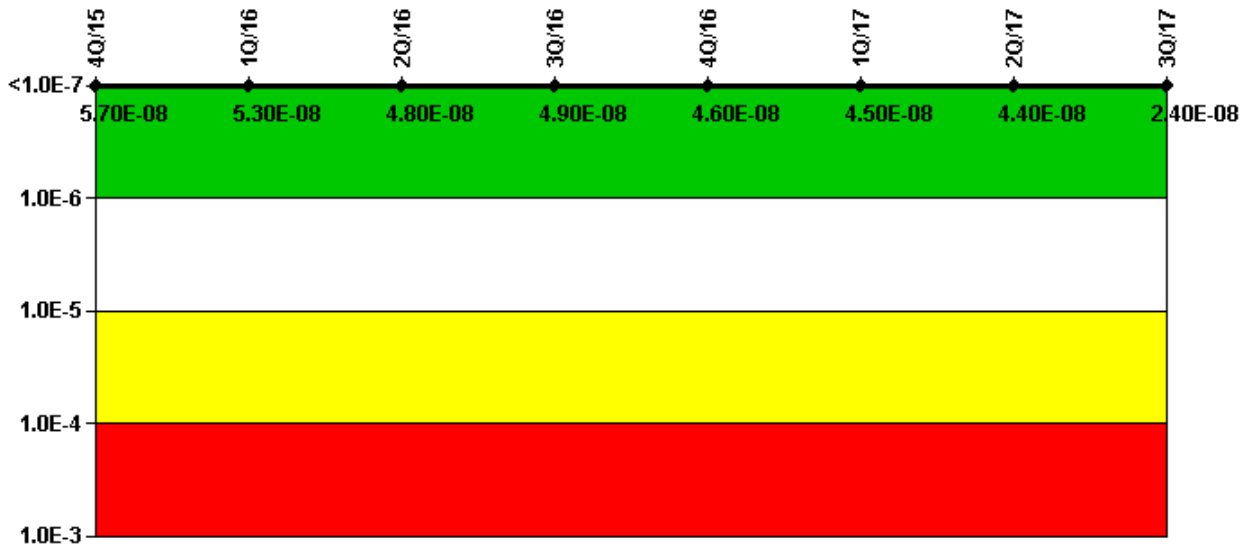
Mitigating Systems Performance Index, Emergency AC Power System

	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17
UAI (ΔCDF)	1.17E-08	5.91E-09	-1.63E-09	-4.40E-09	-3.95E-09	7.46E-09	6.91E-09	1.34E-08
URI (ΔCDF)	-2.13E-08	-7.28E-08	-7.41E-08	-7.25E-08	-7.67E-08	-7.64E-08	-7.73E-08	-7.45E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-9.60E-09	-6.70E-08	-7.60E-08	-7.70E-08	-8.10E-08	-6.90E-08	-7.00E-08	-6.10E-08

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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

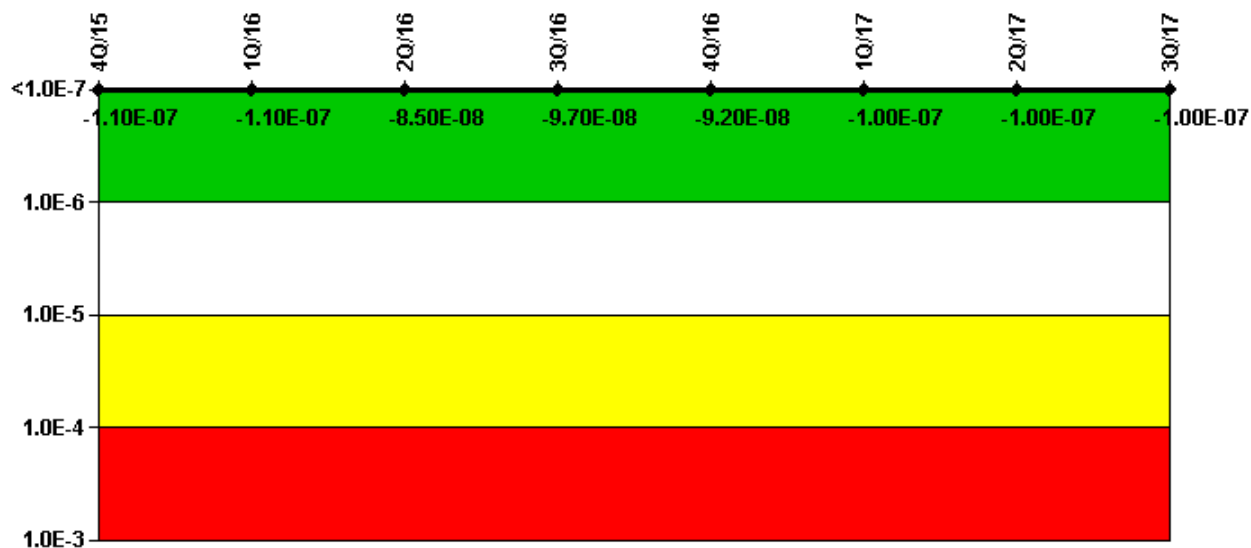
Mitigating Systems Performance Index, High Pressure Injection System

	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17
UAI (Δ CDF)	4.05E-08	3.63E-08	3.14E-08	3.28E-08	2.92E-08	2.86E-08	2.74E-08	1.68E-08
URI (Δ CDF)	1.67E-08	1.66E-08	1.66E-08	1.66E-08	1.66E-08	1.66E-08	1.66E-08	7.17E-09
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	5.70E-08	5.30E-08	4.80E-08	4.90E-08	4.60E-08	4.50E-08	4.40E-08	2.40E-08

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Licensee Comments: none

Mitigating Systems Performance Index, Heat Removal System



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

Notes

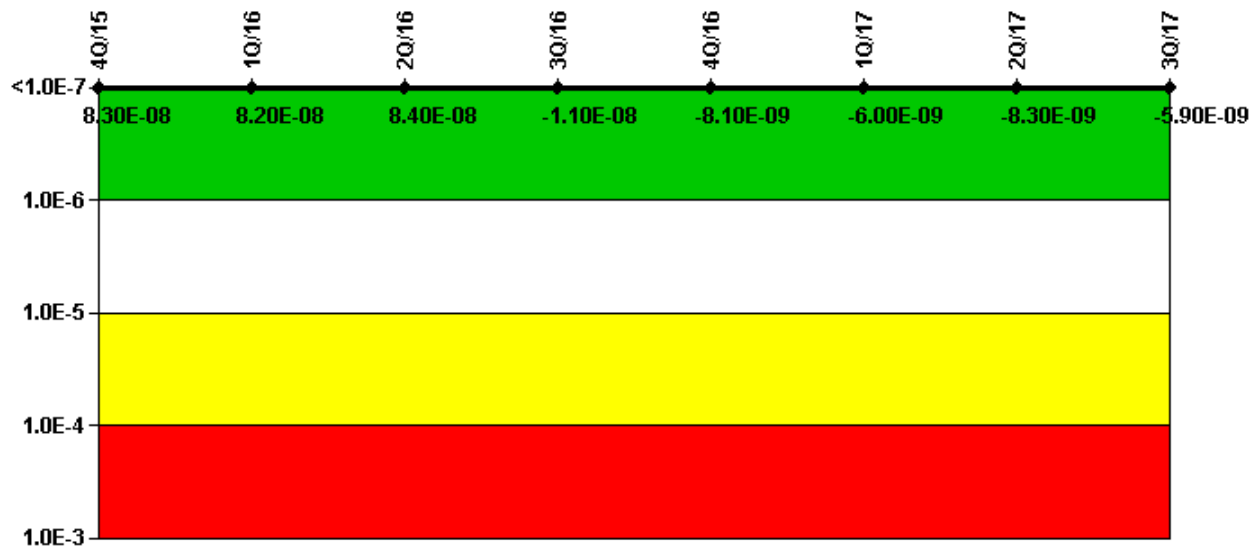
Mitigating Systems Performance Index, Heat Removal System

	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17
UAI (Δ CDF)	-1.13E-08	-5.57E-09	1.64E-08	4.68E-09	1.03E-08	2.99E-09	9.67E-10	-3.48E-10
URI (Δ CDF)	-1.01E-07	-1.02E-07	-1.02E-07	-1.02E-07	-1.03E-07	-1.03E-07	-1.03E-07	-1.03E-07
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-1.10E-07	-1.10E-07	-8.50E-08	-9.70E-08	-9.20E-08	-1.00E-07	-1.00E-07	-1.00E-07

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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

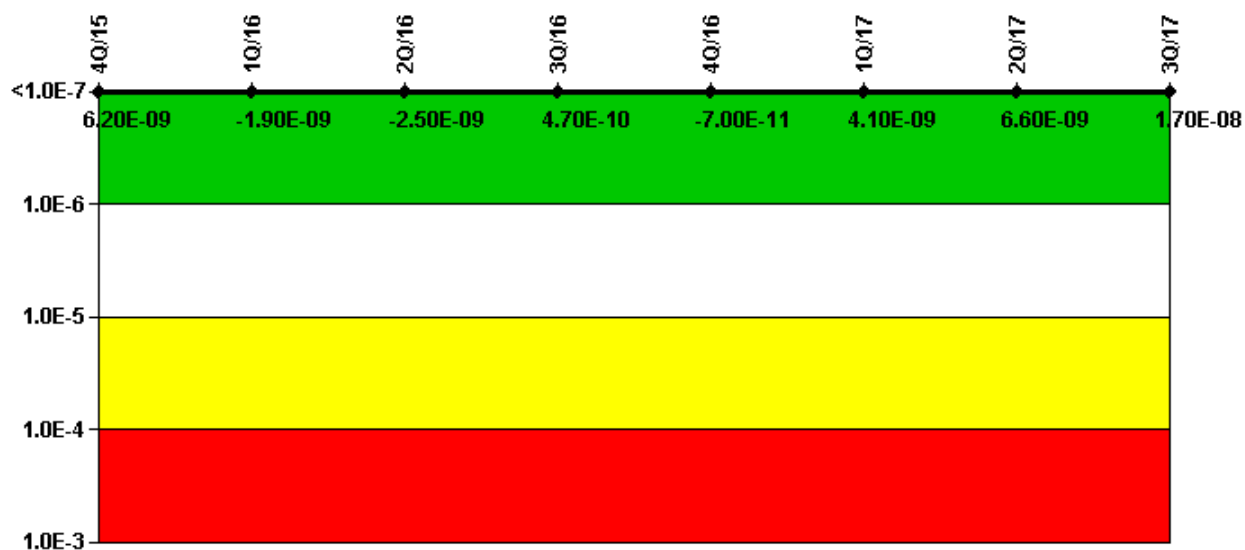
Mitigating Systems Performance Index, Residual Heat Removal System

	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17
UAI (Δ CDF)	1.82E-08	1.78E-08	1.91E-08	1.17E-08	1.47E-08	1.69E-08	1.45E-08	1.69E-08
URI (Δ CDF)	6.48E-08	6.45E-08	6.45E-08	-2.28E-08	-2.28E-08	-2.28E-08	-2.28E-08	-2.28E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	8.30E-08	8.20E-08	8.40E-08	-1.10E-08	-8.10E-09	-6.00E-09	-8.30E-09	-5.90E-09

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Licensee Comments: none

Mitigating Systems Performance Index, Cooling Water Systems



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

Notes

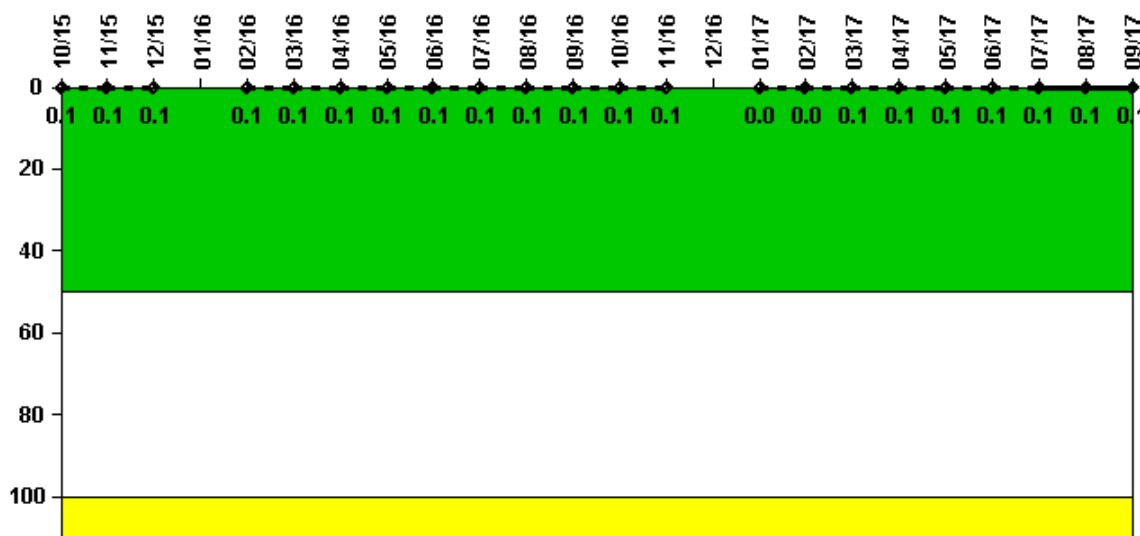
Mitigating Systems Performance Index, Cooling Water Systems

	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17
UAI (ΔCDF)	1.39E-08	5.76E-09	5.23E-09	8.15E-09	7.61E-09	1.18E-08	1.44E-08	2.49E-08
URI (ΔCDF)	-7.68E-09	-7.68E-09	-7.68E-09	-7.68E-09	-7.68E-09	-7.68E-09	-7.79E-09	-7.79E-09
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	6.20E-09	-1.90E-09	-2.50E-09	4.70E-10	-7.00E-11	4.10E-09	6.60E-09	1.70E-08

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Licensee Comments: none

Reactor Coolant System Activity



Thresholds: White > 50.0 Yellow > 100.0

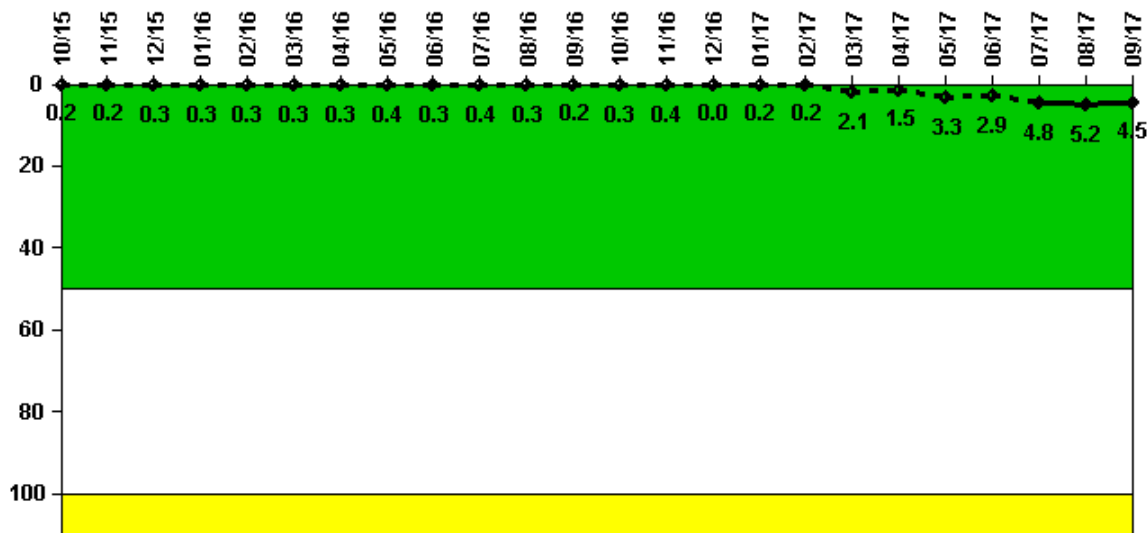
Notes

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	0.000241	0.000263	0.000267	N/A	0.000319	0.000321	0.000380	0.000351	0.000400	0.000423	0.000395	0.000372
Technical specification limit	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Indicator value	0.1	0.1	0.1	N/A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
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	0.000412	0.000438	N/A	0.000155	0.000170	0.000212	0.000199	0.000233	0.000247	0.000290	0.000297	0.000279
Technical specification limit	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Indicator value	0.1	0.1	N/A	0	0	0.1	0.1	0.1	0.1	0.1	0.1	0.1

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Licensee Comments: none

Reactor Coolant System Leakage



Thresholds: White > 50.0 Yellow > 100.0

Notes

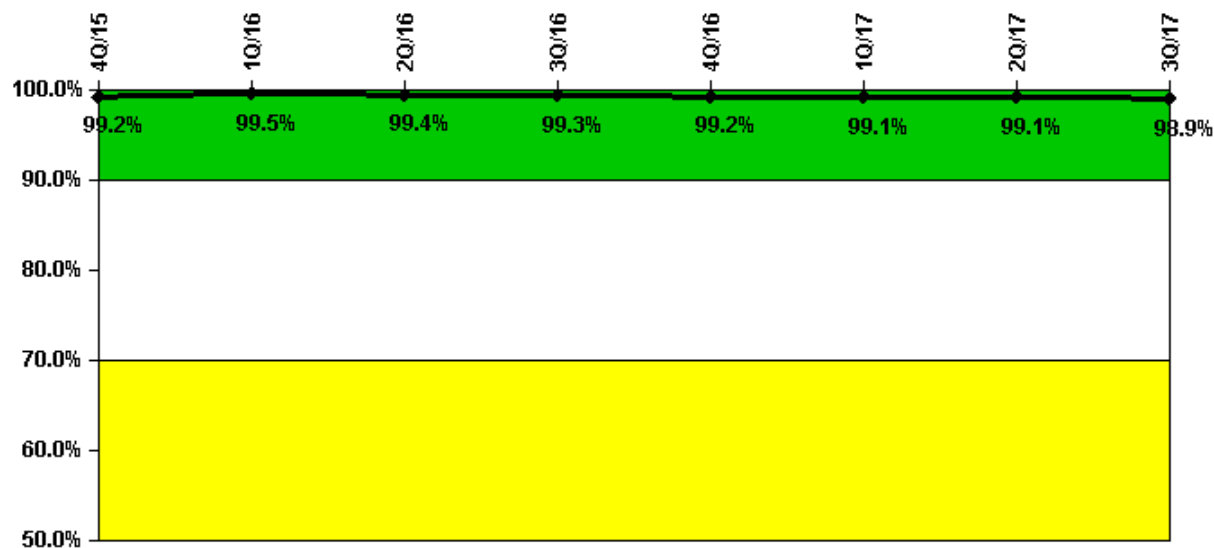
Reactor Coolant System Leakage	10/15	11/15	12/15	1/16	2/16	3/16	4/16	5/16	6/16	7/16	8/16	9/16
Maximum leakage	0.020	0.020	0.030	0.030	0.030	0.030	0.030	0.040	0.030	0.040	0.030	0.020
Technical specification limit	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0

Indicator value	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.4	0.3	0.2
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	0.030	0.040	0	0.020	0.020	0.210	0.150	0.330	0.290	0.480	0.520	0.450
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	0.3	0.4	0	0.2	0.2	2.1	1.5	3.3	2.9	4.8	5.2	4.5

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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	63.0	84.0	74.0	107.0	20.0	28.0	12.0	43.0
Total opportunities	64.0	84.0	75.0	108.0	21.0	28.0	12.0	44.0

Indicator value 99.2% 99.5% 99.4% 99.3% 99.2% 99.1% 99.1% 98.9%

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Licensee Comments: none

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	99.0	96.0	97.0	103.0	97.0	82.0	84.0	89.0
Total Key personnel	99.0	96.0	97.0	103.0	97.0	82.0	84.0	89.0

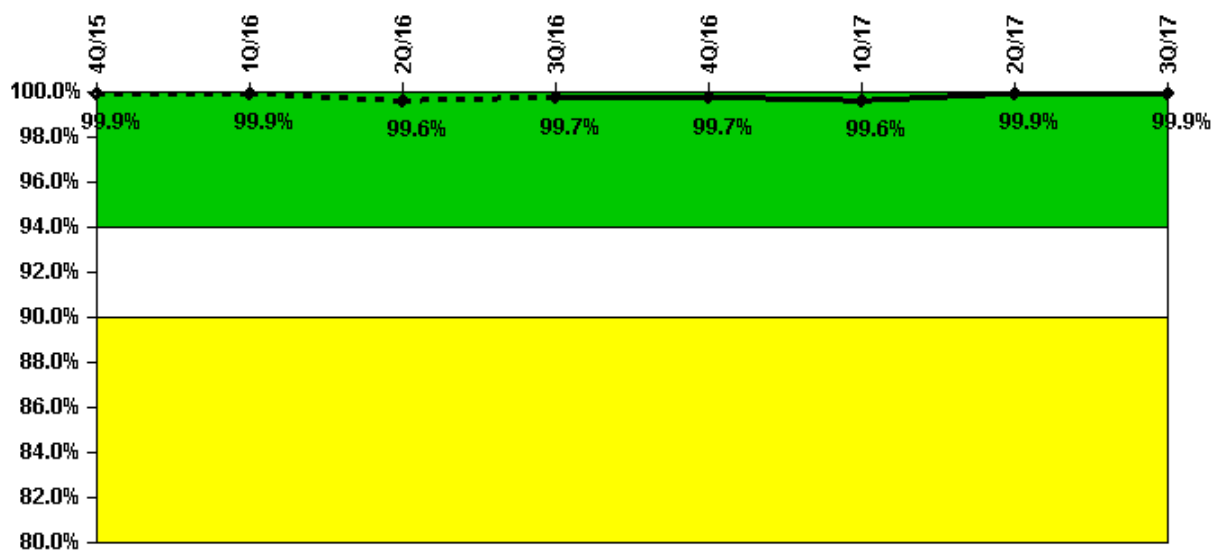
Indicator value **100.0% 100.0% 100.0% 100.0% 100.0% 100.0% 100.0% 100.0% 100.0%**

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Licensee Comments:

3Q/16: CR 1228955 - Identified an error after submittal of participation data for September 2016. The data went from 99 to 103; there is no effect on color.

Alert & Notification System



Thresholds: White < 94.0% Yellow < 90.0%

Notes

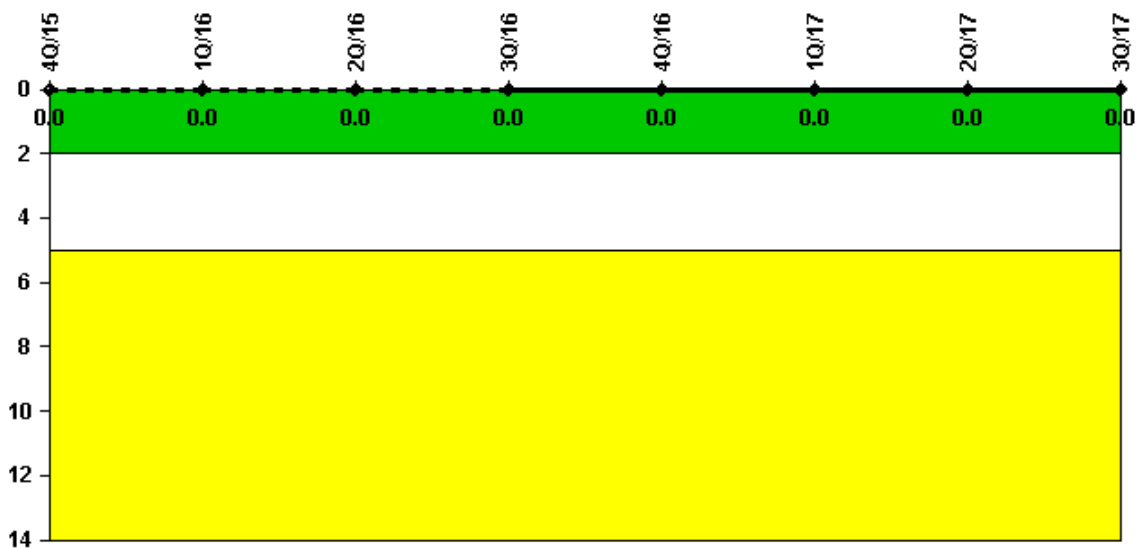
Alert & Notification System	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17
Successful siren-tests	791	1017	780	903	904	1016	904	903
Total sirens-tests	791	1017	791	904	904	1017	904	904

Indicator value 99.9% 99.9% 99.6% 99.7% 99.7% 99.6% 99.9% 99.9%

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Licensee Comments: none

Occupational Exposure Control Effectiveness



Thresholds: White > 2.0 Yellow > 5.0

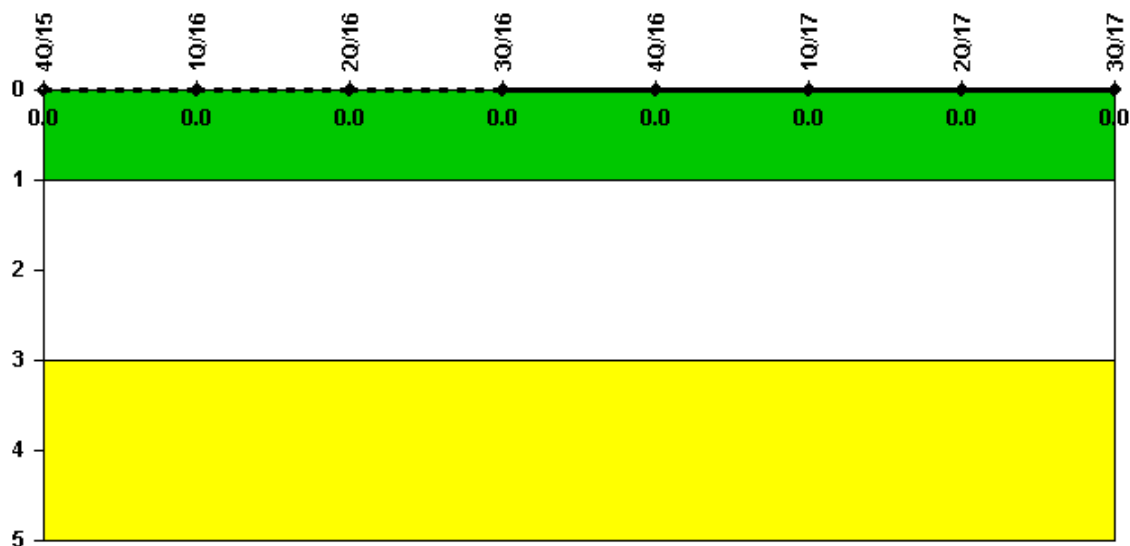
Notes

Occupational Exposure Control Effectiveness	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	0	0	0	0	0	0	0	0

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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