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FitzPatrick – Quarterly Performance Indicators

1Q/2017 Performance Indicators

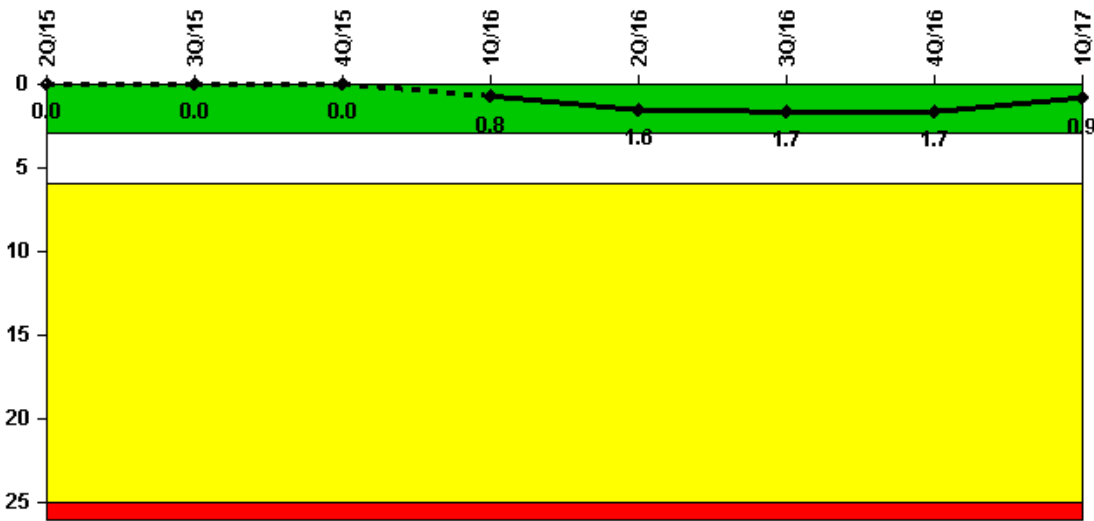
The solid trend line represents the current reporting period.

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

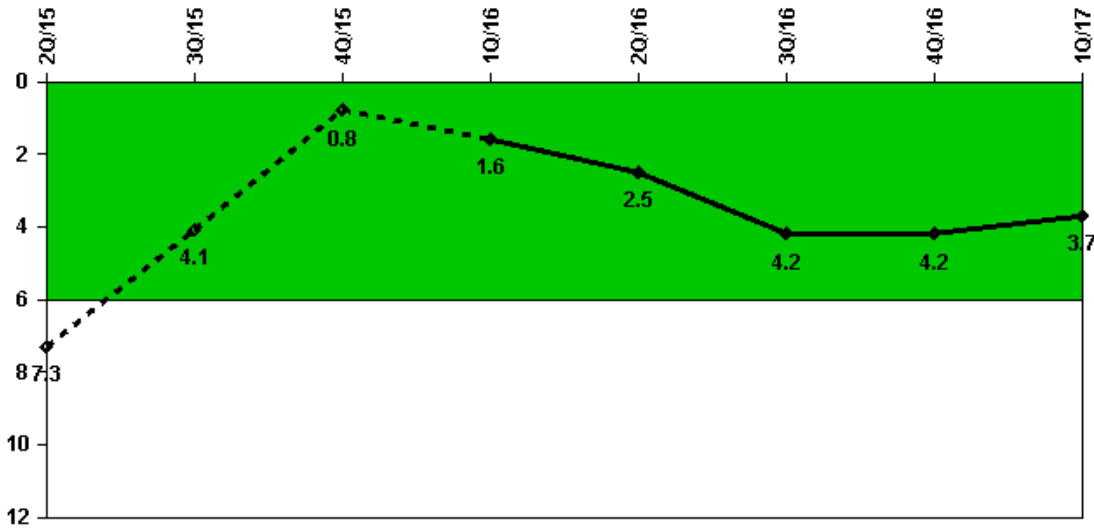
Unplanned Scrams per 7000 Critical Hrs	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17
Unplanned scrams	0	0	0	1.0	1.0	0	0	0
Critical hours	2184.0	2208.0	2209.0	2058.8	2028.6	2080.5	2209.0	1197.7

Indicator value	0	0	0	0.8	1.6	1.7	1.7	0.9
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Licensee Comments: none

Unplanned Power Changes per 7000 Critical Hrs



Thresholds: White > 6.0

Notes

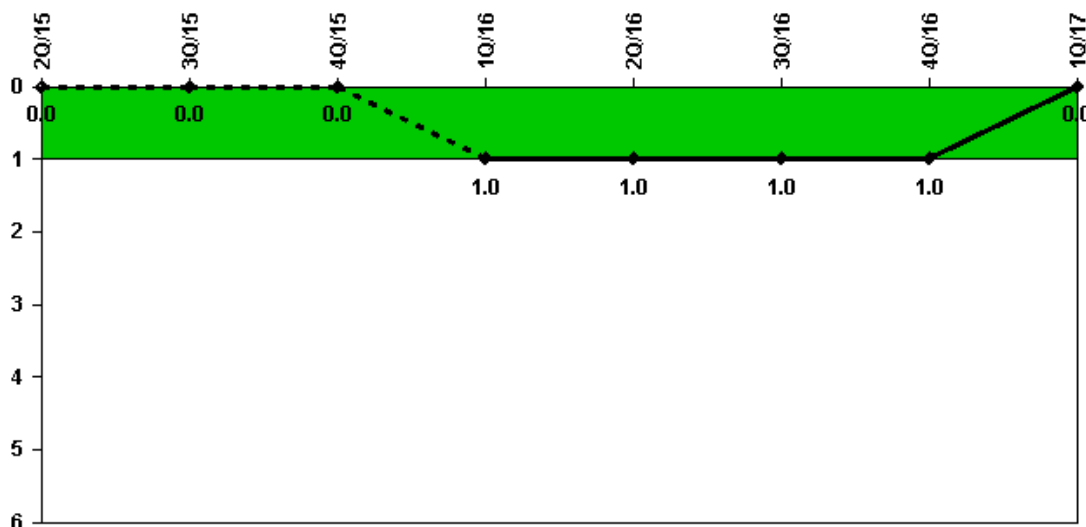
Unplanned Power Changes per 7000 Critical Hrs	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17
Unplanned power changes	0	1.0	0	1.0	1.0	3.0	0	0
Critical hours	2184.0	2208.0	2209.0	2058.8	2028.6	2080.5	2209.0	1197.7
Indicator value	7.3	4.1	0.8	1.6	2.5	4.2	4.2	3.7

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Licensee Comments:

2Q/15: Multiple downpowers were due to Main Condenser tube leakage. Retubing project completed during Refuel Outage 21. Main Condenser degrading performance has been corrected and this PI is improving. There is no effect on public or nuclear safety.

Unplanned Scrams with Complications



Thresholds: White > 1.0

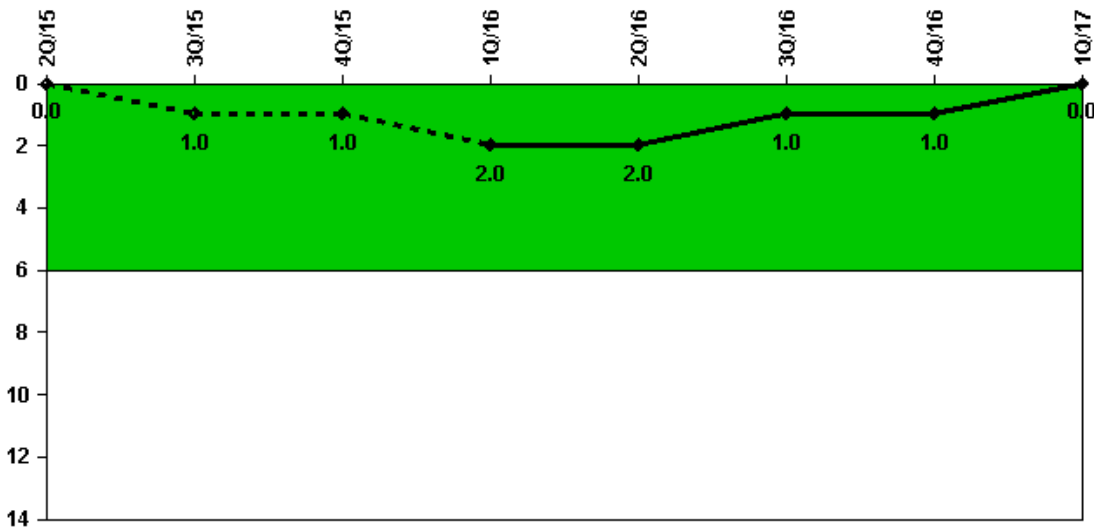
Notes

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	1.0	0	0	0	0
Indicator value	0.0	0.0	0.0	1.0	1.0	1.0	1.0	0.0

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Licensee Comments: none

Safety System Functional Failures (BWR)



Thresholds: White > 6.0

Notes

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

Safety System Functional Failures 0 1 0 1 0 0 0 0

Indicator value 0 1 1 2 2 1 1 0

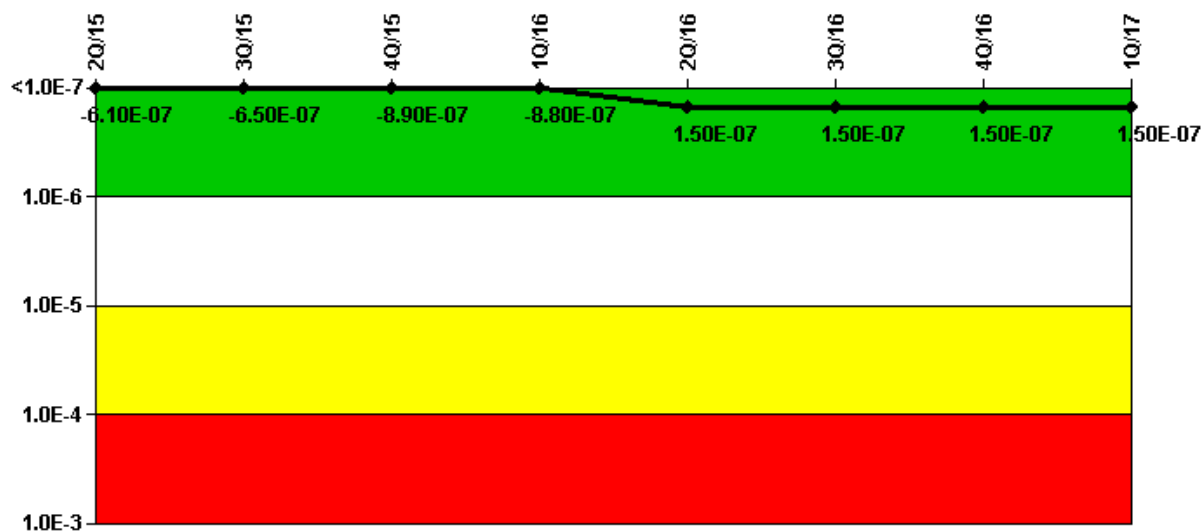
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Licensee Comments:

1Q/16: LER-15-008, Containment Atmosphere Dilution System Reliability Degraded due to Manufacturer Defect in Temperature Transmitters

3Q/15: LER-2015-003, Roof Maintenance Results in Secondary Containment Vacuum Below Technical Specification Limit

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)	5.78E-09	4.70E-09	6.10E-09	5.41E-09	1.25E-09	-3.67E-10	-5.06E-10	-4.30E-10
URI (ΔCDF)	-6.19E-07	-6.57E-07	-8.93E-07	-8.84E-07	1.49E-07	1.49E-07	1.48E-07	1.49E-07
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-6.10E-07	-6.50E-07	-8.90E-07	-8.80E-07	1.50E-07	1.50E-07	1.50E-07	1.50E-07

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Licensee Comments:

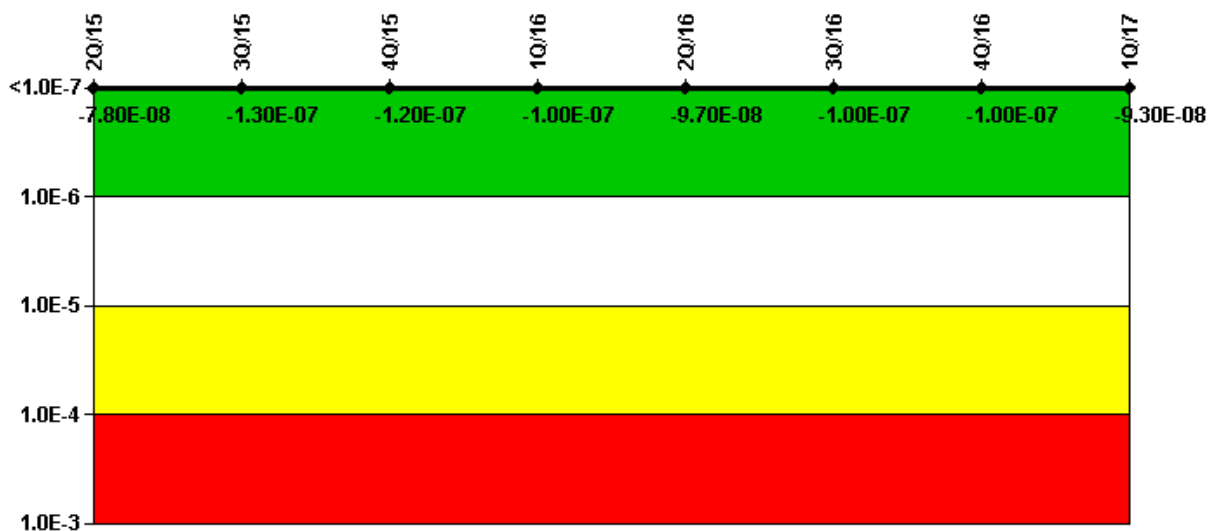
3Q/16: Data in May 2016 was changed to correct for unavailability hours attributed to the Emergency Diesel Generators (EDG) rather than the Emergency Service Water (ESW) System. This correction is in accordance with NEI 99-02 "No Cascading of Unavailability" rule. The change does not affect the indicator significance "color" of Green.

2Q/16: Data in May 2016 was changed to correct for unavailability hours attributed to the Emergency Diesel Generators (EDG) rather than the Emergency Service Water (ESW) System. This correction is in accordance with NEI 99-02 "No Cascading of Unavailability" rule. The change does not affect the indicator significance "color" of Green.

2Q/16: Starting in April 2016, MSPI value is affected by a change to EDG risk, in accordance with NEI 99-02. Previously the Risk utilized affected both trains of EDG per NEI 99.02 Section F1.1.1.

1Q/16: Revised the EDG risk in accordance with NEI 99-02. Previously the Risk utilized affected both trains of EDG per NEI 99.02 Section F1.1.1.

Mitigating Systems Performance Index, High Pressure Injection System



Thresholds: White > $1.0E-6$ Yellow > $1.0E-5$ Red > $1.0E-4$

Notes

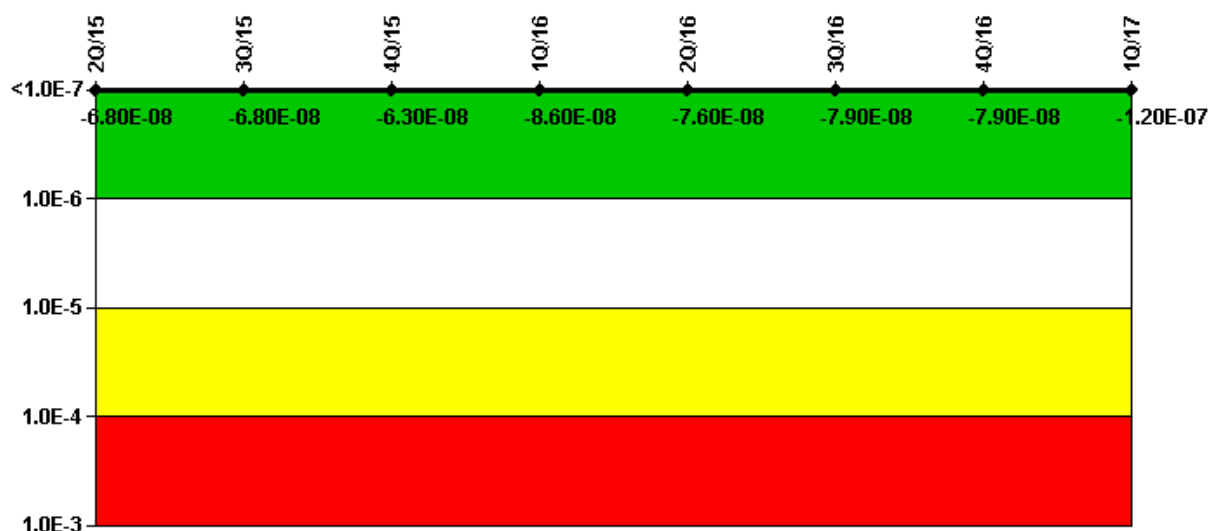
Mitigating Systems Performance Index, High Pressure Injection System

	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17
UAI (Δ CDF)	9.35E-09	-4.43E-08	-4.43E-08	-8.16E-09	-4.58E-09	-8.65E-09	-4.68E-09	4.55E-09
URI (Δ CDF)	-8.70E-08	-8.28E-08	-7.61E-08	-9.22E-08	-9.25E-08	-9.43E-08	-9.61E-08	-9.79E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-7.80E-08	-1.30E-07	-1.20E-07	-1.00E-07	-9.70E-08	-1.00E-07	-1.00E-07	-9.30E-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

	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17
UAI (Δ CDF)	-1.14E-08	-1.32E-08	-1.53E-08	-2.89E-09	9.48E-09	8.92E-09	8.92E-09	-2.69E-08
URI (Δ CDF)	-5.70E-08	-5.45E-08	-4.74E-08	-8.34E-08	-8.59E-08	-8.83E-08	-8.83E-08	-9.19E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-6.80E-08	-6.80E-08	-6.30E-08	-8.60E-08	-7.60E-08	-7.90E-08	-7.90E-08	-1.20E-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

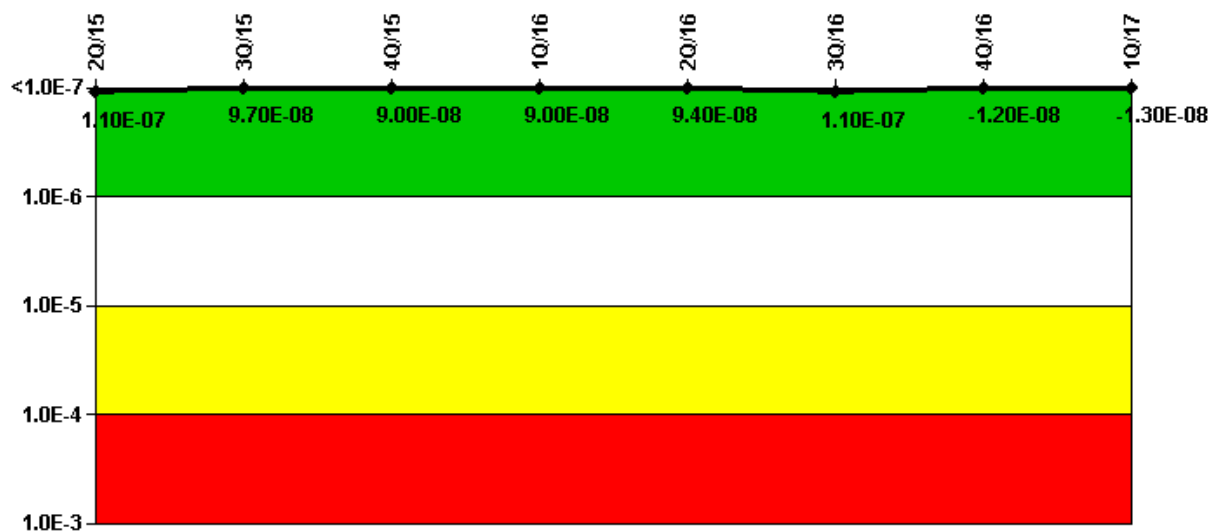
Mitigating Systems Performance Index, Residual Heat Removal System

	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17
UAI (Δ CDF)	7.15E-08	2.83E-08	1.81E-08	-6.26E-09	-5.89E-09	7.18E-08	2.92E-08	6.41E-08
URI (Δ CDF)	-2.63E-07	-2.50E-07	-2.31E-07	-2.37E-07	-2.38E-07	-2.43E-07	-2.43E-07	-2.57E-07
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-1.90E-07	-2.20E-07	-2.10E-07	-2.40E-07	-2.40E-07	-1.70E-07	-2.10E-07	-1.90E-07

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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

	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17
UAI (ΔCDF)	1.20E-07	1.10E-07	1.03E-07	1.02E-07	1.07E-07	1.21E-07	8.51E-10	-1.53E-10
URI (ΔCDF)	-1.26E-08	-1.26E-08	-1.26E-08	-1.27E-08	-1.30E-08	-1.24E-08	-1.24E-08	-1.25E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	1.10E-07	9.70E-08	9.00E-08	9.00E-08	9.40E-08	1.10E-07	-1.20E-08	-1.30E-08

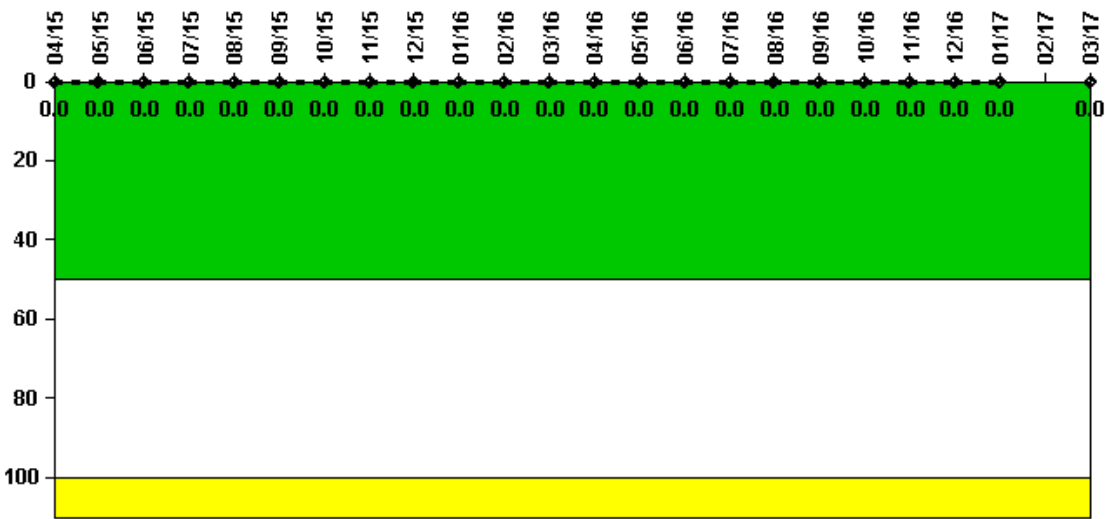
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Licensee Comments:

3Q/16: Data in May 2016 was changed to correct for unavailability hours attributed to the Emergency Diesel Generators (EDG) rather than the Emergency Service Water (ESW) System. This correction is in accordance with NEI 99-02 "No Cascading of Unavailability" rule. The change does not affect the indicator significance "color" of Green.

2Q/16: Data in May 2016 was changed to correct for unavailability hours attributed to the Emergency Diesel Generators (EDG) rather than the Emergency Service Water (ESW) System. This correction is in accordance with NEI 99-02 "No Cascading of Unavailability" rule. The change does not affect the indicator significance "color" of Green.

Reactor Coolant System Activity



Thresholds: White > 50.0 Yellow > 100.0

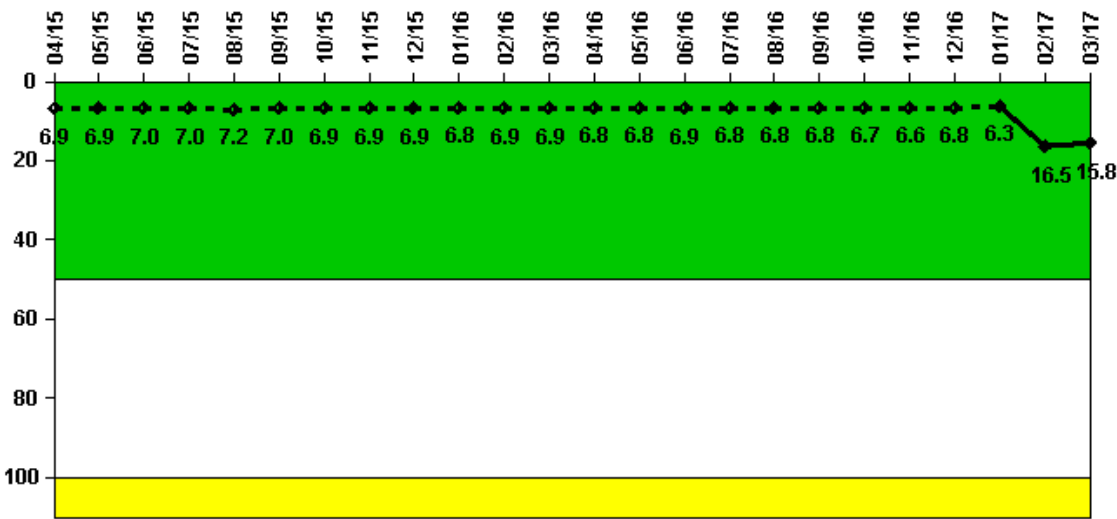
Notes

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	0.000010	0.000008	0.000008	0.000007	0.000008	0.000006	0.000006	0.000007	0.000007	0.000006	0.000019	0.000008
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
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	0.000005	0.000008	0.000007	0.000012	0.000009	0.000009	0.000011	0.000020	0.000023	0.000038	N/A	0.000008
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
Indicator value	0	0	0	0	0	0	0	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	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	1.730	1.730	1.740	1.740	1.790	1.760	1.720	1.720	1.720	1.710	1.730	1.720
Technical specification limit	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0

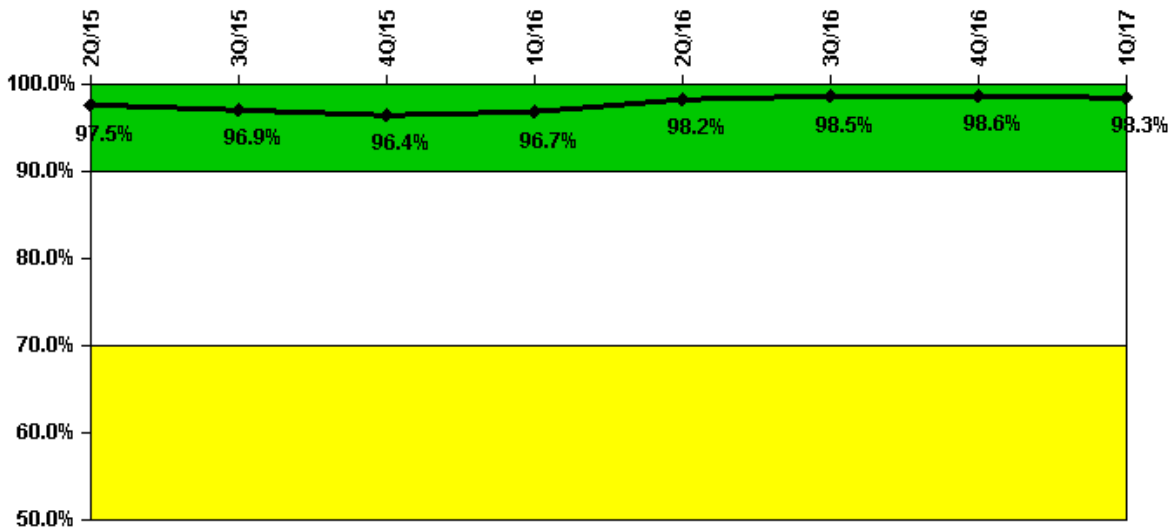
Indicator value	6.9	6.9	7.0	7.0	7.2	7.0	6.9	6.9	6.9	6.8	6.9	6.9
Reactor Coolant System Leakage	4/16	5/16	6/16	7/16	8/16	9/16	10/16	11/16	12/16	1/17	2/17	3/17
Maximum leakage	1.710	1.700	1.720	1.690	1.690	1.690	1.680	1.660	1.700	1.570	4.130	3.940
Technical specification limit	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0

Indicator value	6.8	6.8	6.9	6.8	6.8	6.8	6.7	6.6	6.8	6.3	16.5	15.8
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Licensee Comments: none

Drill/Exercise Performance



Thresholds: White < 90.0% Yellow < 70.0%

Notes

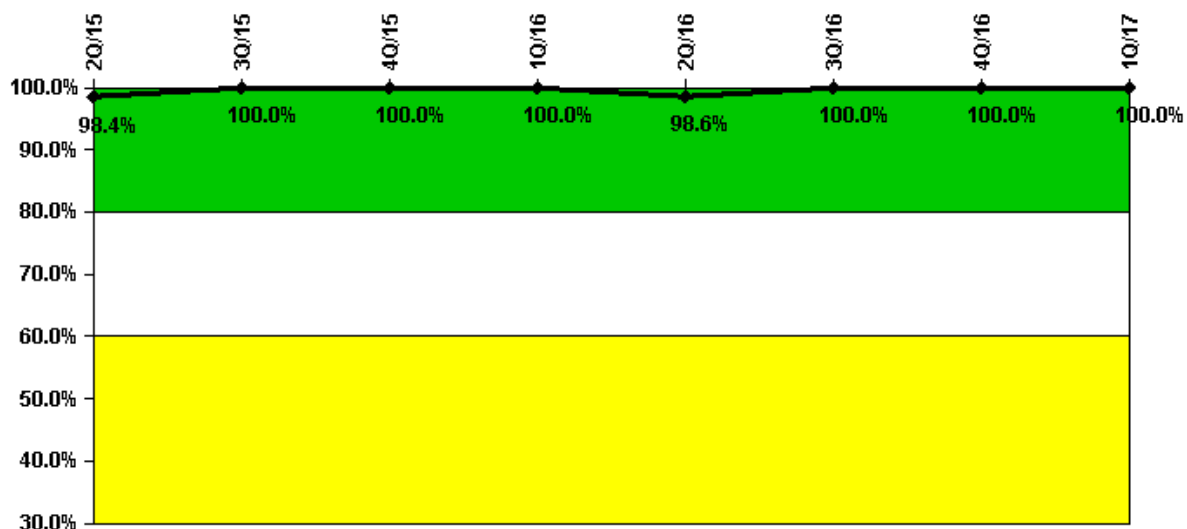
Drill/Exercise Performance	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17
Successful opportunities	69.0	16.0	6.0	67.0	41.0	36.0	14.0	41.0
Total opportunities	70.0	17.0	6.0	68.0	42.0	36.0	14.0	42.0

Indicator value 97.5% 96.9% 96.4% 96.7% 98.2% 98.5% 98.6% 98.3%

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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	62.0	61.0	65.0	71.0	73.0	69.0	70.0	64.0
Total Key personnel	63.0	61.0	65.0	71.0	74.0	69.0	70.0	64.0

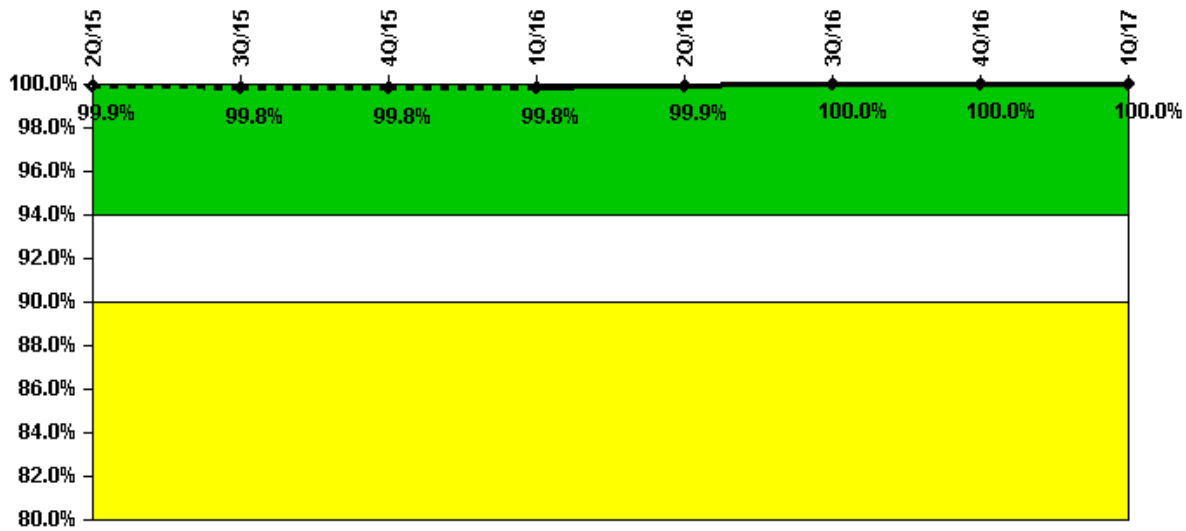
Indicator value **98.4% 100.0% 100.0% 100.0% 98.6% 100.0% 100.0% 100.0%**

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Licensee Comments:

2Q/15: December 2014 data is updated to correct a discrepancy in which an individual should have been counted for 2 separate positions. The change has a minor effect on the indicator value and it does not change the indicator color.

Alert & Notification System



Thresholds: White < 94.0% Yellow < 90.0%

Notes

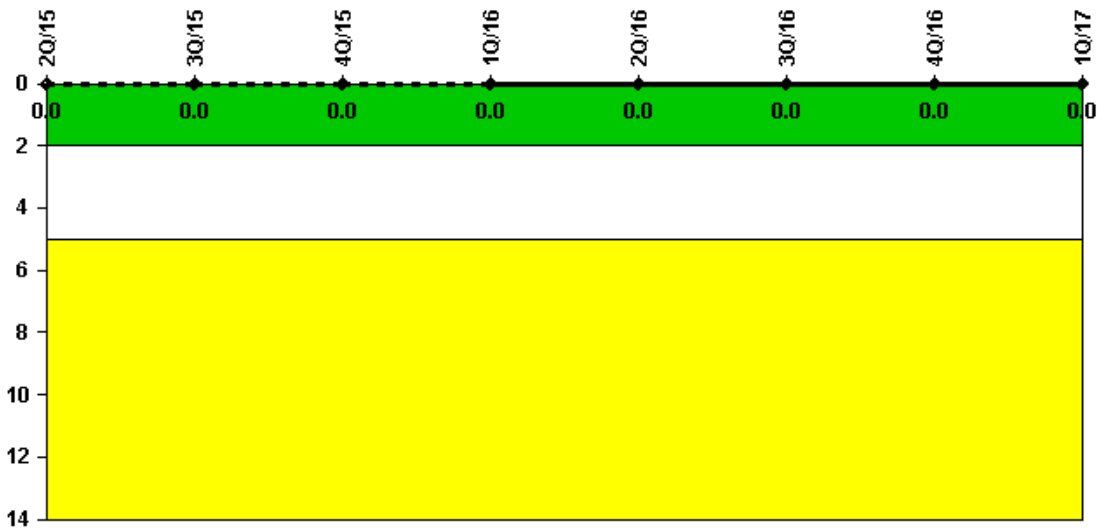
Alert & Notification System	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17
Successful siren-tests	258	258	296	348	520	520	520	2440
Total sirens-tests	259	259	296	348	520	520	520	2440

Indicator value **99.9%** **99.8%** **99.8%** **99.8%** **99.9%** **100.0%** **100.0%** **100.0%**

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Licensee Comments: none

Occupational Exposure Control Effectiveness



Thresholds: White > 2.0 Yellow > 5.0

Notes

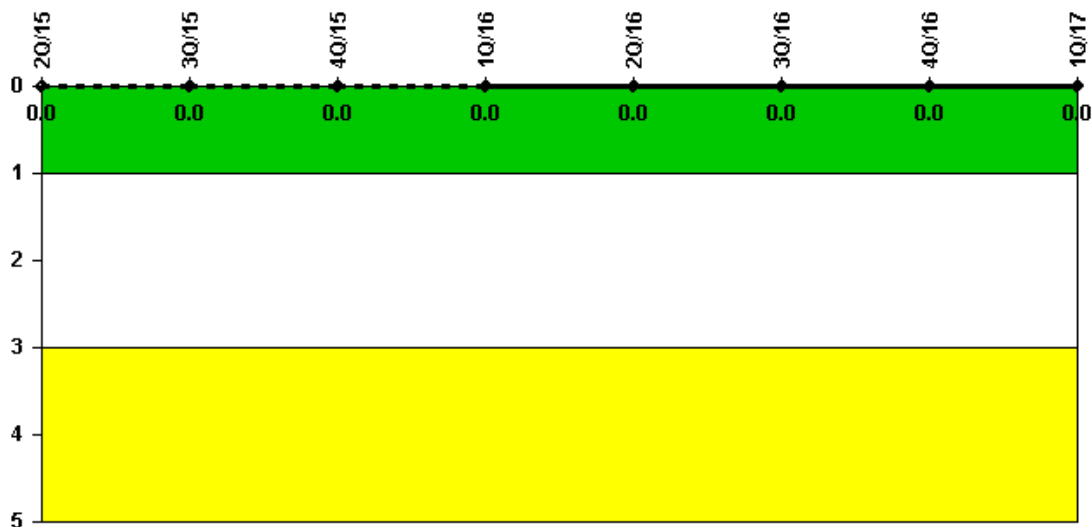
Occupational Exposure Control Effectiveness 2Q/15 3Q/15 4Q/15 1Q/16 2Q/16 3Q/16 4Q/16 1Q/17

High radiation area occurrences	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 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

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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: May 5, 2017

Page Last Reviewed/Updated Wednesday, June 07, 2017