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Saint Lucie 2 – Quarterly Performance Indicators

2Q/2017 Performance Indicators

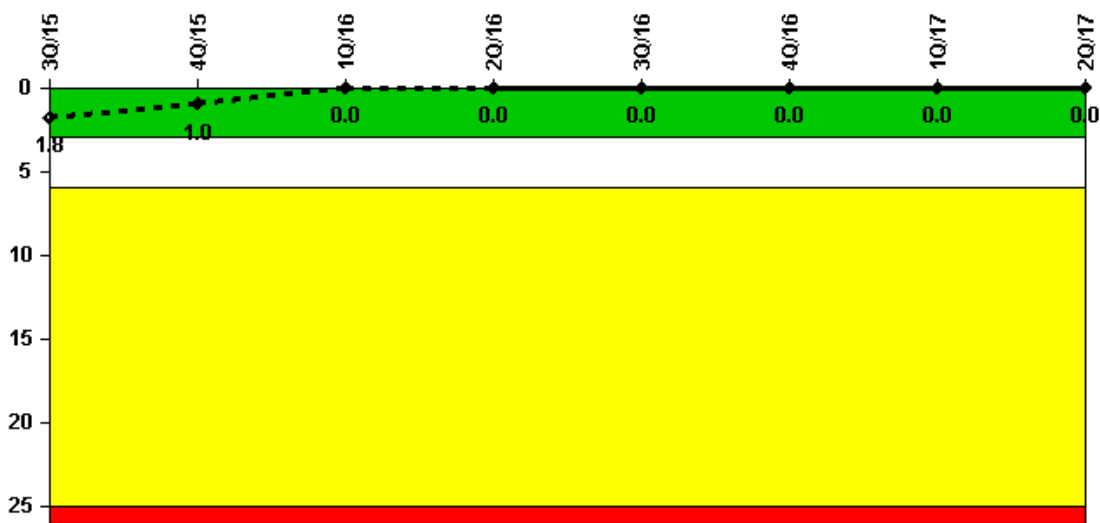
The solid trend line represents the current reporting period.

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

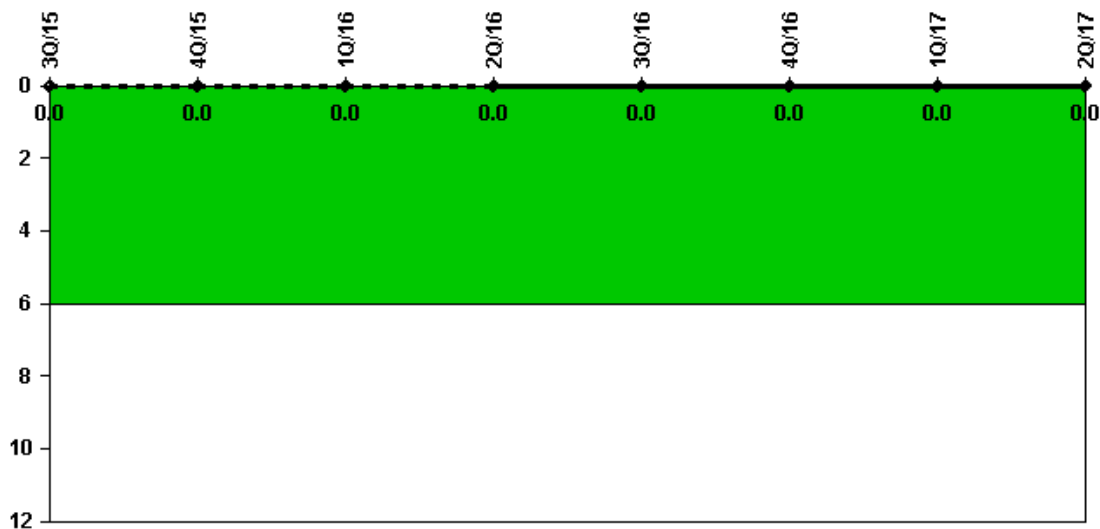
Unplanned Scrams per 7000 Critical Hrs	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17
Unplanned scrams	0	0	0	0	0	0	0	0
Critical hours	1657.2	1626.2	2183.0	2184.0	2208.0	2034.5	1395.9	2184.0

Indicator value	1.8	1.0	0	0	0	0	0	0
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Licensee Comments: none

Unplanned Power Changes per 7000 Critical Hrs



Thresholds: White > 6.0

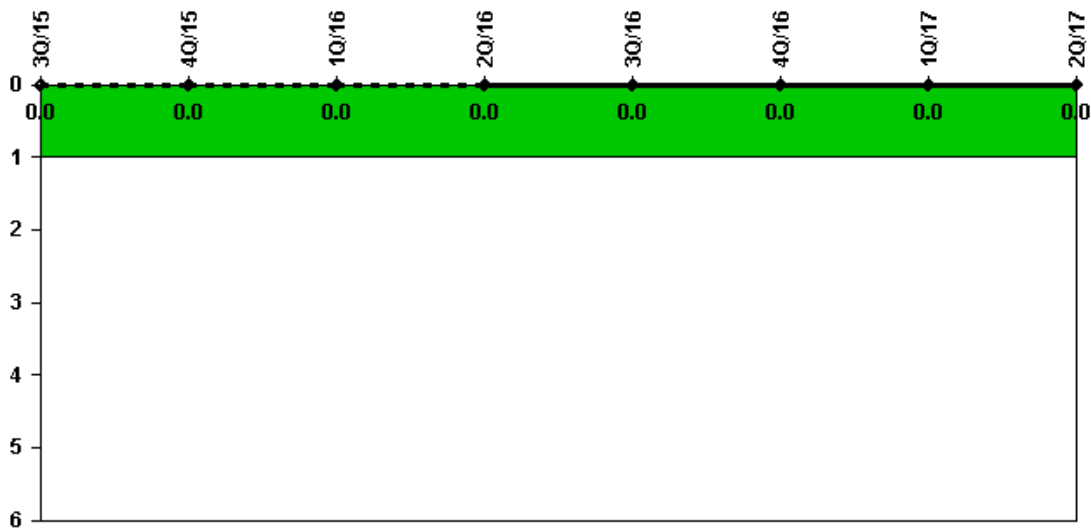
Notes

Unplanned Power Changes per 7000 Critical Hrs	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17
Unplanned power changes	0	0	0	0	0	0	0	0
Critical hours	1657.2	1626.2	2183.0	2184.0	2208.0	2034.5	1395.9	2184.0
Indicator value	0	0	0	0	0	0	0	0

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Licensee Comments: none

Unplanned Scrams with Complications



Thresholds: White > 1.0

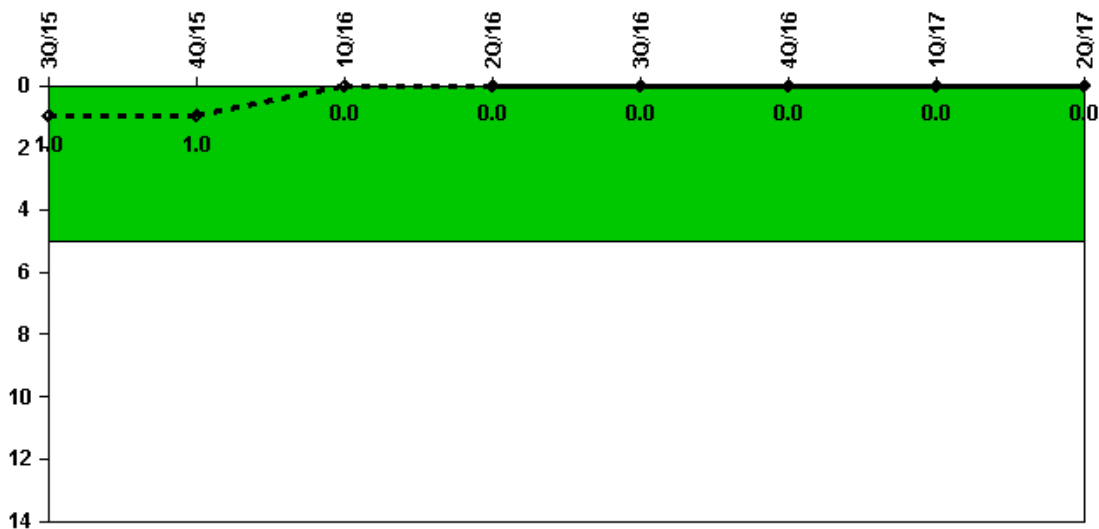
Notes

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

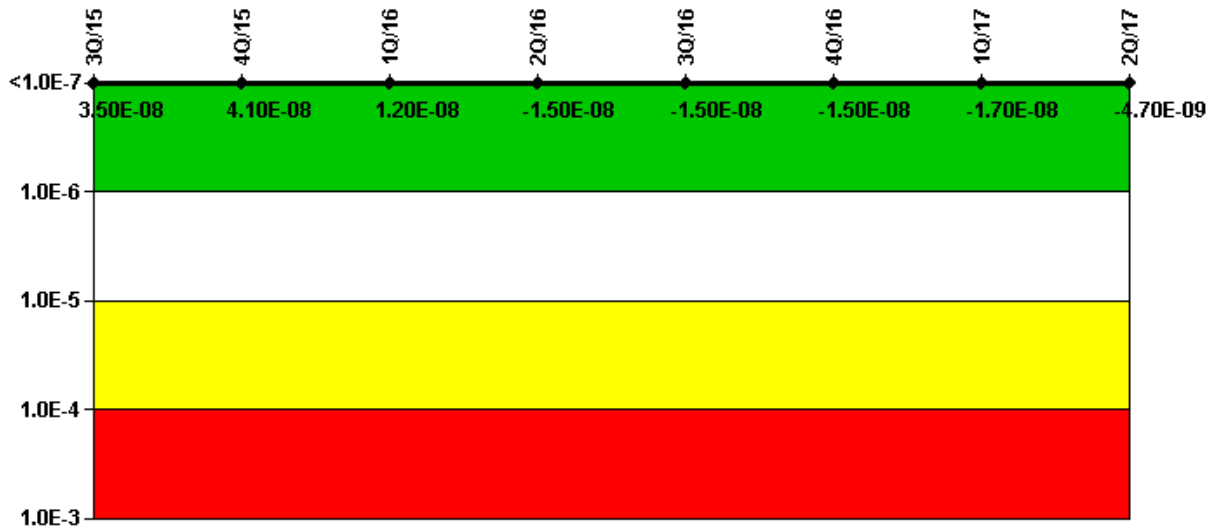
Safety System Functional Failures 0 0 0 0 0 0 0 0

Indicator value 1 1 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

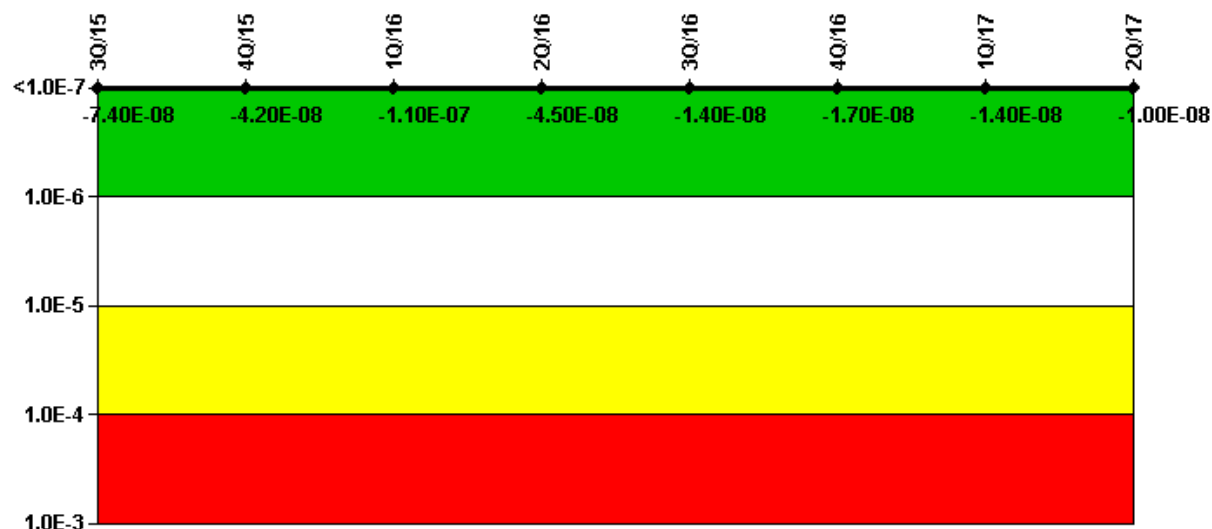
	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17
UAI (ΔCDF)	3.35E-08	3.11E-08	3.02E-08	1.52E-08	1.50E-08	1.50E-08	1.26E-08	2.54E-08
URI (ΔCDF)	1.56E-09	9.54E-09	-1.84E-08	-3.01E-08	-3.01E-08	-3.01E-08	-3.01E-08	-3.01E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	3.50E-08	4.10E-08	1.20E-08	-1.50E-08	-1.50E-08	-1.50E-08	-1.70E-08	-4.70E-09

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Licensee Comments:

2Q/16: Changed PRA Parameter(s). PRA coefficients and CDF were changed due to updated PRA model

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

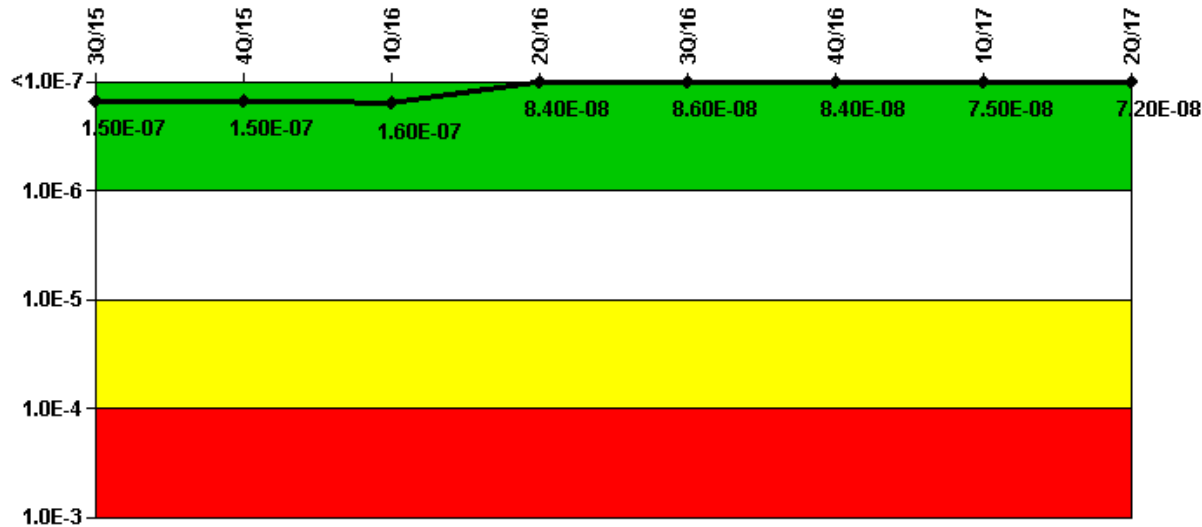
	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17
UAI (ΔCDF)	2.09E-07	2.41E-07	1.70E-07	5.41E-08	8.44E-08	8.23E-08	8.53E-08	8.86E-08
URI (ΔCDF)	-2.84E-07	-2.84E-07	-2.84E-07	-9.88E-08	-9.88E-08	-9.88E-08	-9.88E-08	-9.88E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-7.40E-08	-4.20E-08	-1.10E-07	-4.50E-08	-1.40E-08	-1.70E-08	-1.40E-08	-1.00E-08

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Licensee Comments:

2Q/16: Changed PRA Parameter(s). PRA coefficients and CDF were changed due to updated PRA model

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

	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17
UAI (ΔCDF)	5.50E-09	4.64E-09	9.82E-09	1.35E-08	1.53E-08	1.53E-08	1.53E-08	1.29E-08
URI (ΔCDF)	1.46E-07	1.46E-07	1.46E-07	7.10E-08	7.10E-08	6.89E-08	5.95E-08	5.95E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	1.50E-07	1.50E-07	1.60E-07	8.40E-08	8.60E-08	8.40E-08	7.50E-08	7.20E-08

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Licensee Comments:

3Q/16: MSPI URI recalculated due to revised ICES records 314625 and 316104. (AR 2162606)

2Q/16: Changed PRA Parameter(s). PRA coefficients and CDF were changed due to updated PRA model

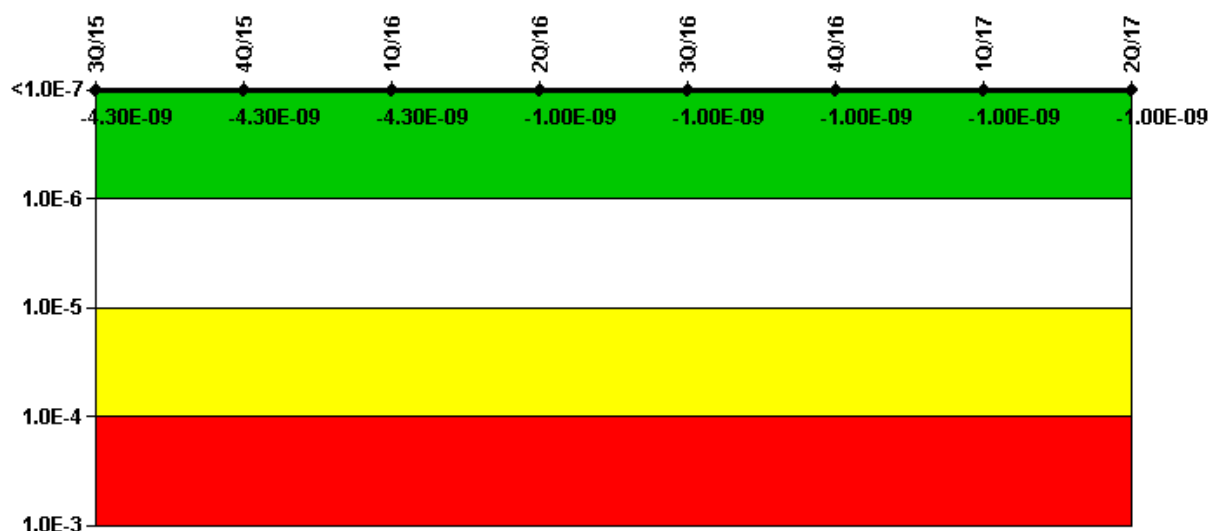
2Q/16: PRA coefficients and CDF were changed due to updated PRA model MSPI URI recalculated due to revised ICES records 314625 and 316104. (AR 2162606)

1Q/16: MSPI URI recalculated due to revised ICES records 314625 and 316104. (AR 2162606)

4Q/15: MSPI URI recalculated due to revised ICES records 314625 and 316104. (AR 2162606)

3Q/15: MSPI URI recalculated due to revised ICES records 314625 and 316104. (AR 2162606)

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

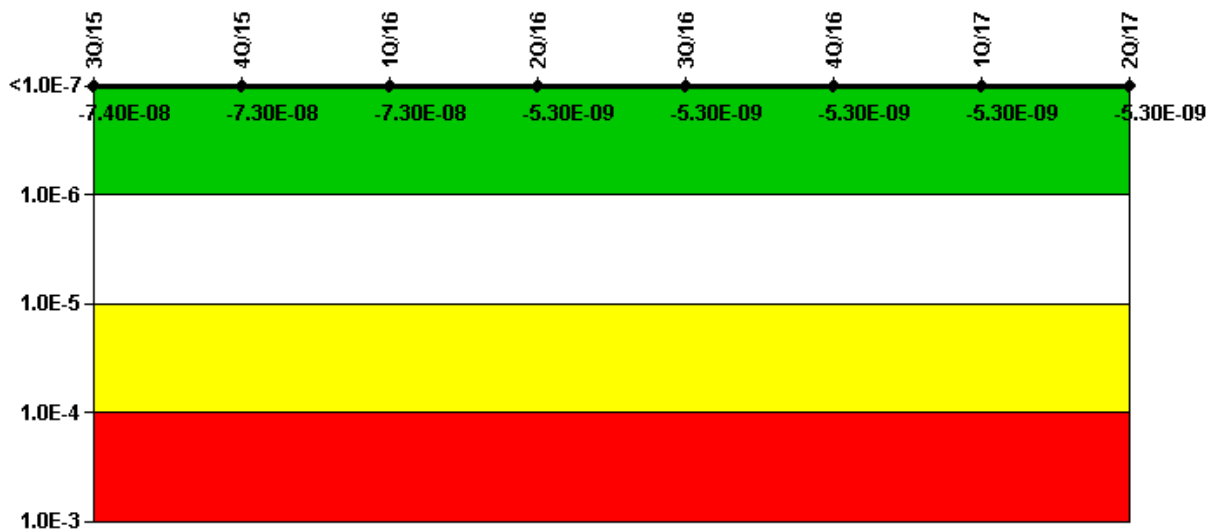
	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17
UAI (Δ CDF)	-1.03E-09	-1.03E-09	-1.03E-09	-1.10E-10	-1.10E-10	-1.10E-10	-1.10E-10	-1.10E-10
URI (Δ CDF)	-3.25E-09	-3.25E-09	-3.25E-09	-9.36E-10	-9.36E-10	-9.36E-10	-9.36E-10	-9.36E-10
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-4.30E-09	-4.30E-09	-4.30E-09	-1.00E-09	-1.00E-09	-1.00E-09	-1.00E-09	-1.00E-09

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Licensee Comments:

2Q/16: Changed PRA Parameter(s). PRA coefficients and CDF were changed due to updated PRA model

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

	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17
UAI (ΔCDF)	-6.51E-08	-6.45E-08	-6.45E-08	-4.33E-09	-4.33E-09	-4.33E-09	-4.33E-09	-4.34E-09
URI (ΔCDF)	-8.83E-09	-8.83E-09	-8.83E-09	-9.63E-10	-9.63E-10	-9.63E-10	-9.63E-10	-9.63E-10
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-7.40E-08	-7.30E-08	-7.30E-08	-5.30E-09	-5.30E-09	-5.30E-09	-5.30E-09	-5.30E-09

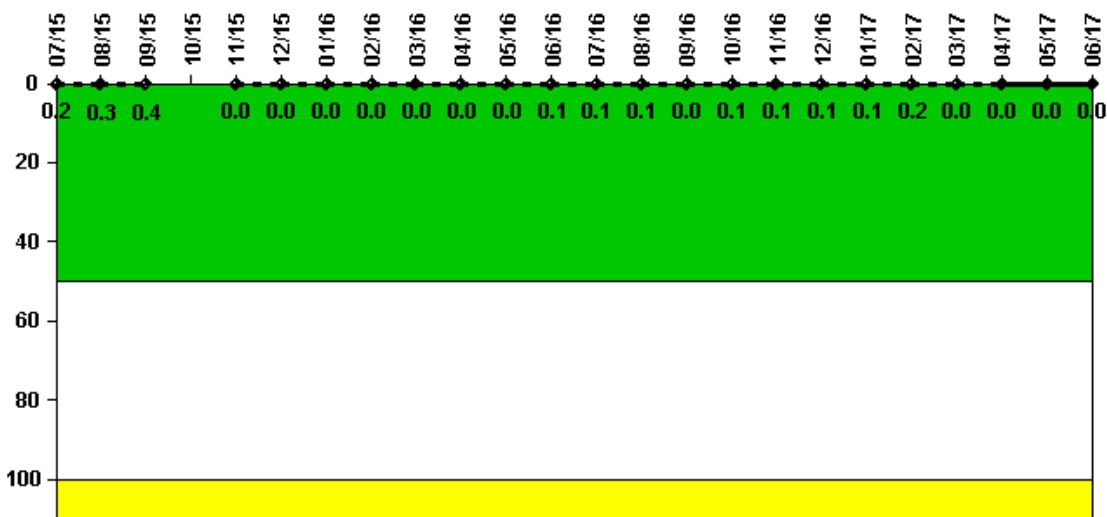
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Licensee Comments:

2Q/16: Changed PRA Parameter(s). PRA coefficients and CDF were changed due to updated PRA model

3Q/15: ICES OE record #319756 revised to upgrade the 2C ICW pump failure to a MSPI demand failure - change resulted in no effect on the calculated 3Q PI value.

Reactor Coolant System Activity



Thresholds: White > 50.0 Yellow > 100.0

Notes

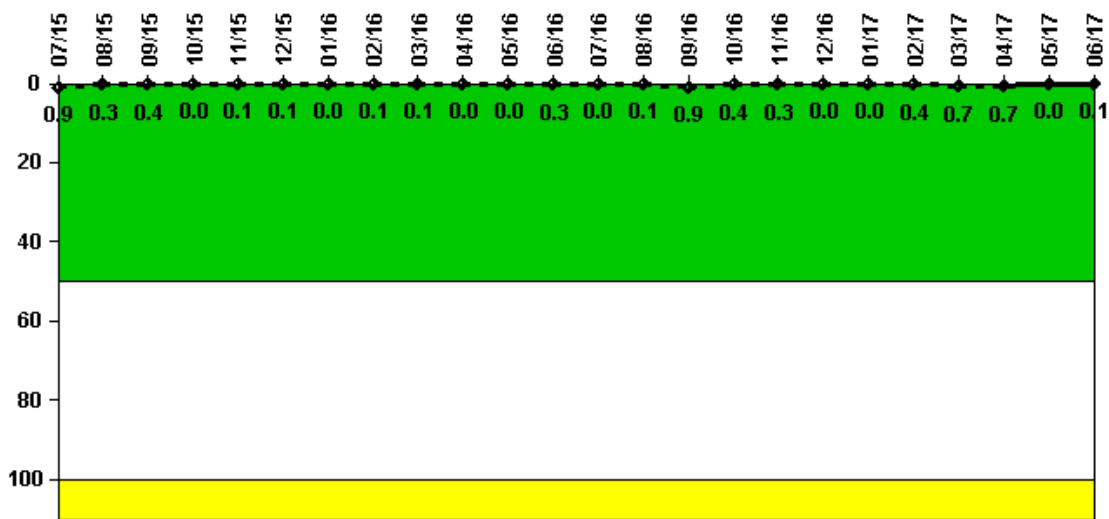
Reactor Coolant System Activity	7/15	8/15	9/15	10/15	11/15	12/15	1/16	2/16	3/16	4/16	5/16	6/16
Maximum activity	0.002130	0.002520	0.003770	N/A	0.000269	0.000312	0.000333	0.000364	0.000382	0.000384	0.000374	0.000607
Technical specification limit	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Indicator value	0.2	0.3	0.4	N/A	0	0	0	0	0	0	0	0.1

Reactor Coolant System Activity	7/16	8/16	9/16	10/16	11/16	12/16	1/17	2/17	3/17	4/17	5/17	6/17
Maximum activity	0.000680	0.000638	0.000452	0.000774	0.000512	0.000581	0.000615	0.001650	0.000219	0.000262	0.000252	0.000249
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	0.1	0.1	0	0.1	0.1	0.1	0.1	0.2	0	0	0	0

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Licensee Comments: none

Reactor Coolant System Leakage



Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Leakage	7/15	8/15	9/15	10/15	11/15	12/15	1/16	2/16	3/16	4/16	5/16	6/16
Maximum leakage	0.086	0.030	0.040	0	0.005	0.005	0.003	0.005	0.005	0	0	0.030
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	0.3	0.4	0	0.1	0.1	0	0.1	0.1	0	0	0.3
Reactor Coolant System Leakage	7/16	8/16	9/16	10/16	11/16	12/16	1/17	2/17	3/17	4/17	5/17	6/17
Maximum leakage	0.004	0.010	0.089	0.042	0.030	0.003	0	0.044	0.074	0.074	0	0.009
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

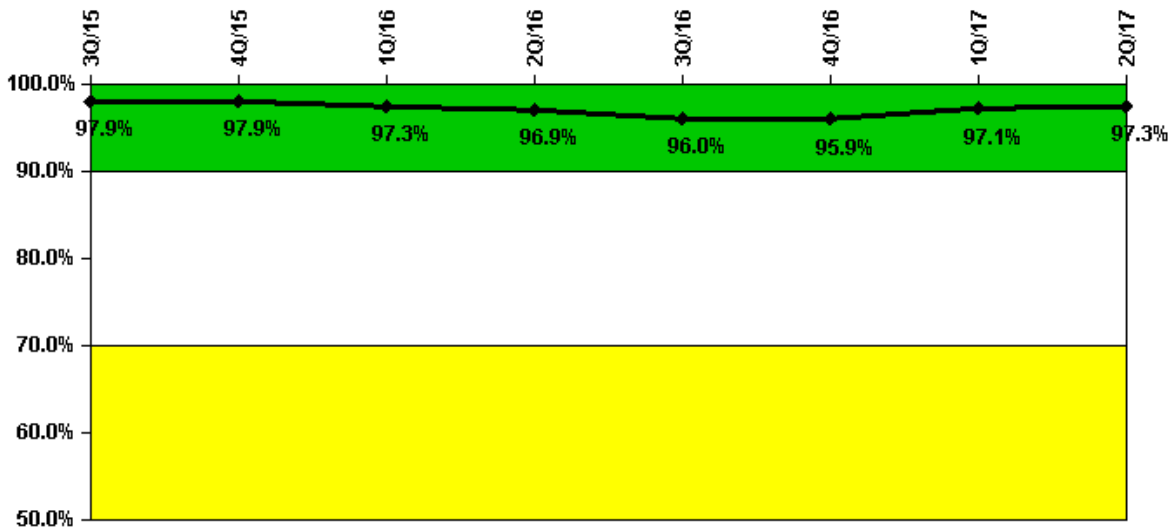
Indicator value	0	0.1	0.9	0.4	0.3	0	0	0.4	0.7	0.7	0	0.1
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Licensee Comments:

3/16: February data corrected from 0.058 to 0.005

Drill/Exercise Performance



Thresholds: White < 90.0% Yellow < 70.0%

Notes

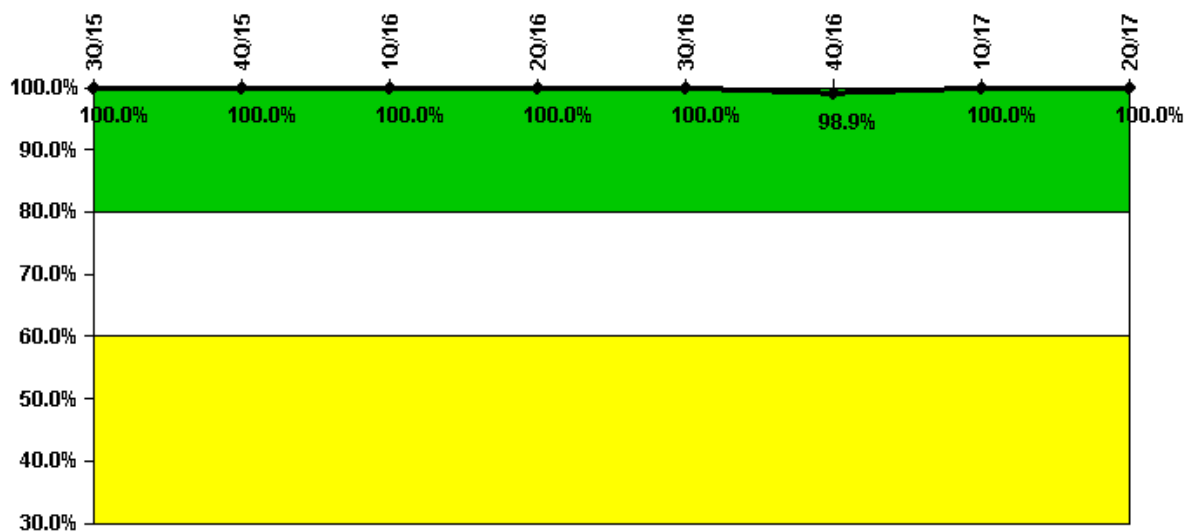
Drill/Exercise Performance	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17
Successful opportunities	20.0	24.0	17.0	17.0	25.0	24.0	44.0	46.0
Total opportunities	22.0	25.0	18.0	17.0	27.0	24.0	44.0	46.0

Indicator value 97.9% 97.9% 97.3% 96.9% 96.0% 95.9% 97.1% 97.3%

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Licensee Comments: none

ERO Drill Participation



Thresholds: White < 80.0% Yellow < 60.0%

Notes

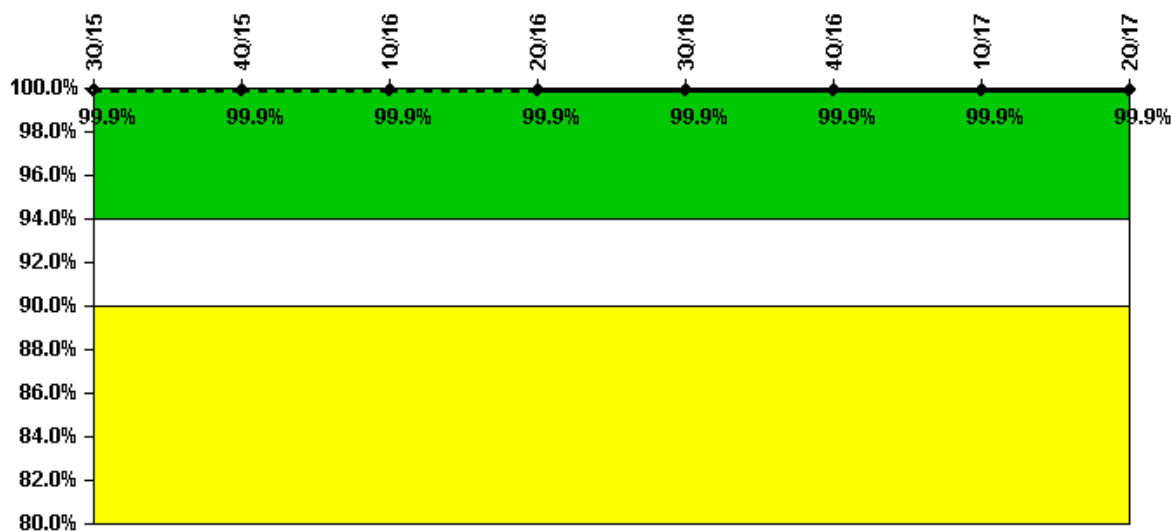
ERO Drill Participation	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17
Participating Key personnel	76.0	76.0	83.0	83.0	79.0	86.0	86.0	84.0
Total Key personnel	76.0	76.0	83.0	83.0	79.0	87.0	86.0	84.0

Indicator value **100.0% 100.0% 100.0% 100.0% 100.0% 98.9% 100.0% 100.0%**

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Licensee Comments: none

Alert & Notification System



Thresholds: White < 94.0% Yellow < 90.0%

Notes

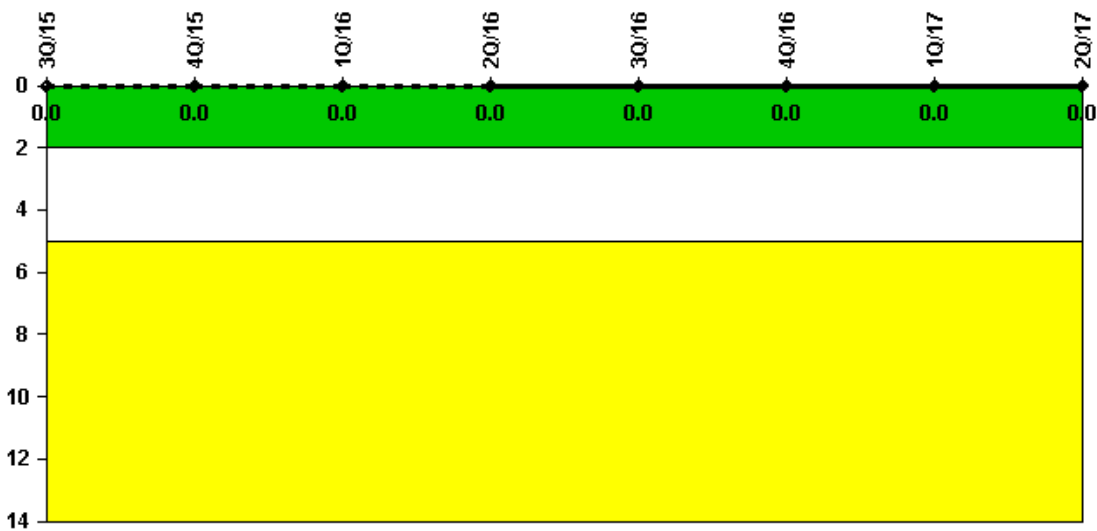
Alert & Notification System	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17
Successful siren-tests	719	629	630	629	720	629	629	720
Total sirens-tests	720	630	630	630	720	630	630	720

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

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Licensee Comments: none

Occupational Exposure Control Effectiveness



Thresholds: White > 2.0 Yellow > 5.0

Notes

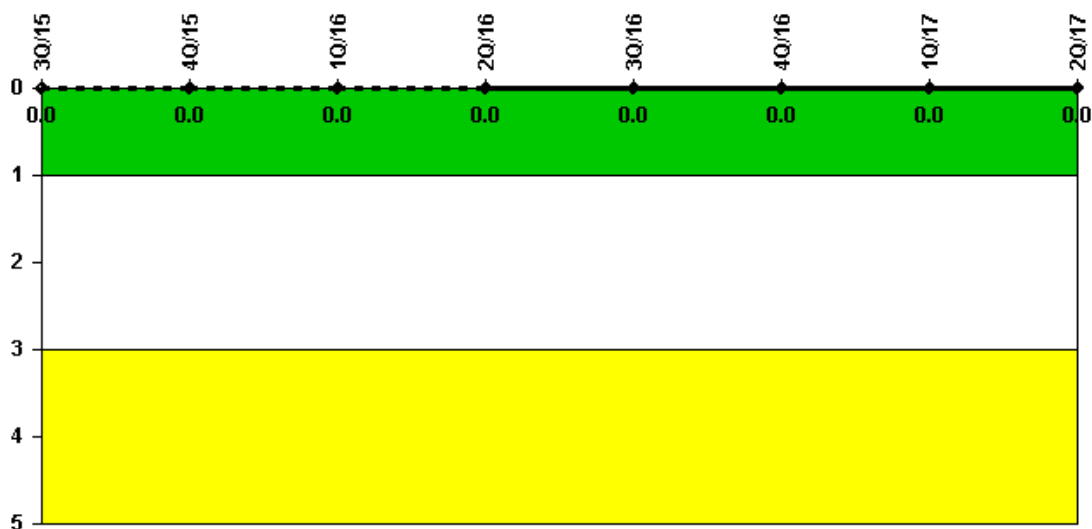
Occupational Exposure Control Effectiveness 3Q/15 4Q/15 1Q/16 2Q/16 3Q/16 4Q/16 1Q/17 2Q/17

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 3Q/15 4Q/15 1Q/16 2Q/16 3Q/16 4Q/16 1Q/17 2Q/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: July 26, 2017

Page Last Reviewed/Updated Wednesday, June 07, 2017