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Turkey Point 4 – Quarterly Performance Indicators

2Q/2017 Performance Indicators

The solid trend line represents the current reporting period.

Licensee's General Comments: none

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- 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)
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- Reactor Coolant System Leakage (BI02)
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- Alert and Notification System Reliability (EP03)
- Occupational Exposure Control Effectiveness (OR01)
- RETS/OCDM Radiological Effluent Occurrence (PR01)
- Protected Area Equipment (PP01)

Notes

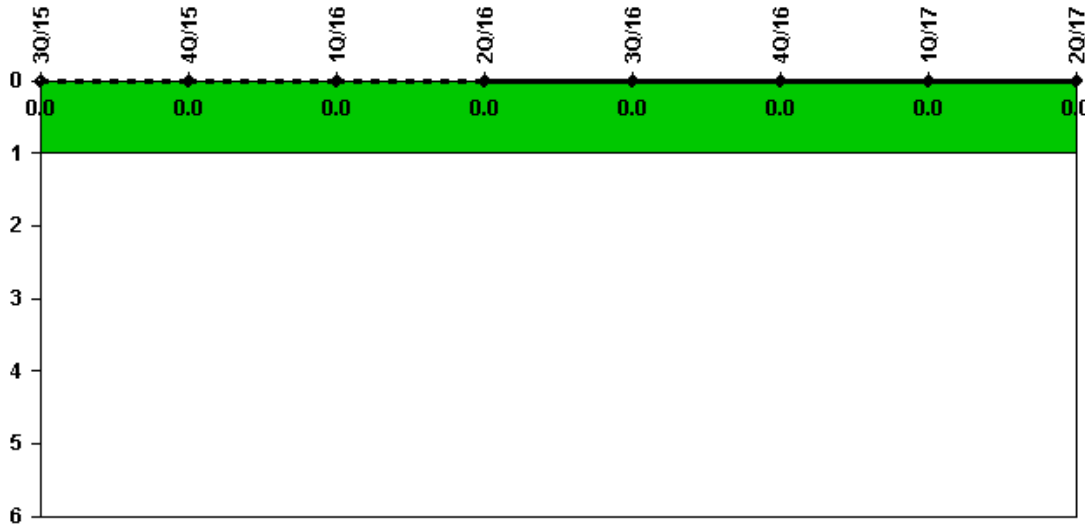
Unplanned Power Changes per 7000 Critical Hrs	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17
Unplanned power changes	0	0	0	1.0	0	1.0	0	0
Critical hours	2208.0	2209.0	2112.4	1538.1	2208.0	2209.0	2159.0	2184.0
Indicator value	0.9	0	0	0.9	0.9	1.7	1.7	0.8

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Licensee Comments:

2Q/16: Turkey Point Unit 4 performed an unplanned downpower on 5/19/2016 due to a EHC leak on the 4C MSR. Unit 4 returned to full power on 5/20/2016

Unplanned Scrams with Complications



Thresholds: White > 1.0

Notes

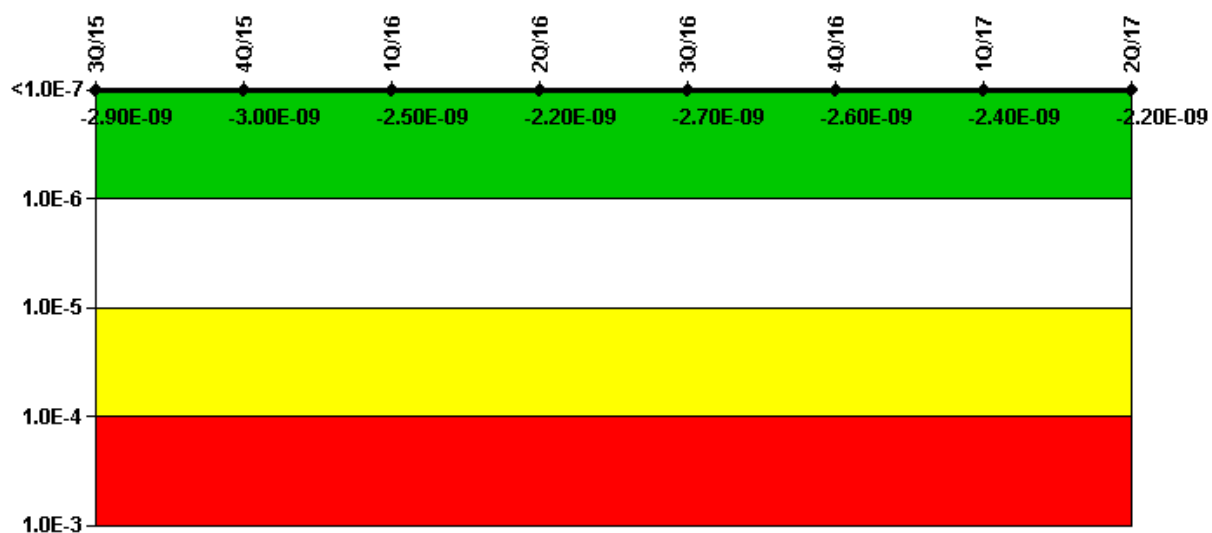
Unplanned Scrams with Complications	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17
Scrams with complications	0	0	0	0	0	0	0	0

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

Mitigating Systems Performance Index, Emergency AC Power System



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

Notes

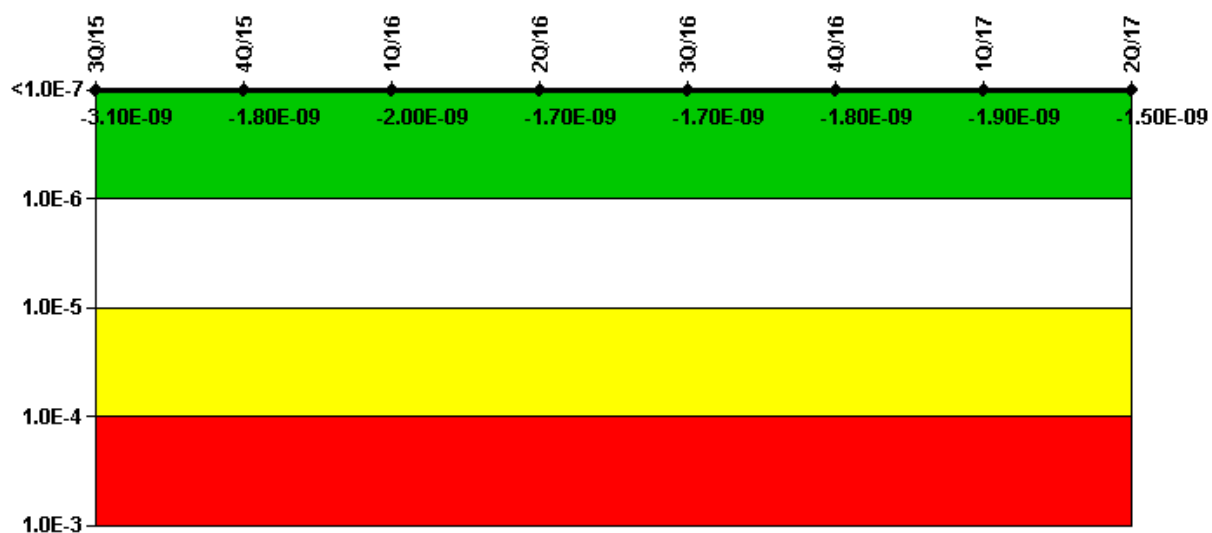
Mitigating Systems Performance Index, Emergency AC Power System

	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17
UAI (ΔCDF)	2.09E-09	1.96E-09	2.08E-09	2.10E-09	1.84E-09	1.95E-09	2.16E-09	2.33E-09
URI (ΔCDF)	-5.04E-09	-4.93E-09	-4.57E-09	-4.26E-09	-4.56E-09	-4.55E-09	-4.57E-09	-4.55E-09
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-2.90E-09	-3.00E-09	-2.50E-09	-2.20E-09	-2.70E-09	-2.60E-09	-2.40E-09	-2.20E-09

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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

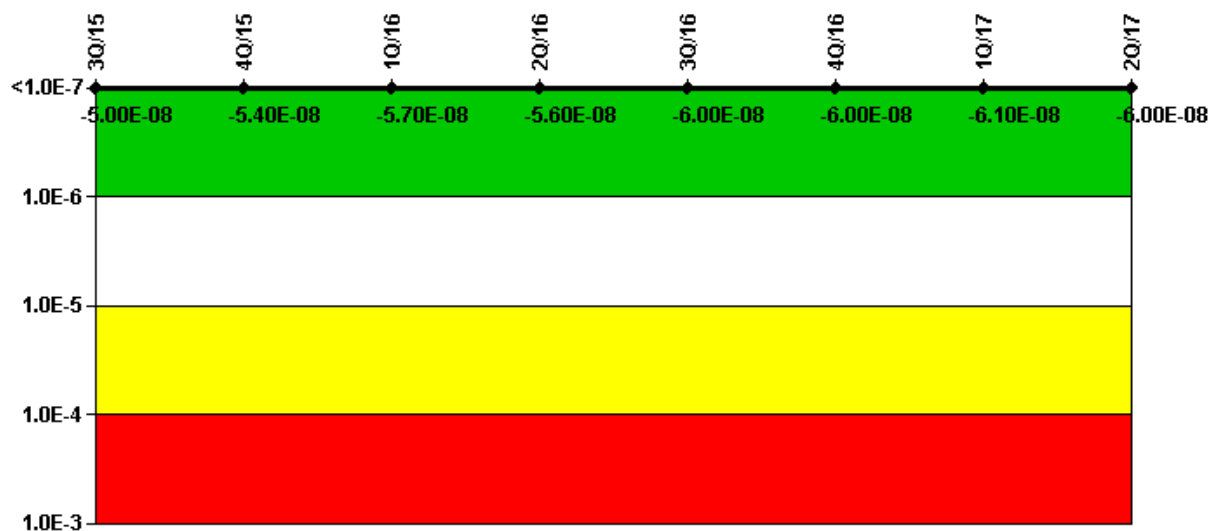
Mitigating Systems Performance Index, High Pressure Injection System

	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17
UAI (Δ CDF)	-1.33E-09	-6.88E-11	-2.72E-10	3.82E-11	2.02E-11	-5.05E-11	-2.28E-10	2.55E-10
URI (Δ CDF)	-1.76E-09	-1.76E-09	-1.76E-09	-1.76E-09	-1.76E-09	-1.72E-09	-1.72E-09	-1.72E-09
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-3.10E-09	-1.80E-09	-2.00E-09	-1.70E-09	-1.70E-09	-1.80E-09	-1.90E-09	-1.50E-09

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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

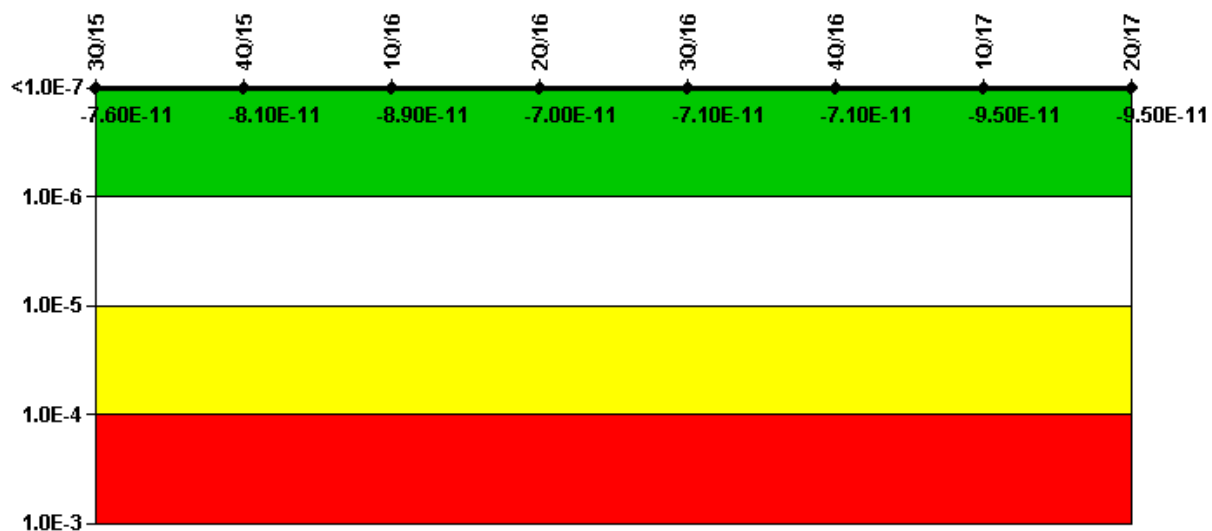
Mitigating Systems Performance Index, Heat Removal System

	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17
UAI (ΔCDF)	1.88E-08	1.48E-08	1.19E-08	1.22E-08	8.26E-09	8.13E-09	7.18E-09	8.35E-09
URI (ΔCDF)	-6.90E-08	-6.90E-08	-6.85E-08	-6.84E-08	-6.84E-08	-6.84E-08	-6.84E-08	-6.84E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-5.00E-08	-5.40E-08	-5.70E-08	-5.60E-08	-6.00E-08	-6.00E-08	-6.10E-08	-6.00E-08

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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

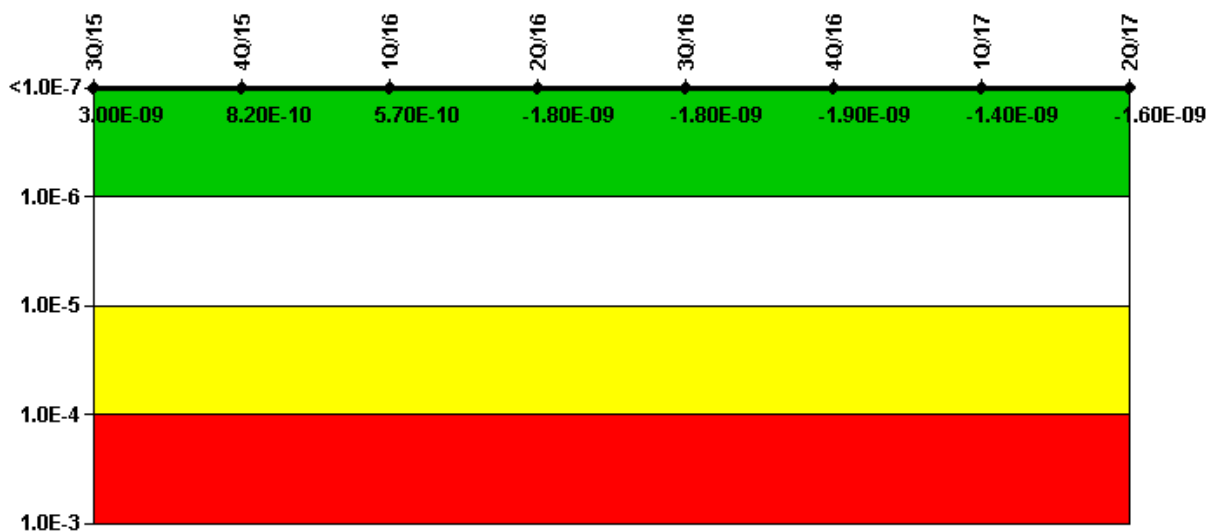
Mitigating Systems Performance Index, Residual Heat Removal System

	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17
UAI (Δ CDF)	-1.10E-12	-5.85E-12	-1.39E-11	4.33E-12	3.55E-12	3.35E-12	-2.06E-11	-2.06E-11
URI (Δ CDF)	-7.47E-11	-7.47E-11	-7.47E-11	-7.47E-11	-7.47E-11	-7.47E-11	-7.47E-11	-7.47E-11
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-7.60E-11	-8.10E-11	-8.90E-11	-7.00E-11	-7.10E-11	-7.10E-11	-9.50E-11	-9.50E-11

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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

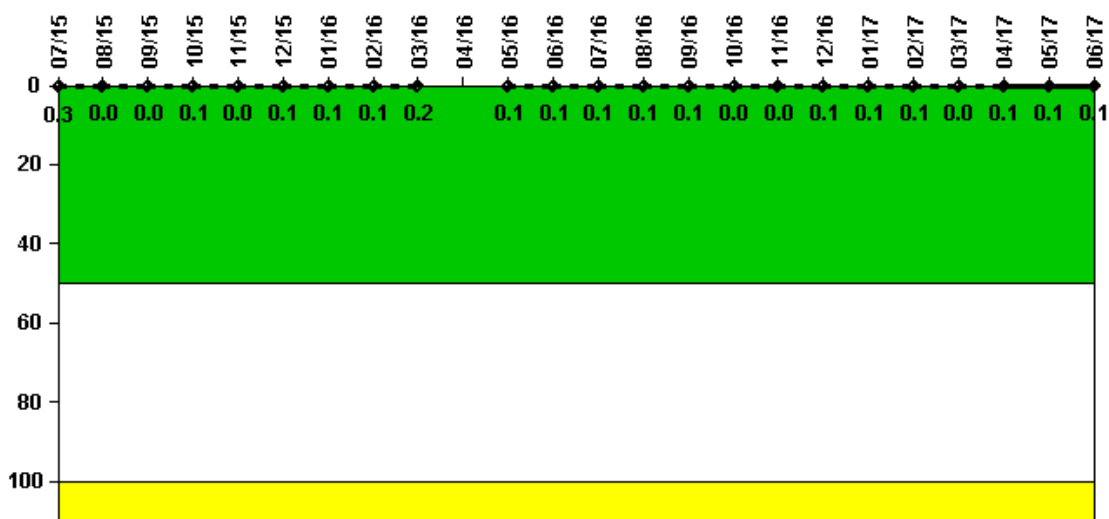
Mitigating Systems Performance Index, Cooling Water Systems

	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17
UAI (ΔCDF)	7.52E-09	5.34E-09	5.09E-09	2.74E-09	2.72E-09	2.67E-09	3.14E-09	2.91E-09
URI (ΔCDF)	-4.52E-09	-4.52E-09	-4.52E-09	-4.52E-09	-4.52E-09	-4.52E-09	-4.52E-09	-4.52E-09
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	3.00E-09	8.20E-10	5.70E-10	-1.80E-09	-1.80E-09	-1.90E-09	-1.40E-09	-1.60E-09

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Licensee Comments: none

Reactor Coolant System Activity



Thresholds: White > 50.0 Yellow > 100.0

Notes

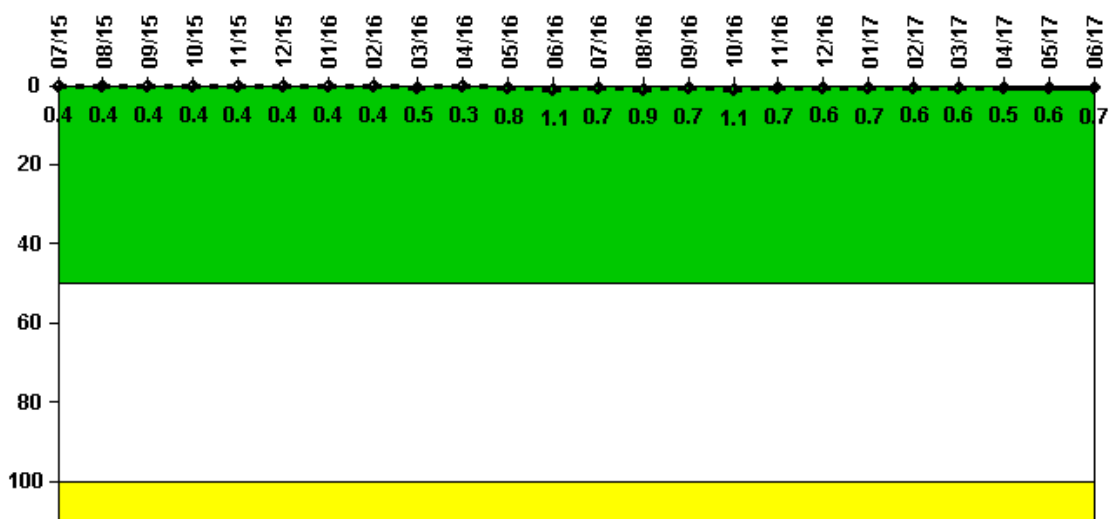
Reactor Coolant System Activity	7/15	8/15	9/15	10/15	11/15	12/15	1/16	2/16	3/16	4/16	5/16	6/16
Maximum activity	0.000850	0.000120	0.000120	0.000290	0.000100	0.000240	0.000180	0.000140	0.000610	N/A	0.000320	0.000130
Technical specification limit	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Indicator value	0.3	0	0	0.1	0	0.1	0.1	0.1	0.2	N/A	0.1	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	0.000130	0.000150	0.000150	0.000100	0.000100	0.000190	0.000200	0.000220	0.000120	0.000210	0.000240	0.000240
Technical specification limit	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Indicator value	0.1	0.1	0.1	0	0	0.1	0.1	0.1	0	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	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	0.040	0.042	0.040	0.040	0.040	0.040	0.040	0.040	0.050	0.030	0.080	0.110
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	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.3	0.8	1.1
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	0.070	0.090	0.070	0.110	0.066	0.061	0.068	0.063	0.056	0.050	0.060	0.070
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

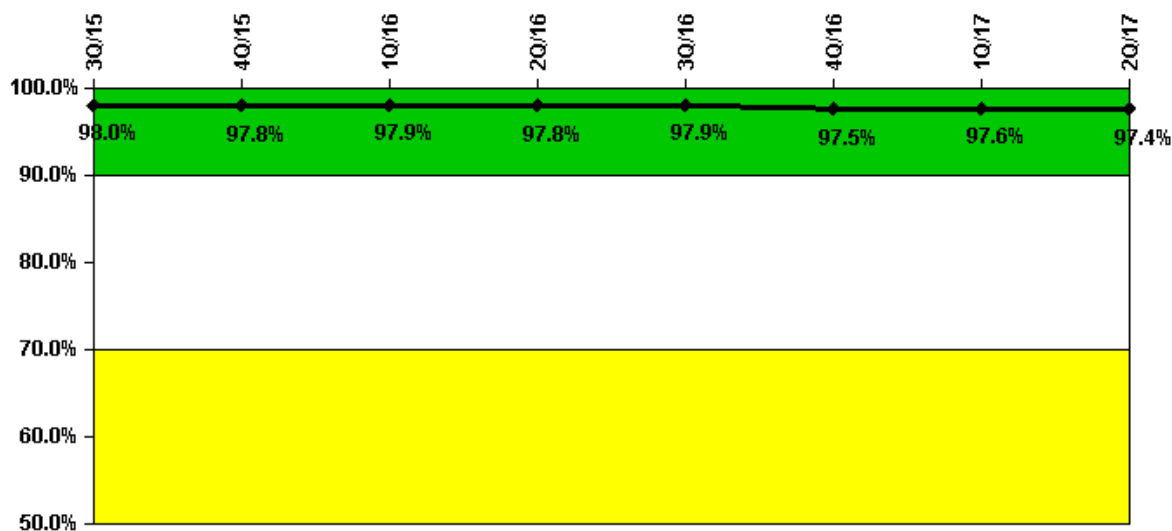
Indicator value	0.7	0.9	0.7	1.1	0.7	0.6	0.7	0.6	0.6	0.5	0.6	0.7
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Licensee Comments:

6/17: Indicator has been corrected to report maximum monthly identified leakage. (Indicator has been revised for July 2016 to June 2017.)

Drill/Exercise Performance



Thresholds: White < 90.0% Yellow < 70.0%

Notes

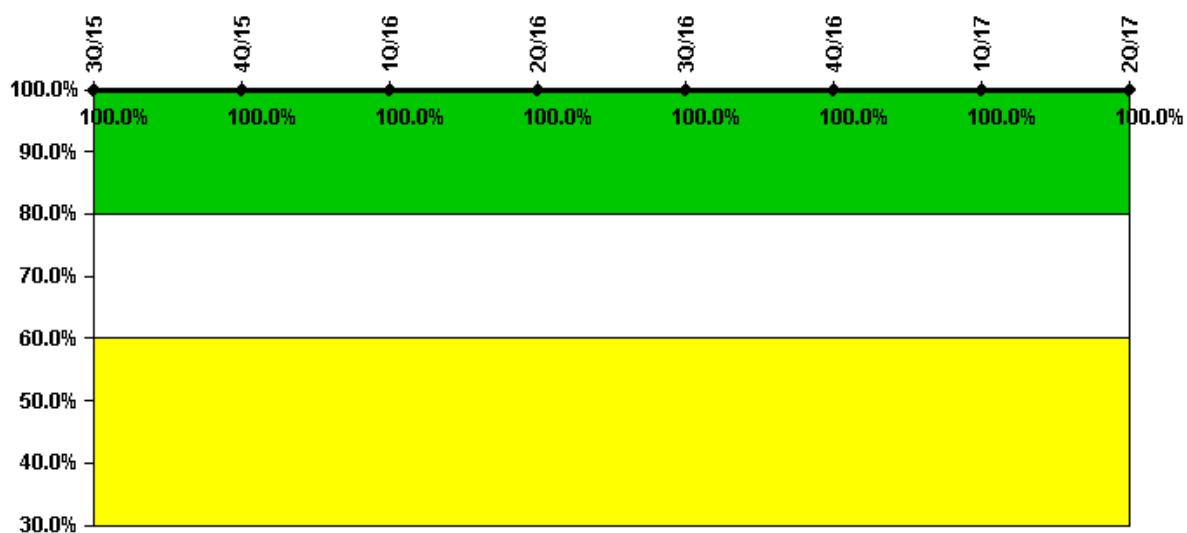
Drill/Exercise Performance	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17
Successful opportunities	40.0	14.0	48.0	4.0	26.0	40.0	36.0	15.0
Total opportunities	41.0	14.0	49.0	4.0	26.0	41.0	39.0	15.0

Indicator value **98.0% 97.8% 97.9% 97.8% 97.9% 97.5% 97.6% 97.4%**

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Licensee Comments: none

ERO Drill Participation



Thresholds: White < 80.0% Yellow < 60.0%

Notes

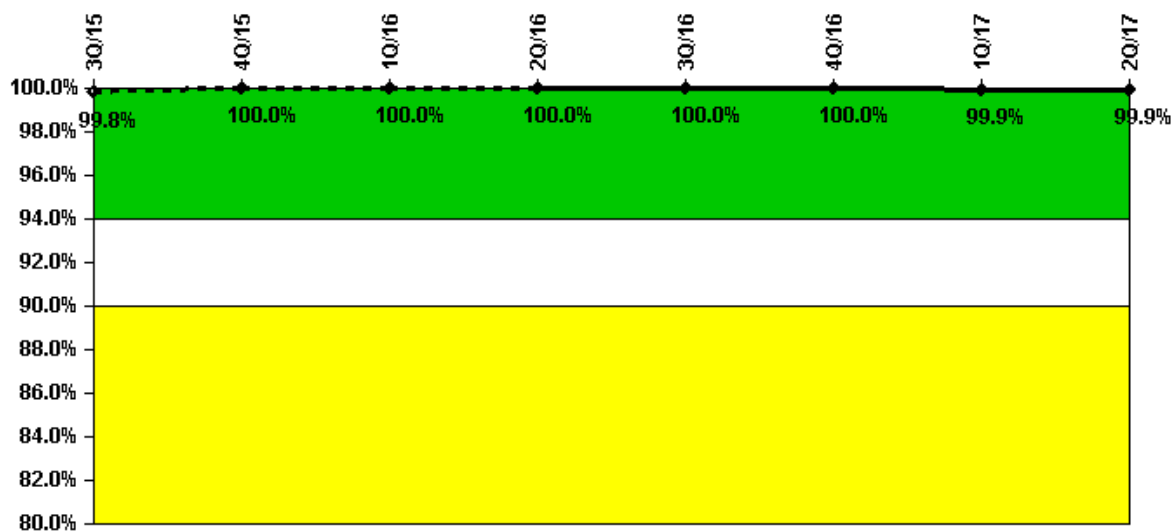
ERO Drill Participation	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17
Participating Key personnel	106.0	107.0	102.0	100.0	100.0	103.0	102.0	99.0
Total Key personnel	106.0	107.0	102.0	100.0	100.0	103.0	102.0	99.0

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

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Licensee Comments: none

Alert & Notification System



Thresholds: White < 94.0% Yellow < 90.0%

Notes

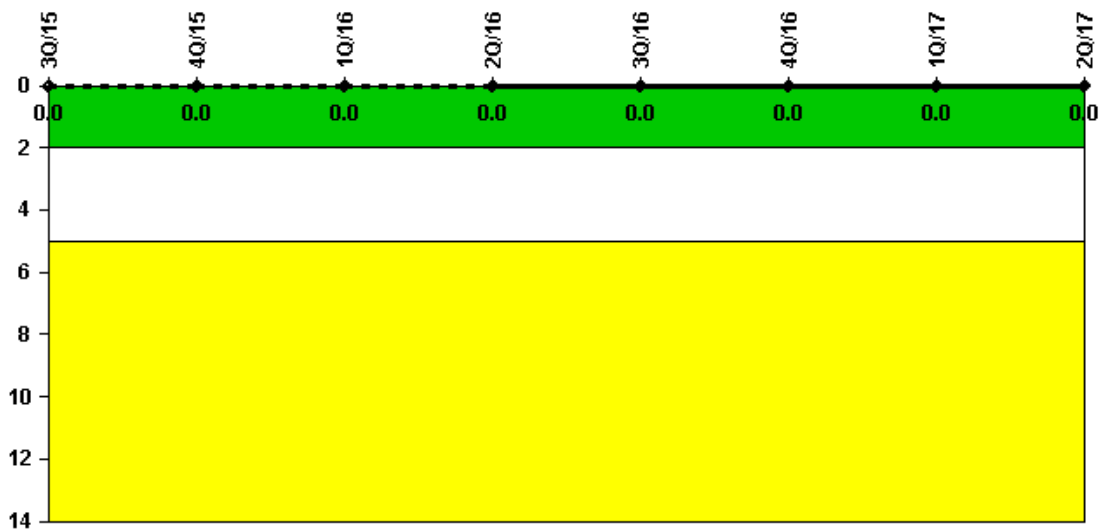
Alert & Notification System	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17
Successful siren-tests	376	376	336	384	336	384	335	335
Total sirens-tests	376	376	336	384	336	384	336	336

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

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Licensee Comments: none

Occupational Exposure Control Effectiveness



Thresholds: White > 2.0 Yellow > 5.0

Notes

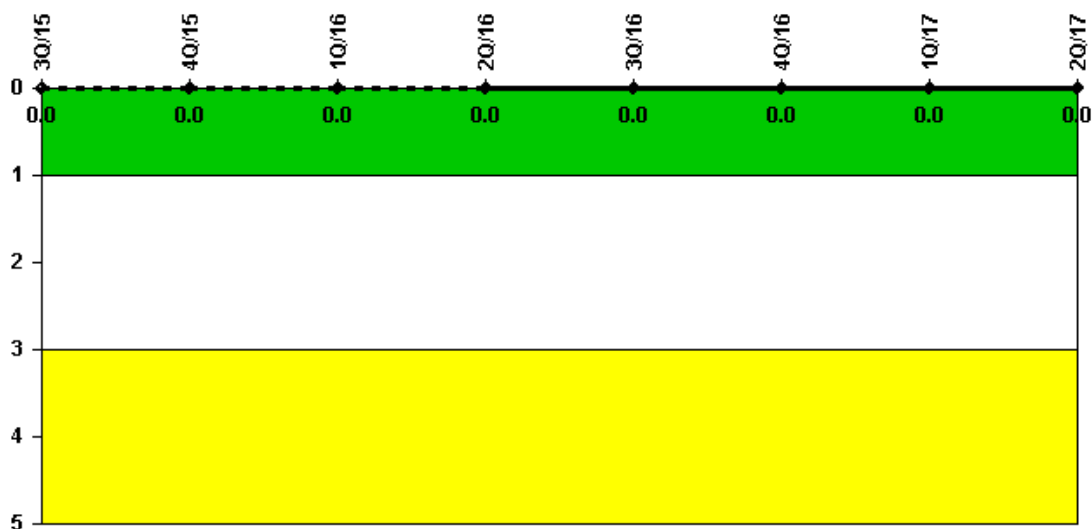
Occupational Exposure Control Effectiveness 3Q/15 4Q/15 1Q/16 2Q/16 3Q/16 4Q/16 1Q/17 2Q/17

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