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Wolf Creek – Quarterly Performance Indicators

3Q/2017 Performance Indicators

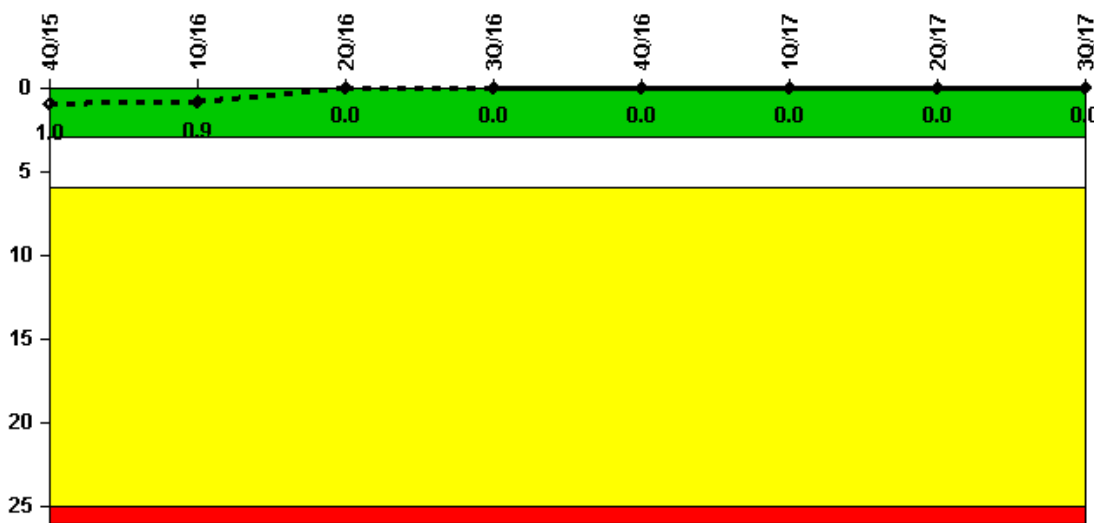
The solid trend line represents the current reporting period.

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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Unplanned Scrams per 7000 Critical Hrs



Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

Notes

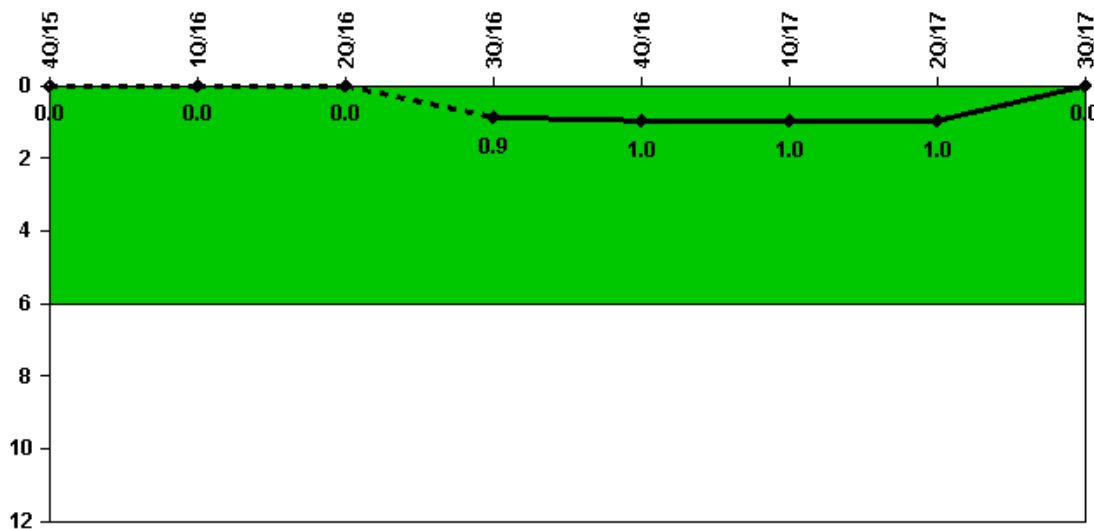
Unplanned Scrams per 7000 Critical Hrs	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17
Unplanned scrams	0	0	0	0	0	0	0	0
Critical hours	2209.0	2183.0	2184.0	1524.0	1003.3	2159.0	2184.0	2208.0

Indicator value	1.0	0.9	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	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17
Unplanned power changes	0	0	0	1.0	0	0	0	0
Critical hours	2209.0	2183.0	2184.0	1524.0	1003.3	2159.0	2184.0	2208.0
Indicator value	0	0	0	0.9	1.0	1.0	1.0	0

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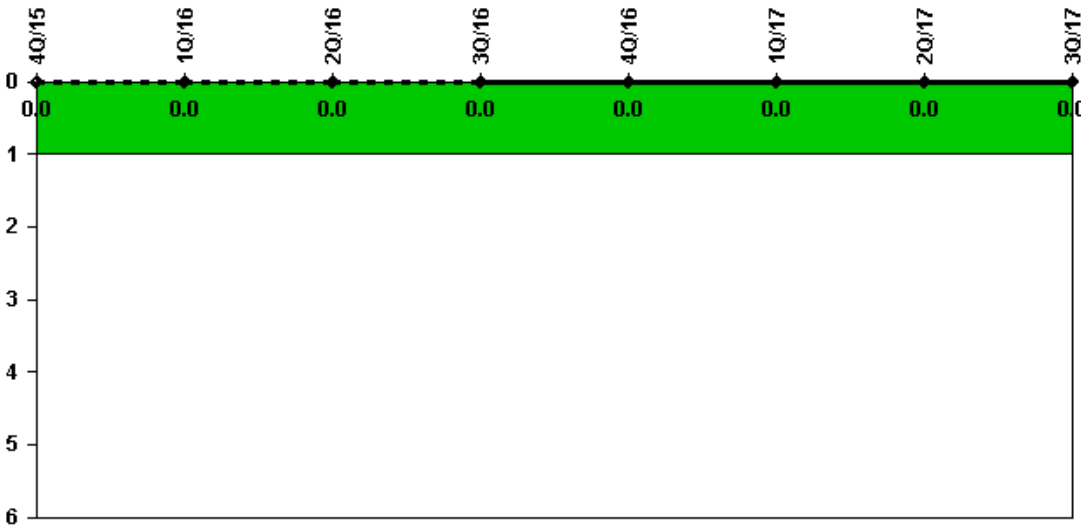
Licensee Comments:

3Q/17: On September 7, 2017, all MSSVs and ARVs were declared inoperable due to Wolf Creek not having a retrievable analysis proving that a single tornado driven design basis missile is not capable of affecting more than 2 ARVs. Entered TS 3.7.1 Condition C and TS 3.7.4 Condition C. Enforcement Guidance Memorandum (EGM) 15-002 has been implemented with a 60 day requirement to have more robust compensatory measures in place, along with the initial compensatory measures allowed by the guidance.

2Q/17: On April 5, 2017, both EDGs were identified as having unanalyzed conditions regarding the fuel oil truck connections outside the diesel building for tornado missile hazards. The 'A' and 'B' EDGs were declared inoperable due to Tornado-Generated Missile Protection Non-Compliance. Entered Technical Specification (TS) 3.8.1 Condition B and F. Enforcement Guidance Memorandum (EGM) 15-002 has been implemented with a 60 day requirement to have more robust compensatory measures in place, along with the initial compensatory measures allowed by the guidance.

3Q/16: Unit shutdown due to unidentified RCS leakage. The source of the leak was identified on Core Exit Thermocouple Nozzle Assembly (CETNA) penetration #77.

Unplanned Scrams with Complications



Thresholds: White > 1.0

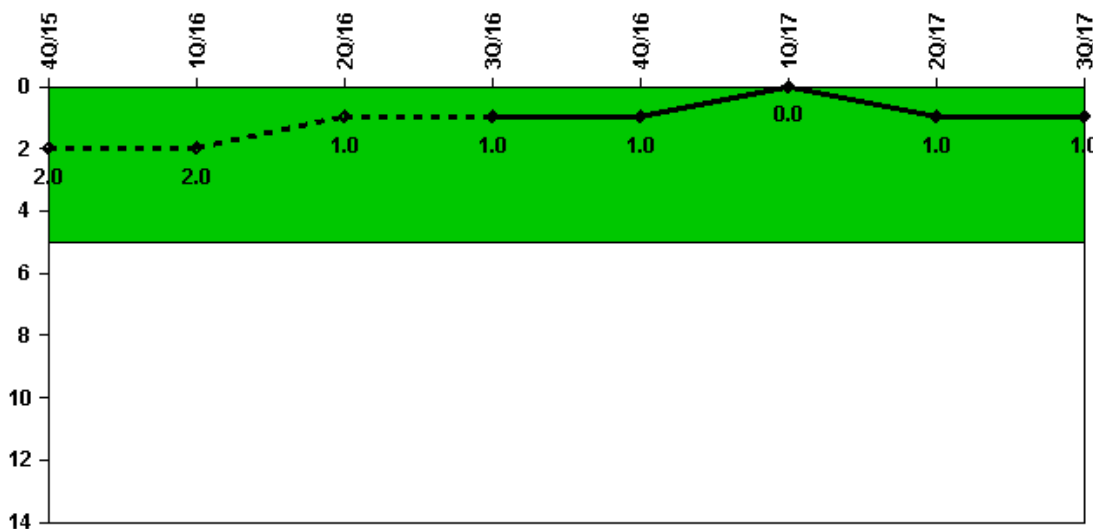
Notes

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

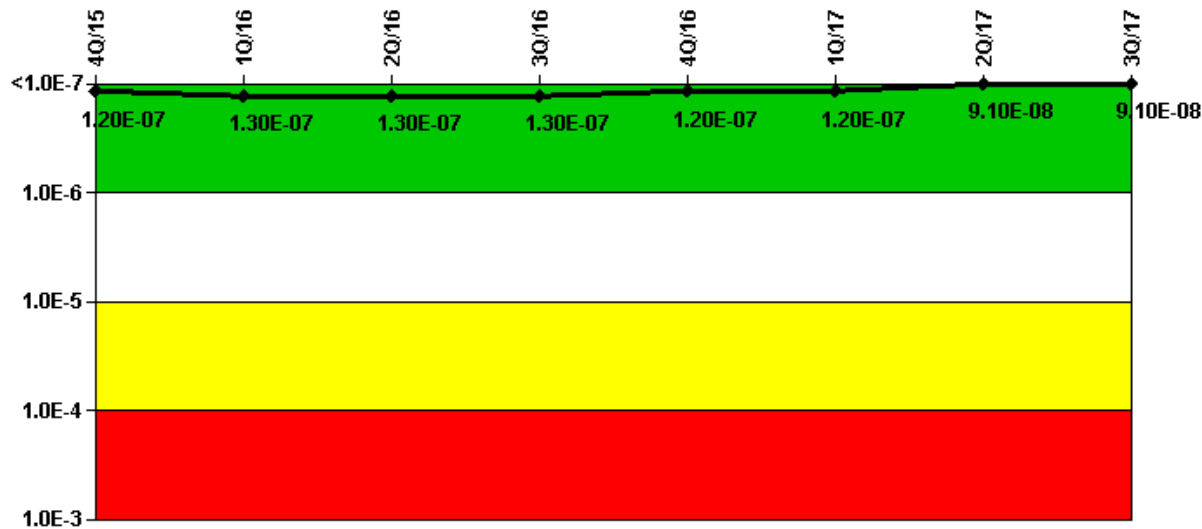
Safety System Functional Failures 0 1 0 0 0 0 1 0

Indicator value 2 2 1 1 1 0 1 1

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Licensee Comments:
1Q/16: LER 2016-001

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

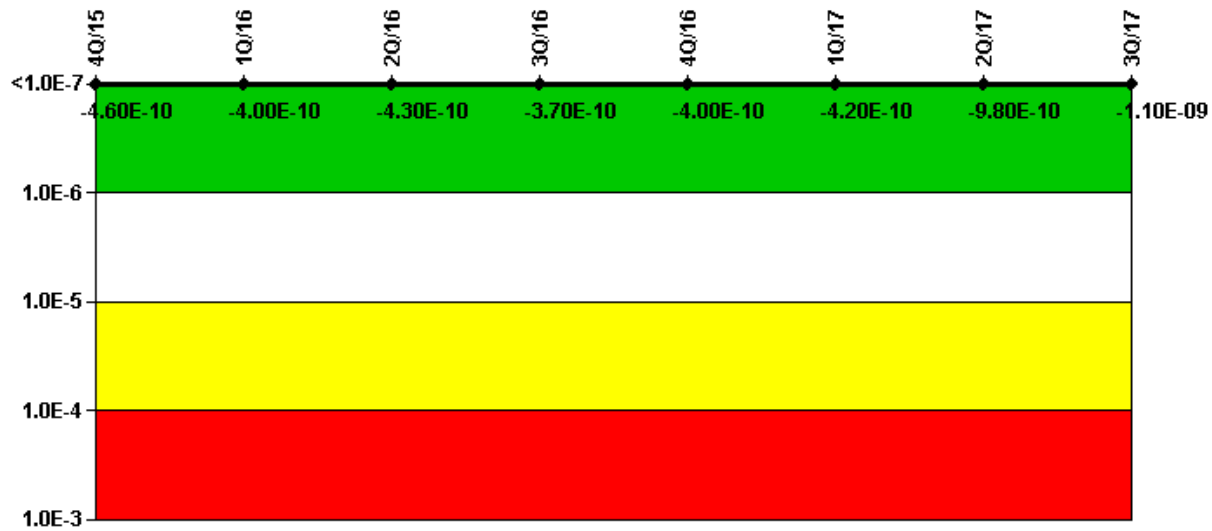
	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17
UAI (ΔCDF)	3.57E-09	3.26E-09	2.76E-09	2.83E-09	3.11E-09	2.94E-09	-5.80E-12	-5.80E-12
URI (ΔCDF)	1.16E-07	1.28E-07	1.28E-07	1.29E-07	1.14E-07	1.14E-07	9.14E-08	9.09E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	1.20E-07	1.30E-07	1.30E-07	1.30E-07	1.20E-07	1.20E-07	9.10E-08	9.10E-08

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Licensee Comments:

2Q/17: Changed PRA Parameter(s).

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)	-3.06E-11	-1.63E-12	-6.82E-11	-2.38E-12	1.03E-11	-2.07E-11	2.53E-11	-1.29E-10
URI (ΔCDF)	-4.33E-10	-3.93E-10	-3.60E-10	-3.70E-10	-4.10E-10	-3.95E-10	-1.01E-09	-9.95E-10
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-4.60E-10	-4.00E-10	-4.30E-10	-3.70E-10	-4.00E-10	-4.20E-10	-9.80E-10	-1.10E-09

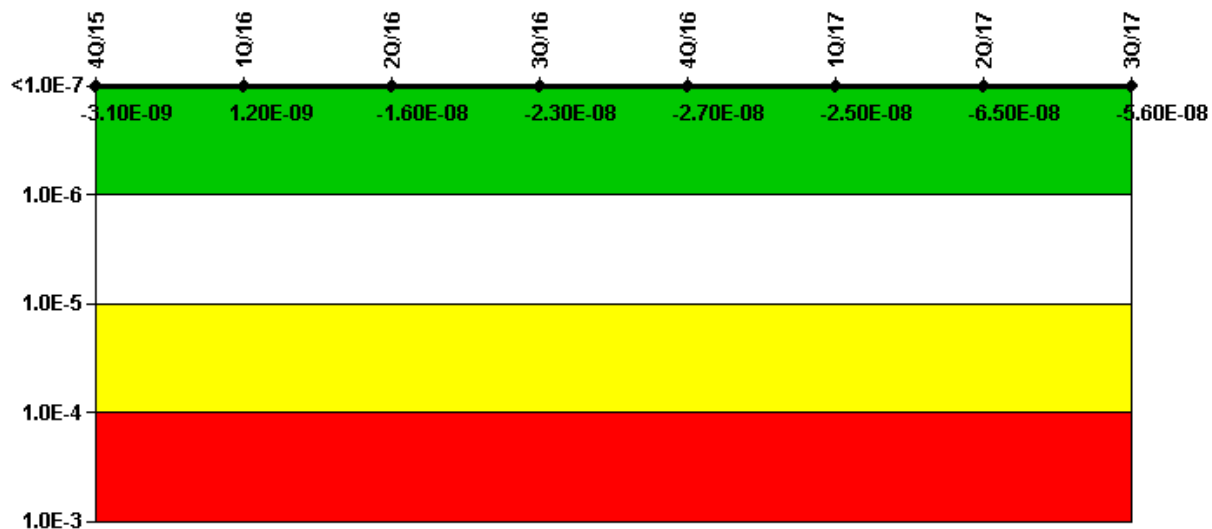
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Licensee Comments:

2Q/17: Changed PRA Parameter(s).

4Q/15: Data error identified and corrected for the A train Safety Injection Pump (SIP). 2.63 hrs was corrected to 1.63 hrs.

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)	5.99E-08	6.56E-08	4.12E-08	3.25E-08	3.04E-08	3.20E-08	8.08E-08	8.99E-08
URI (ΔCDF)	-6.30E-08	-6.44E-08	-5.71E-08	-5.58E-08	-5.72E-08	-5.67E-08	-1.46E-07	-1.46E-07
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-3.10E-09	1.20E-09	-1.60E-08	-2.30E-08	-2.70E-08	-2.50E-08	-6.50E-08	-5.60E-08

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Licensee Comments:

2Q/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

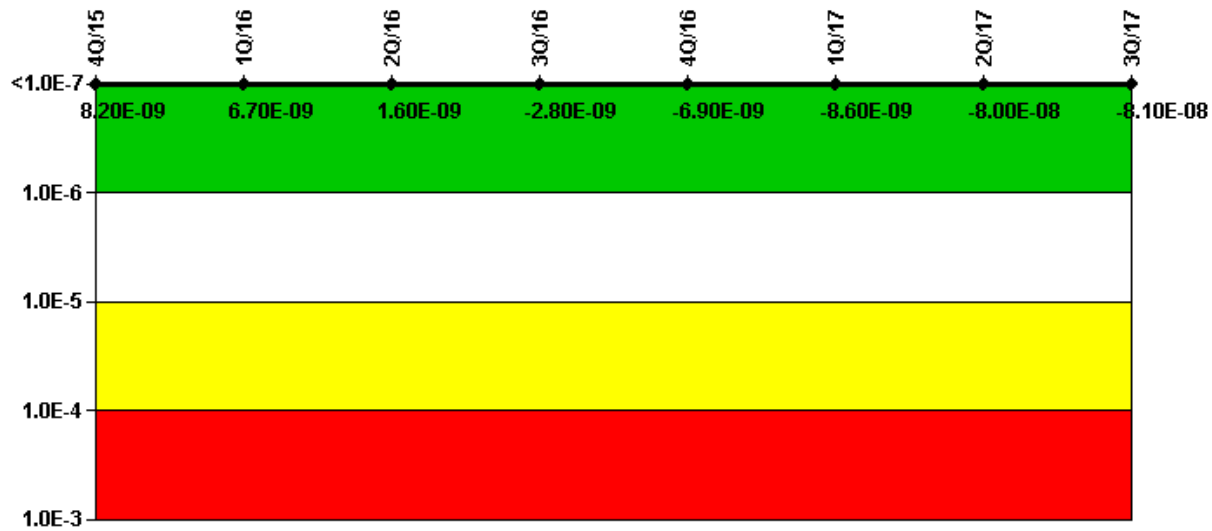
	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17
UAI (Δ CDF)	5.59E-09	4.70E-09	5.13E-09	9.25E-09	3.50E-09	3.20E-10	-7.49E-10	-3.07E-09
URI (Δ CDF)	-4.45E-08	-3.76E-08	-3.52E-08	-3.75E-08	-4.38E-08	-4.10E-08	-4.38E-08	-4.37E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-3.90E-08	-3.30E-08	-3.00E-08	-2.80E-08	-4.00E-08	-4.10E-08	-4.50E-08	-4.70E-08

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Licensee Comments:

2Q/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

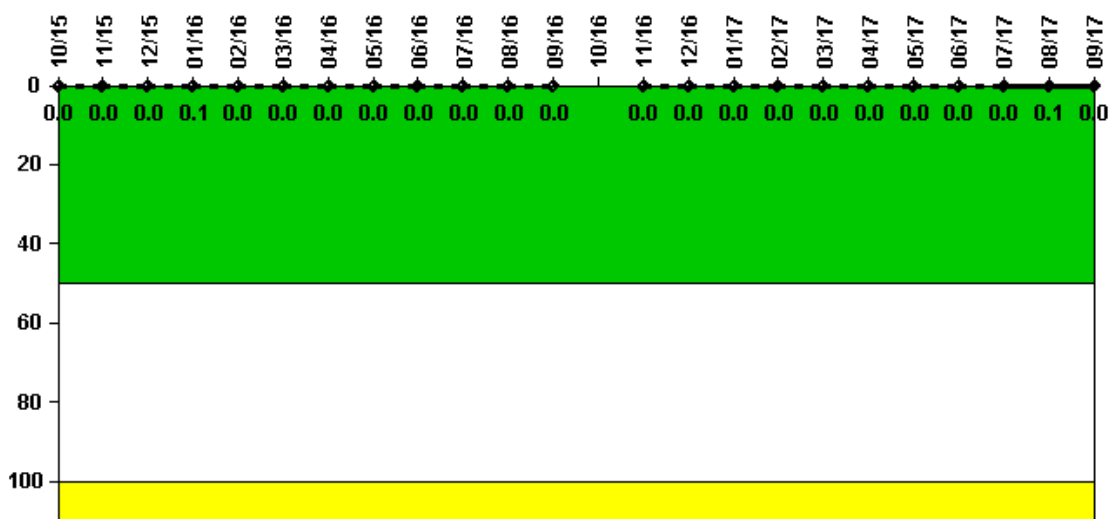
	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17
UAI (ΔCDF)	3.05E-08	2.80E-08	2.23E-08	1.92E-08	1.58E-08	1.39E-08	-1.29E-09	-1.16E-10
URI (ΔCDF)	-2.23E-08	-2.12E-08	-2.07E-08	-2.19E-08	-2.27E-08	-2.25E-08	-7.92E-08	-8.06E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	8.20E-09	6.70E-09	1.60E-09	-2.80E-09	-6.90E-09	-8.60E-09	-8.00E-08	-8.10E-08

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Licensee Comments:

2Q/17: Changed PRA Parameter(s).

Reactor Coolant System Activity



Thresholds: White > 50.0 Yellow > 100.0

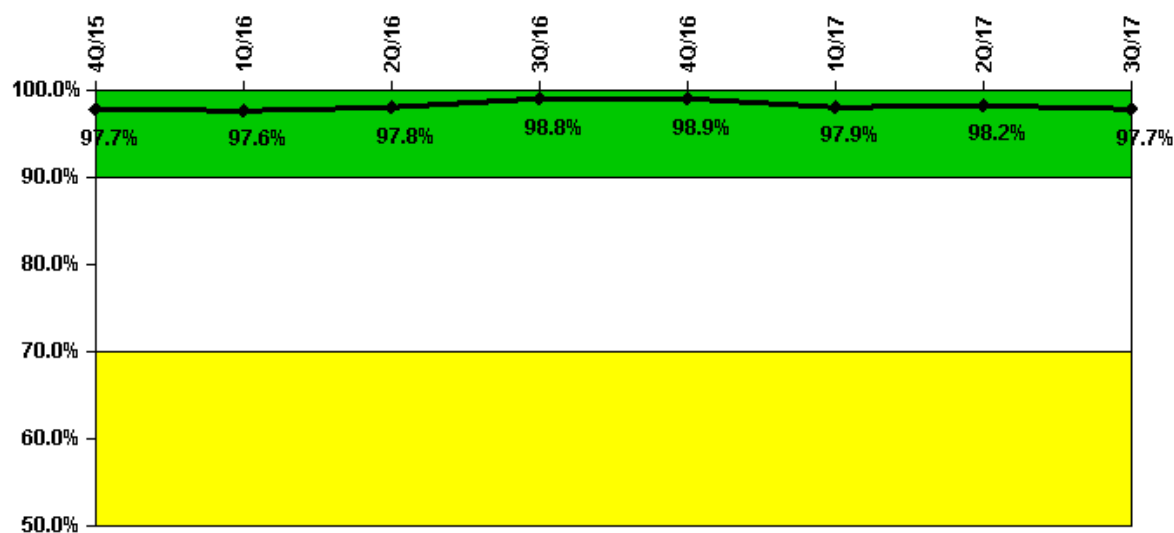
Notes

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	0.000200	0.000200	0.000200	0.000700	0.000200	0.000300	0.000300	0.000300	0.000300	0.000300	0.000300	0.000300
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	0.1	0	0	0	0	0	0	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	N/A	0.000200	0.000200	0.000200	0.000300	0.000300	0.000300	0.000300	0.000300	0.000300	0.001000	0.000300
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	N/A	0	0	0	0	0	0	0	0	0	0.1	0

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Licensee Comments:
3/17: Indication of fuel defect present.

Drill/Exercise Performance



Thresholds: White < 90.0% Yellow < 70.0%

Notes

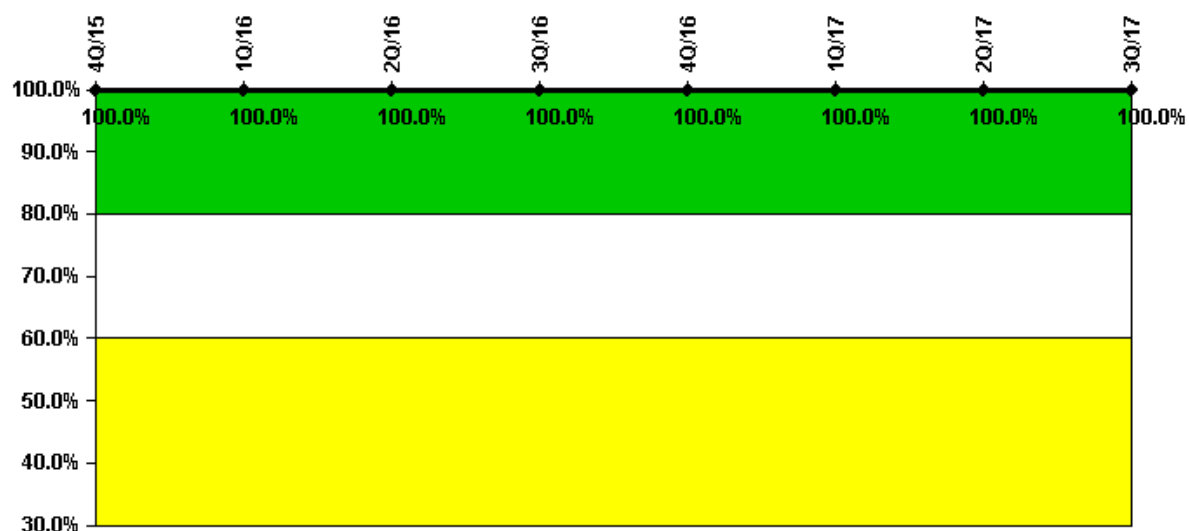
Drill/Exercise Performance	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17
Successful opportunities	18.0	36.0	27.0	8.0	14.0	43.0	49.0	22.0
Total opportunities	18.0	37.0	27.0	8.0	14.0	44.0	50.0	24.0

Indicator value 97.7% 97.6% 97.8% 98.8% 98.9% 97.9% 98.2% 97.7%

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Licensee Comments: none

ERO Drill Participation



Thresholds: White < 80.0% Yellow < 60.0%

Notes

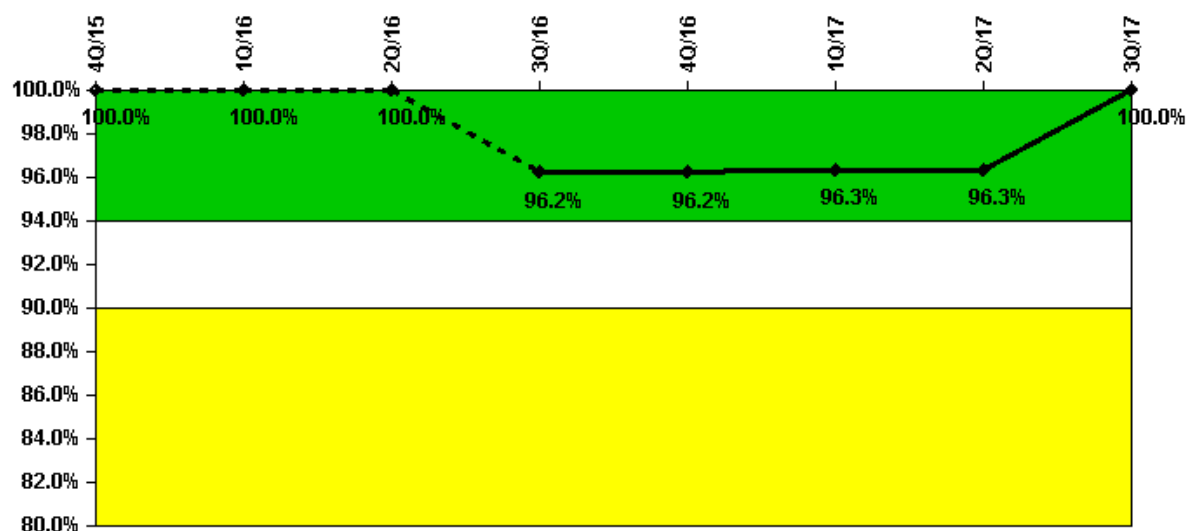
ERO Drill Participation	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17
Participating Key personnel	66.0	75.0	76.0	82.0	83.0	77.0	80.0	82.0
Total Key personnel	66.0	75.0	76.0	82.0	83.0	77.0	80.0	82.0

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	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17
Successful siren-tests	66	77	66	66	66	88	66	77
Total sirens-tests	66	77	66	77	66	88	66	77

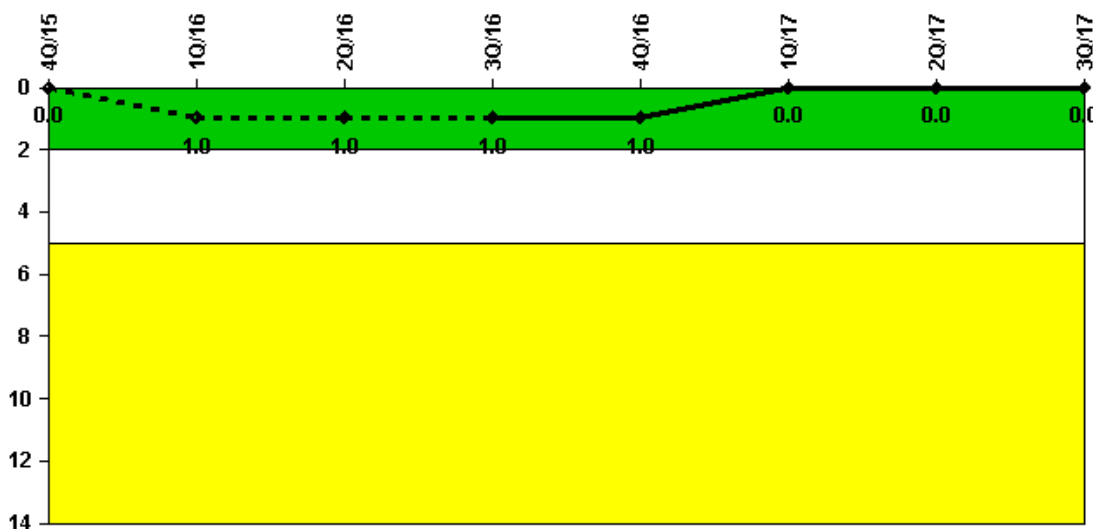
Indicator value **100.0% 100.0% 100.0% 96.2% 96.2% 96.3% 96.3% 100.0%**

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Licensee Comments:

3Q/16: August 2016 E-Plan siren failure due to county console failure.

Occupational Exposure Control Effectiveness



Thresholds: White > 2.0 Yellow > 5.0

Notes

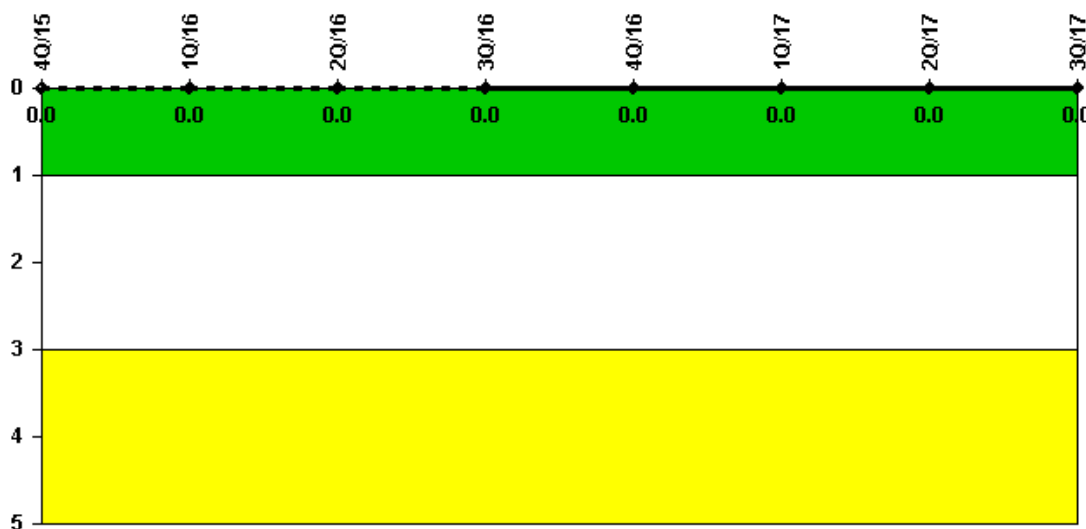
Occupational Exposure Control Effectiveness 4Q/15 1Q/16 2Q/16 3Q/16 4Q/16 1Q/17 2Q/17 3Q/17

High radiation area occurrences	0	1	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	1	1	1	1	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