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Sequoyah 1 – Quarterly Performance Indicators

2Q/2017 Performance Indicators

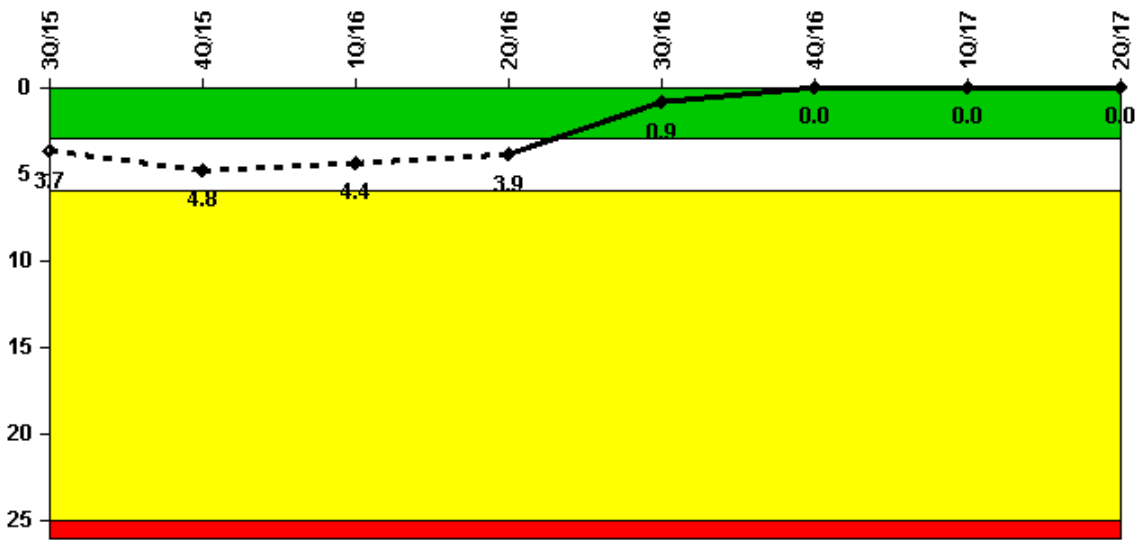
The solid trend line represents the current reporting period.

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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Unplanned Scrams per 7000 Critical Hrs



Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

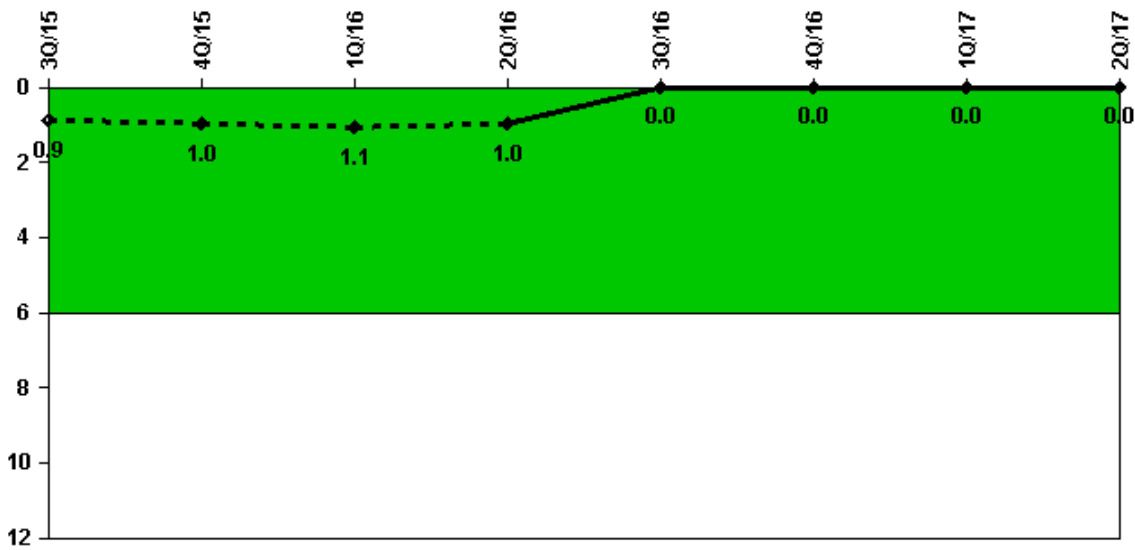
Notes

| Unplanned Scrams per 7000 Critical Hrs | 3Q/15 | 4Q/15 | 1Q/16 | 2Q/16 | 3Q/16 | 4Q/16 | 1Q/17 | 2Q/17 |
|--|------------|------------|------------|------------|------------|----------|----------|----------|
| Unplanned scrams | 3.0 | 1.0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Critical hours | 1821.5 | 2041.5 | 1121.2 | 2184.0 | 2208.0 | 1345.4 | 2159.0 | 2184.0 |
| Indicator value | 3.7 | 4.8 | 4.4 | 3.9 | 0.9 | 0 | 0 | 0 |

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Licensee Comments: none

Unplanned Power Changes per 7000 Critical Hrs



Thresholds: White > 6.0

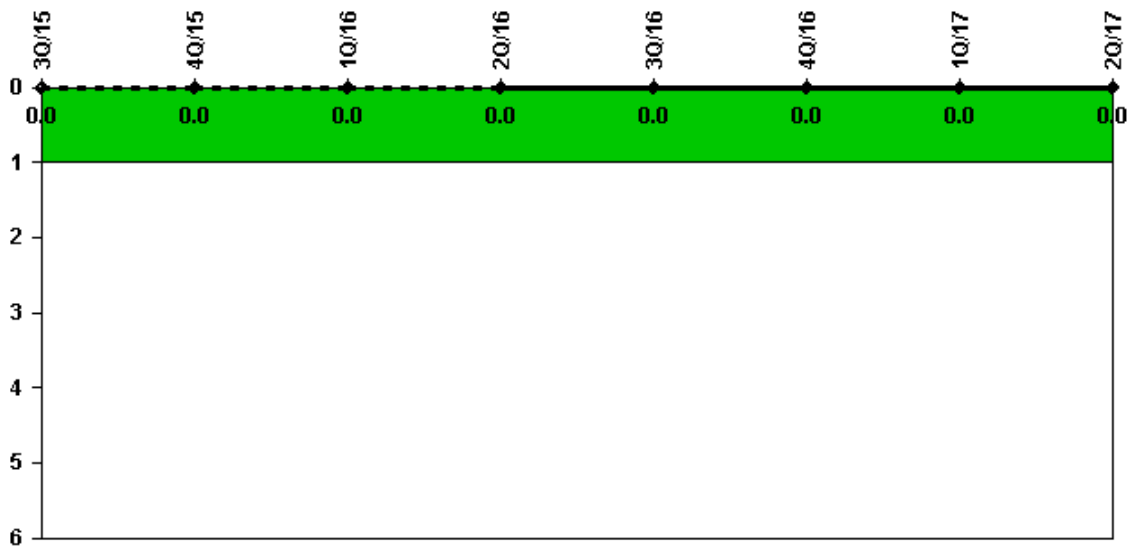
Notes

| 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 | 1.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Critical hours | 1821.5 | 2041.5 | 1121.2 | 2184.0 | 2208.0 | 1345.4 | 2159.0 | 2184.0 |
| Indicator value | 0.9 | 1.0 | 1.1 | 1.0 | 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

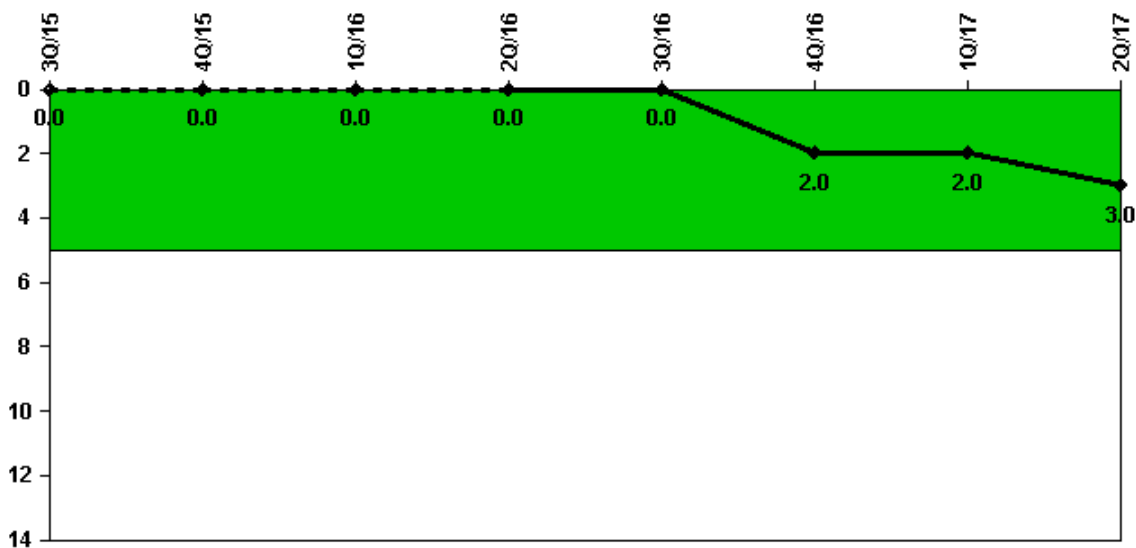
Scrams with complications 0 0 0 0 0 0 0 0

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 2 0 1

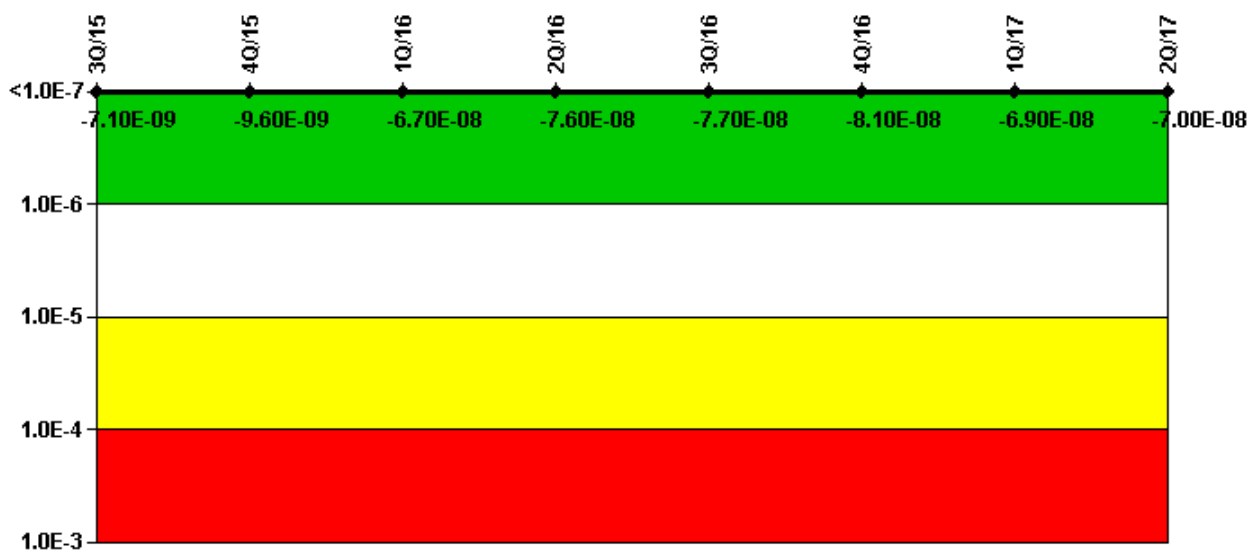
Indicator value 0 0 0 0 0 2 2 3

TOP

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

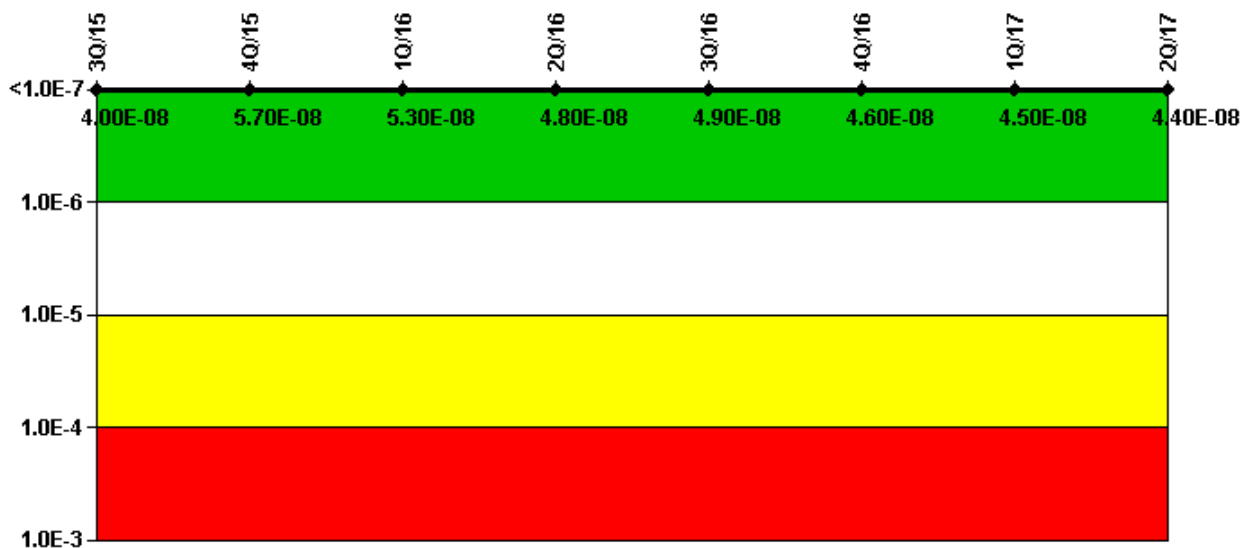
Mitigating Systems Performance Index, Emergency AC Power System

| | 3Q/15 | 4Q/15 | 1Q/16 | 2Q/16 | 3Q/16 | 4Q/16 | 1Q/17 | 2Q/17 |
|-----------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| UAI (ΔCDF) | 1.35E-08 | 1.17E-08 | 5.91E-09 | -1.63E-09 | -4.40E-09 | -3.95E-09 | 7.46E-09 | 6.91E-09 |
| URI (ΔCDF) | -2.06E-08 | -2.13E-08 | -7.28E-08 | -7.41E-08 | -7.25E-08 | -7.67E-08 | -7.64E-08 | -7.73E-08 |
| PLE | NO | NO | NO | NO | NO | NO | NO | NO |
| Indicator value | -7.10E-09 | -9.60E-09 | -6.70E-08 | -7.60E-08 | -7.70E-08 | -8.10E-08 | -6.90E-08 | -7.00E-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

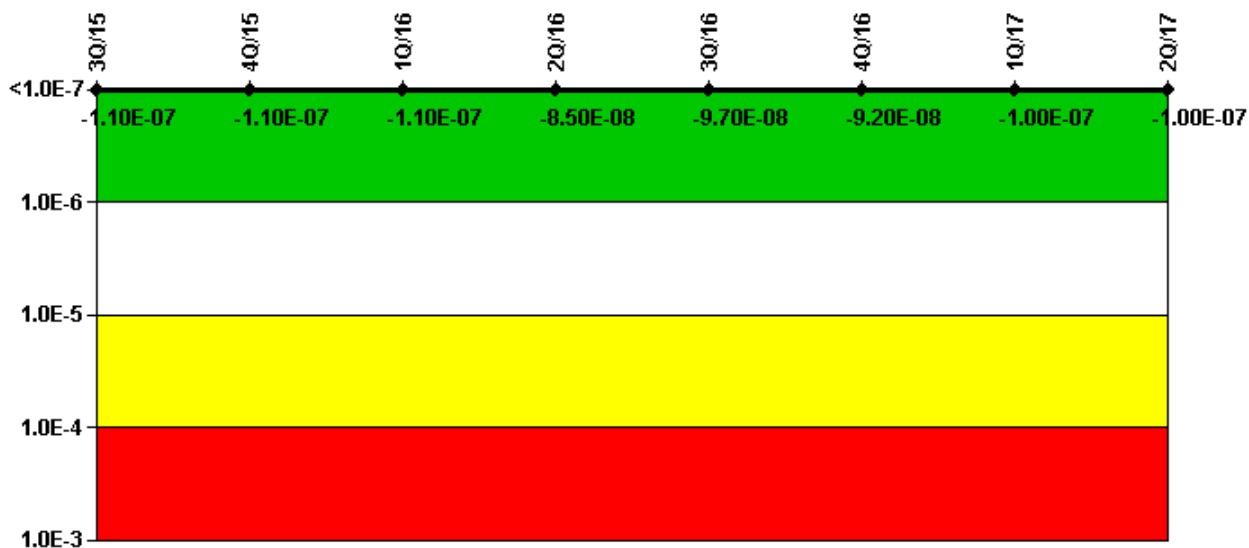
Mitigating Systems Performance Index, High Pressure Injection System

| | 3Q/15 | 4Q/15 | 1Q/16 | 2Q/16 | 3Q/16 | 4Q/16 | 1Q/17 | 2Q/17 |
|------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| UAI (Δ CDF) | 3.24E-08 | 4.05E-08 | 3.63E-08 | 3.14E-08 | 3.28E-08 | 2.92E-08 | 2.86E-08 | 2.74E-08 |
| URI (Δ CDF) | 7.22E-09 | 1.67E-08 | 1.66E-08 | 1.66E-08 | 1.66E-08 | 1.66E-08 | 1.66E-08 | 1.66E-08 |
| PLE | NO | NO | NO | NO | NO | NO | NO | NO |
| Indicator value | 4.00E-08 | 5.70E-08 | 5.30E-08 | 4.80E-08 | 4.90E-08 | 4.60E-08 | 4.50E-08 | 4.40E-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

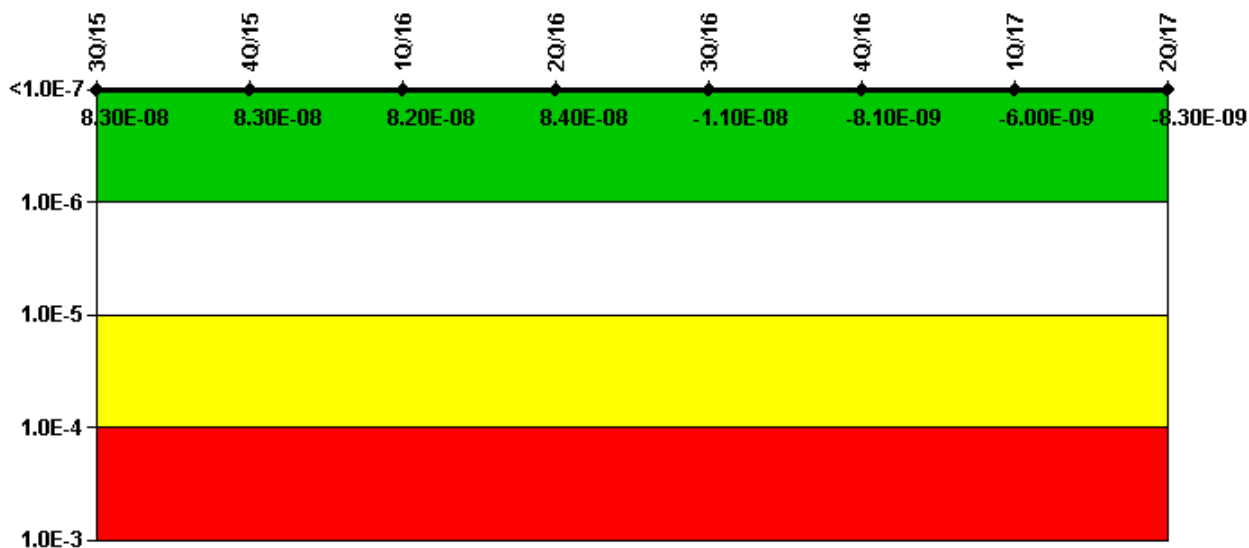
Mitigating Systems Performance Index, Heat Removal System

| | 3Q/15 | 4Q/15 | 1Q/16 | 2Q/16 | 3Q/16 | 4Q/16 | 1Q/17 | 2Q/17 |
|---------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| UAI (Δ CDF) | -1.07E-08 | -1.13E-08 | -5.57E-09 | 1.64E-08 | 4.68E-09 | 1.03E-08 | 2.99E-09 | 9.67E-10 |
| URI (Δ CDF) | -9.95E-08 | -1.01E-07 | -1.02E-07 | -1.02E-07 | -1.02E-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 | -1.10E-07 | -8.50E-08 | -9.70E-08 | -9.20E-08 | -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

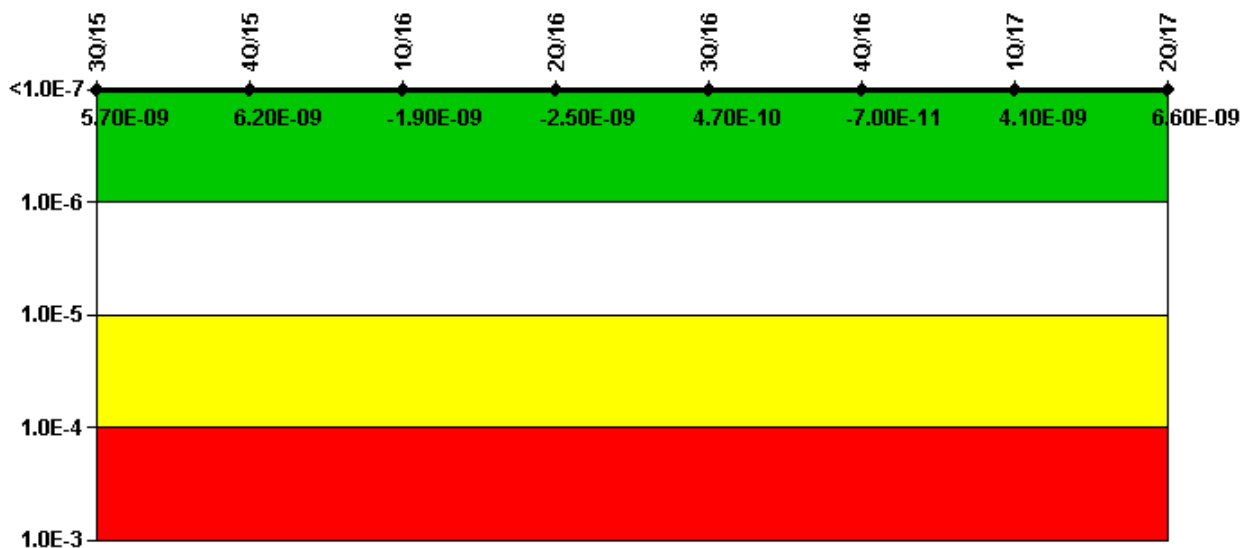
Mitigating Systems Performance Index, Residual Heat Removal System

| | 3Q/15 | 4Q/15 | 1Q/16 | 2Q/16 | 3Q/16 | 4Q/16 | 1Q/17 | 2Q/17 |
|------------------------|-----------------|-----------------|-----------------|-----------------|------------------|------------------|------------------|------------------|
| UAI (Δ CDF) | 1.85E-08 | 1.82E-08 | 1.78E-08 | 1.91E-08 | 1.17E-08 | 1.47E-08 | 1.69E-08 | 1.45E-08 |
| URI (Δ CDF) | 6.48E-08 | 6.48E-08 | 6.45E-08 | 6.45E-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 | 8.30E-08 | 8.20E-08 | 8.40E-08 | -1.10E-08 | -8.10E-09 | -6.00E-09 | -8.30E-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

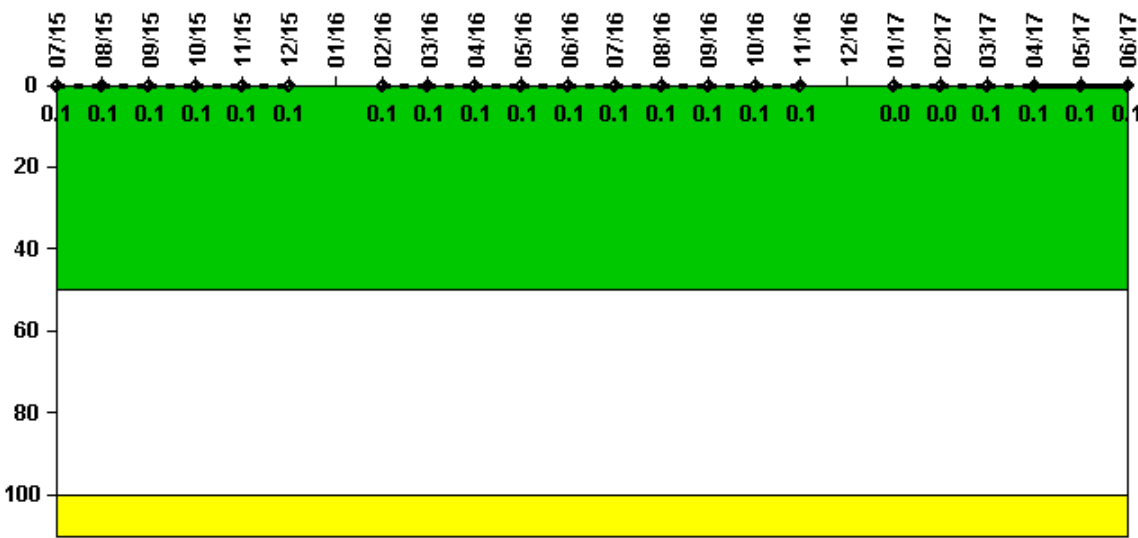
Mitigating Systems Performance Index, Cooling Water Systems

| | 3Q/15 | 4Q/15 | 1Q/16 | 2Q/16 | 3Q/16 | 4Q/16 | 1Q/17 | 2Q/17 |
|-----------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| UAI (ΔCDF) | 1.34E-08 | 1.39E-08 | 5.76E-09 | 5.23E-09 | 8.15E-09 | 7.61E-09 | 1.18E-08 | 1.44E-08 |
| URI (ΔCDF) | -7.68E-09 | -7.68E-09 | -7.68E-09 | -7.68E-09 | -7.68E-09 | -7.68E-09 | -7.68E-09 | -7.79E-09 |
| PLE | NO | NO | NO | NO | NO | NO | NO | NO |
| Indicator value | 5.70E-09 | 6.20E-09 | -1.90E-09 | -2.50E-09 | 4.70E-10 | -7.00E-11 | 4.10E-09 | 6.60E-09 |

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Licensee Comments: none

Reactor Coolant System Activity



Thresholds: White > 50.0 Yellow > 100.0

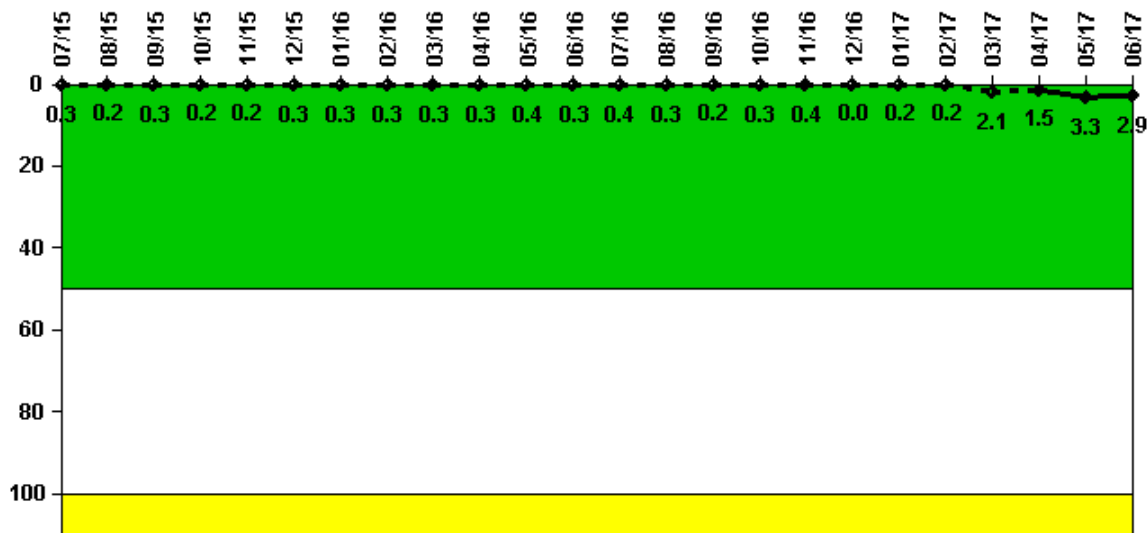
Notes

| 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 | 0.000189 | 0.000221 | 0.000229 | 0.000241 | 0.000263 | 0.000267 | N/A | 0.000319 | 0.000321 | 0.000380 | 0.000351 | 0.000400 |
| 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 | 0.1 | 0.1 | 0.1 | N/A | 0.1 | 0.1 | 0.1 | 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 | 0.000423 | 0.000395 | 0.000372 | 0.000412 | 0.000438 | N/A | 0.000155 | 0.000170 | 0.000212 | 0.000199 | 0.000233 | 0.000247 |
| 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 | 0.1 | 0.1 | N/A | 0 | 0 | 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

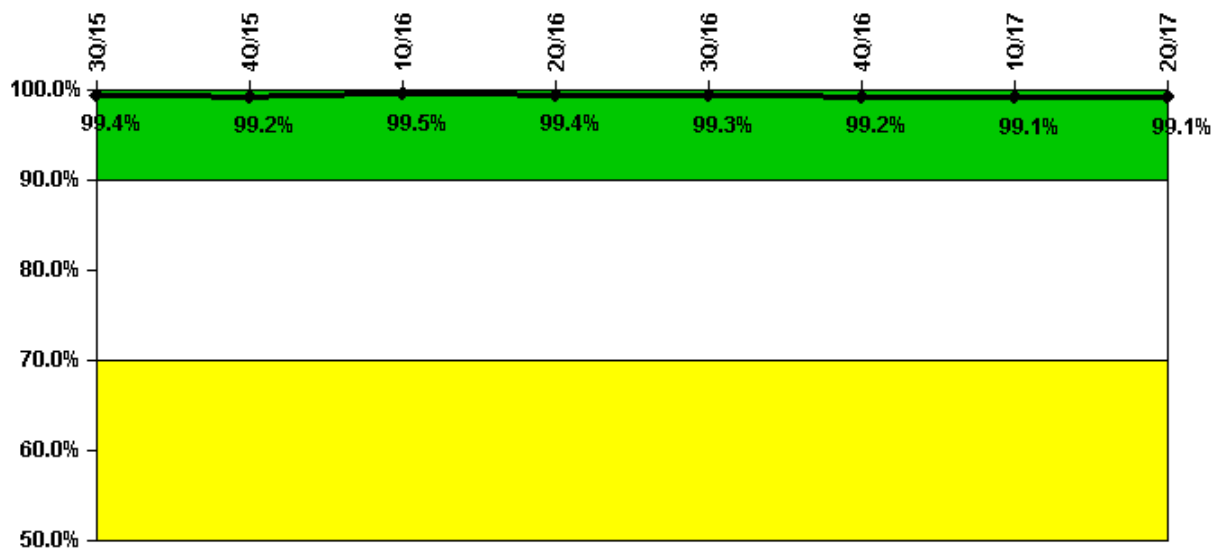
Notes

| Reactor Coolant System Leakage | 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 | 0.030 | 0.020 | 0.030 | 0.020 | 0.020 | 0.030 | 0.030 | 0.030 | 0.030 | 0.030 | 0.040 | 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 | 0.3 | 0.2 | 0.3 | 0.2 | 0.2 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.4 | 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 | 0.040 | 0.030 | 0.020 | 0.030 | 0.040 | 0 | 0.020 | 0.020 | 0.210 | 0.150 | 0.330 | 0.290 |
| 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 | 0.3 | 0.2 | 0.3 | 0.4 | 0 | 0.2 | 0.2 | 2.1 | 1.5 | 3.3 | 2.9 |

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Licensee Comments: none

Drill/Exercise Performance



Thresholds: White < 90.0% Yellow < 70.0%

Notes

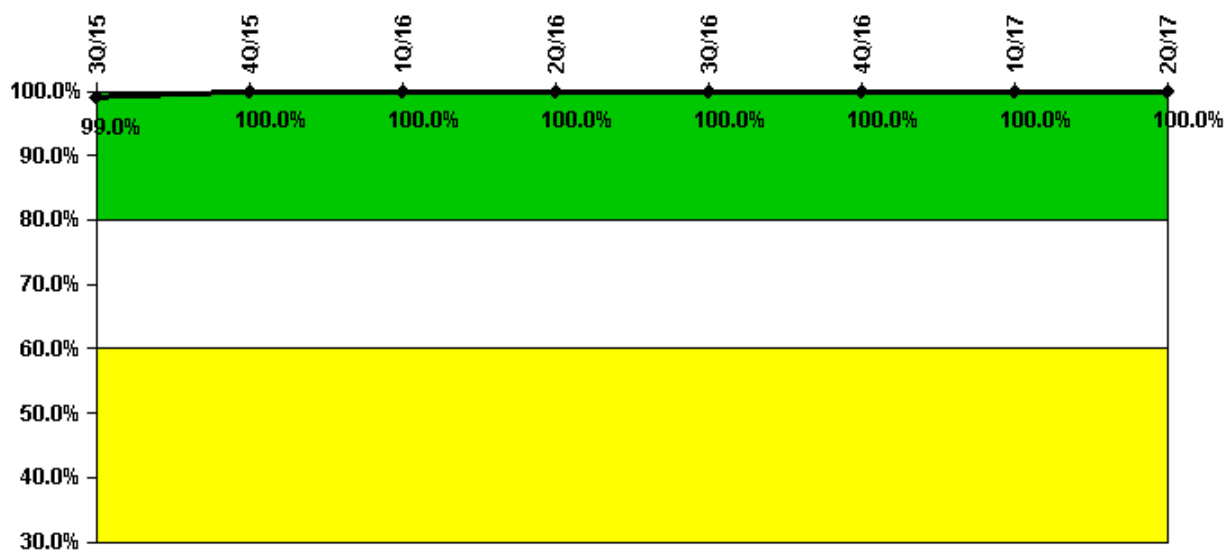
| Drill/Exercise Performance | 3Q/15 | 4Q/15 | 1Q/16 | 2Q/16 | 3Q/16 | 4Q/16 | 1Q/17 | 2Q/17 |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Successful opportunities | 58.0 | 63.0 | 84.0 | 74.0 | 107.0 | 20.0 | 28.0 | 12.0 |
| Total opportunities | 58.0 | 64.0 | 84.0 | 75.0 | 108.0 | 21.0 | 28.0 | 12.0 |

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

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Licensee Comments: none

ERO Drill Participation



Thresholds: White < 80.0% Yellow < 60.0%

Notes

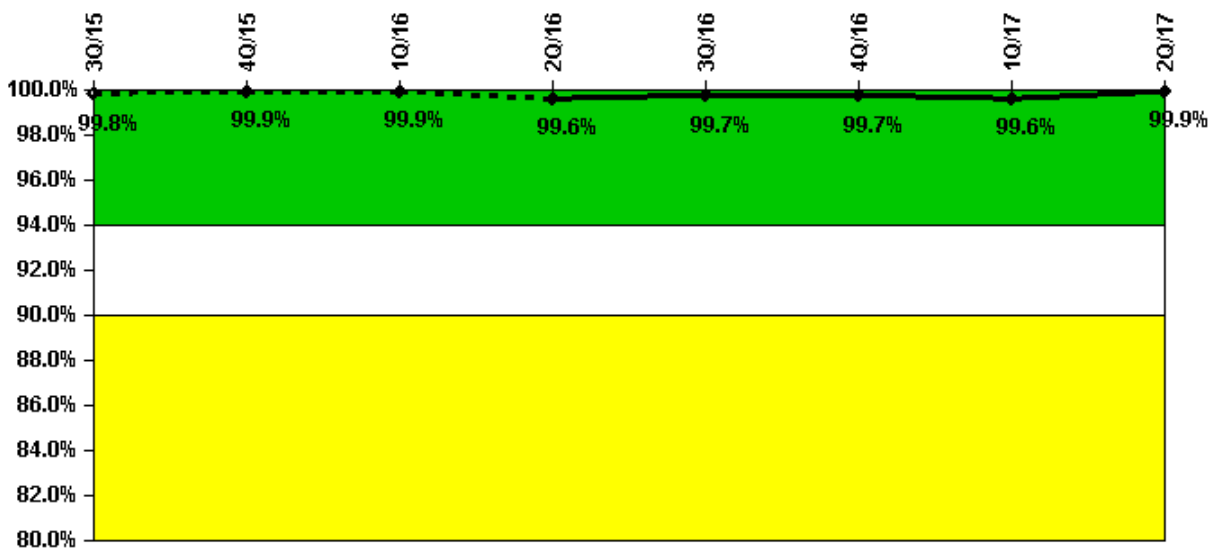
| ERO Drill Participation | 3Q/15 | 4Q/15 | 1Q/16 | 2Q/16 | 3Q/16 | 4Q/16 | 1Q/17 | 2Q/17 |
|-----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Participating Key personnel | 95.0 | 99.0 | 96.0 | 97.0 | 99.0 | 97.0 | 82.0 | 84.0 |
| Total Key personnel | 96.0 | 99.0 | 96.0 | 97.0 | 99.0 | 97.0 | 82.0 | 84.0 |

Indicator value **99.0% 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

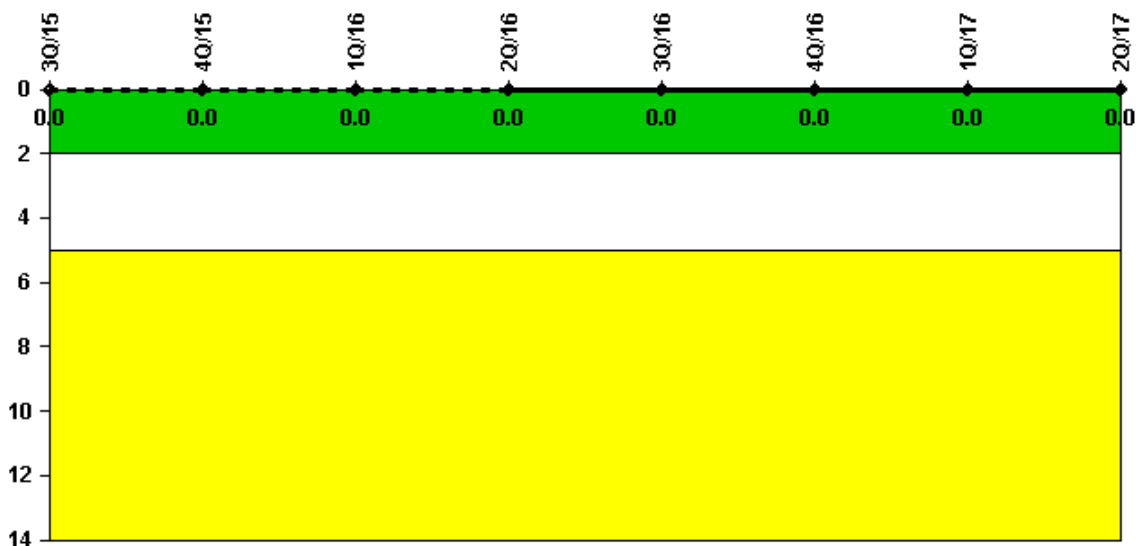
| Alert & Notification System | 3Q/15 | 4Q/15 | 1Q/16 | 2Q/16 | 3Q/16 | 4Q/16 | 1Q/17 | 2Q/17 |
|-----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Successful siren-tests | 1012 | 791 | 1017 | 780 | 903 | 904 | 1016 | 904 |
| Total sirens-tests | 1017 | 791 | 1017 | 791 | 904 | 904 | 1017 | 904 |

Indicator value **99.8% 99.9% 99.9% 99.6% 99.7% 99.7% 99.6% 99.9%**

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Licensee Comments: none

Occupational Exposure Control Effectiveness



Thresholds: White > 2.0 Yellow > 5.0

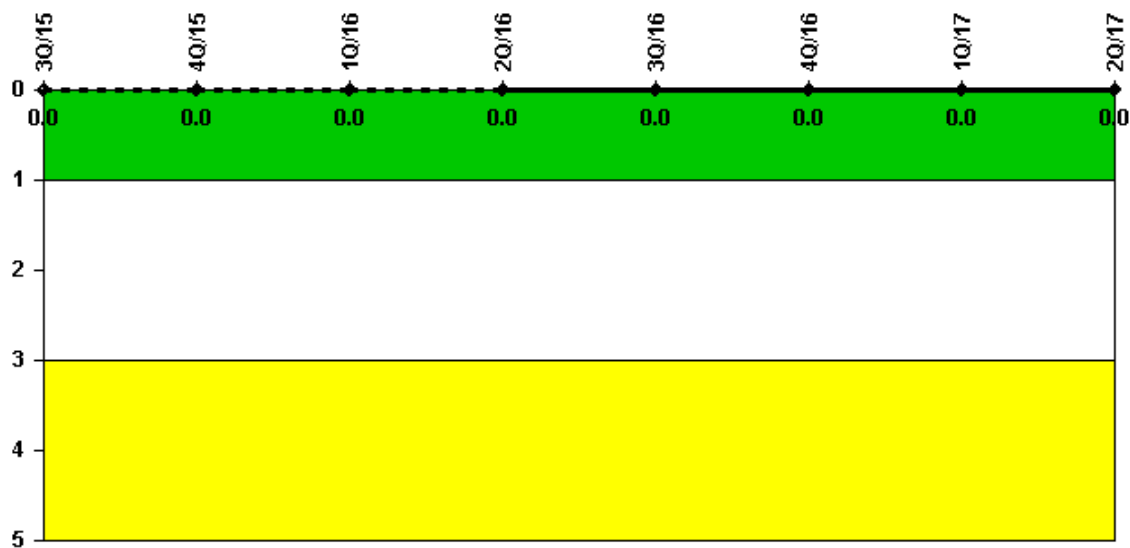
Notes

| 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