

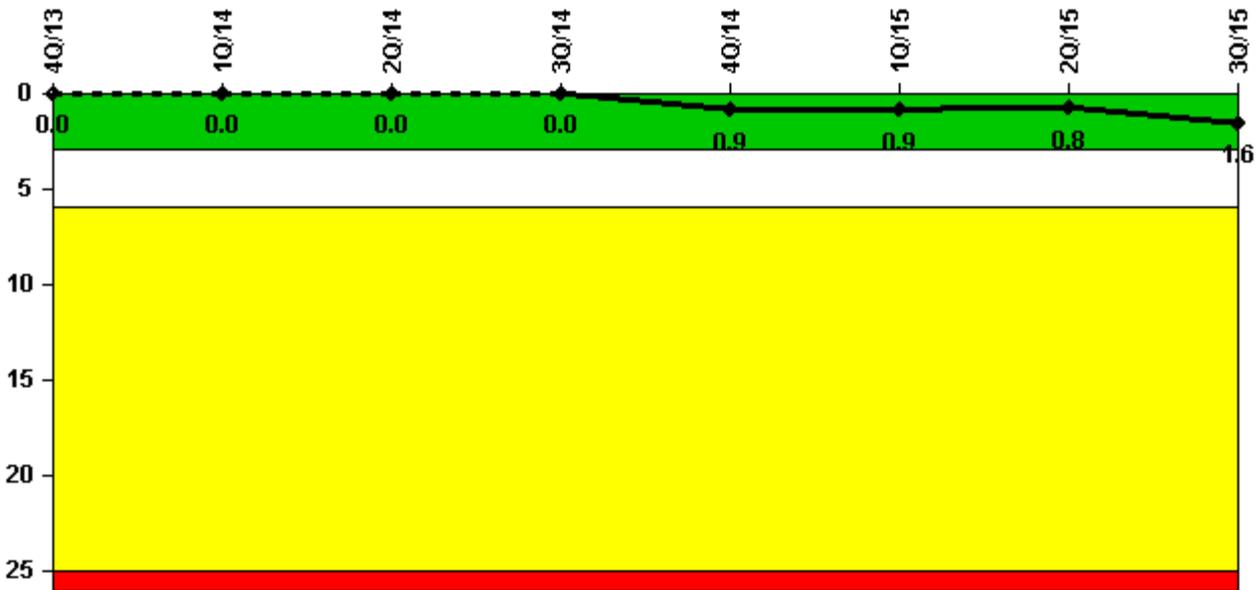
Surry 2

3Q/2015 Performance Indicators

The solid trend line represents the current reporting period.

Licensee's General Comments: none

Unplanned Scrams per 7000 Critical Hrs



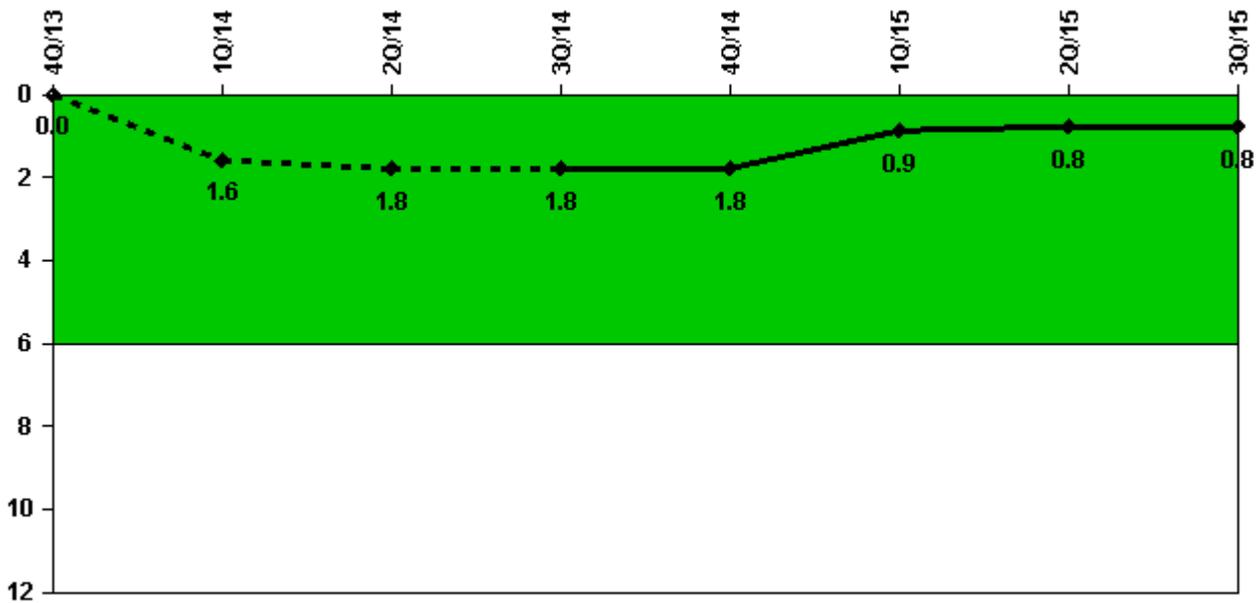
Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

Notes

Unplanned Scrams per 7000 Critical Hrs	4Q/13	1Q/14	2Q/14	3Q/14	4Q/14	1Q/15	2Q/15	3Q/15
Unplanned scrams	0	0	0	0	1.0	0	0	1.0
Critical hours	2209.0	2107.4	1445.8	2208.0	2155.2	2159.0	2184.0	1991.7
Indicator value	0	0	0	0	0.9	0.9	0.8	1.6

Licensee Comments: none

Unplanned Power Changes per 7000 Critical Hrs



Thresholds: White > 6.0

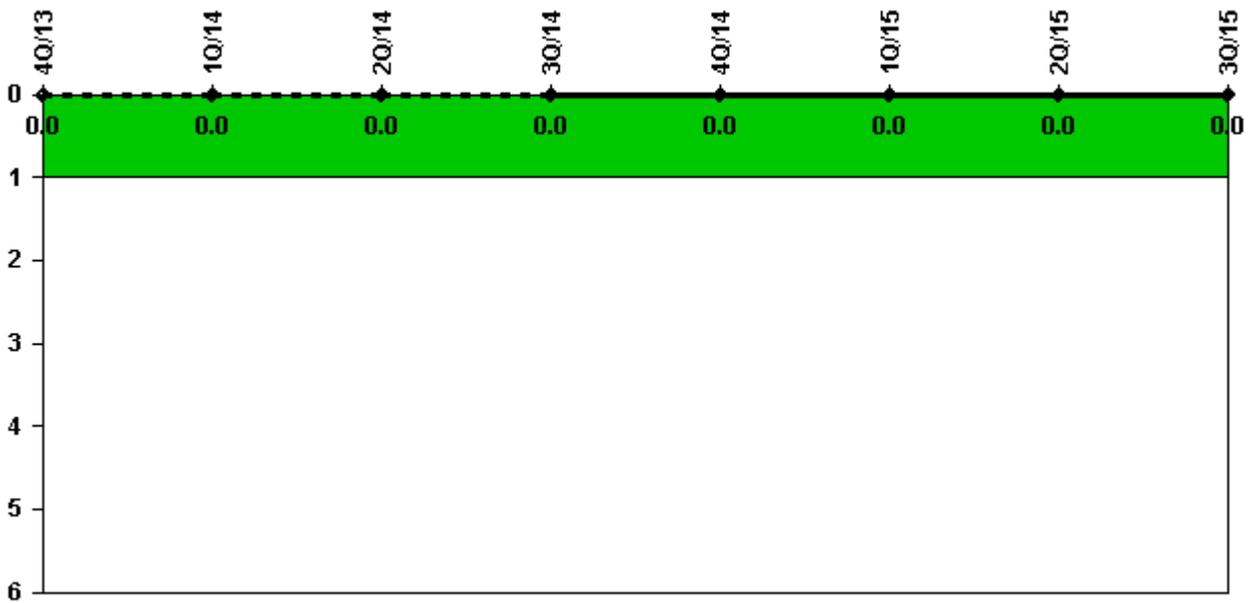
Notes

Unplanned Power Changes per 7000 Critical Hrs	4Q/13	1Q/14	2Q/14	3Q/14	4Q/14	1Q/15	2Q/15	3Q/15
Unplanned power changes	0	2.0	0	0	0	1.0	0	0
Critical hours	2209.0	2107.4	1445.8	2208.0	2155.2	2159.0	2184.0	1991.7
Indicator value	0	1.6	1.8	1.8	1.8	0.9	0.8	0.8

Licensee Comments:

3Q/14: A review, prompted by the NRC, determined the March 2014 Unit 2 shutdown to repair a pressurizer spray valve was also an unplanned power change. Historical data was corrected with no change in color.

Unplanned Scrams with Complications



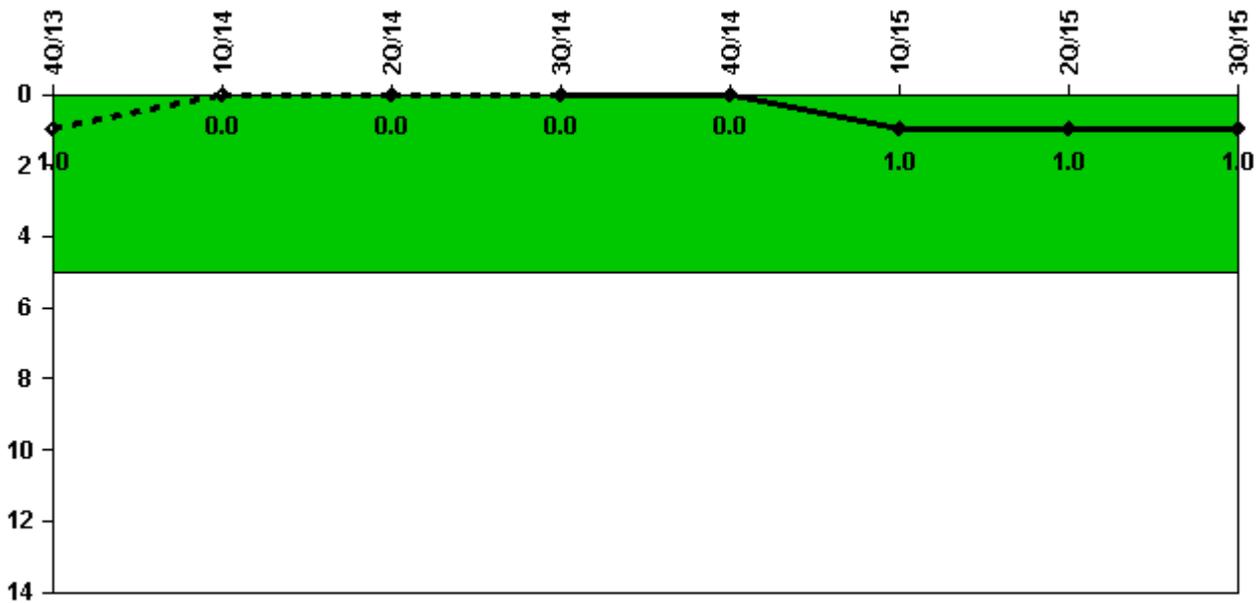
Thresholds: White > 1.0

Notes

Unplanned Scrams with Complications	4Q/13	1Q/14	2Q/14	3Q/14	4Q/14	1Q/15	2Q/15	3Q/15
Scrams with complications	0	0	0	0	0	0	0	0
Indicator value	0.0							

Licensee Comments: none

Safety System Functional Failures (PWR)



Thresholds: White > 5.0

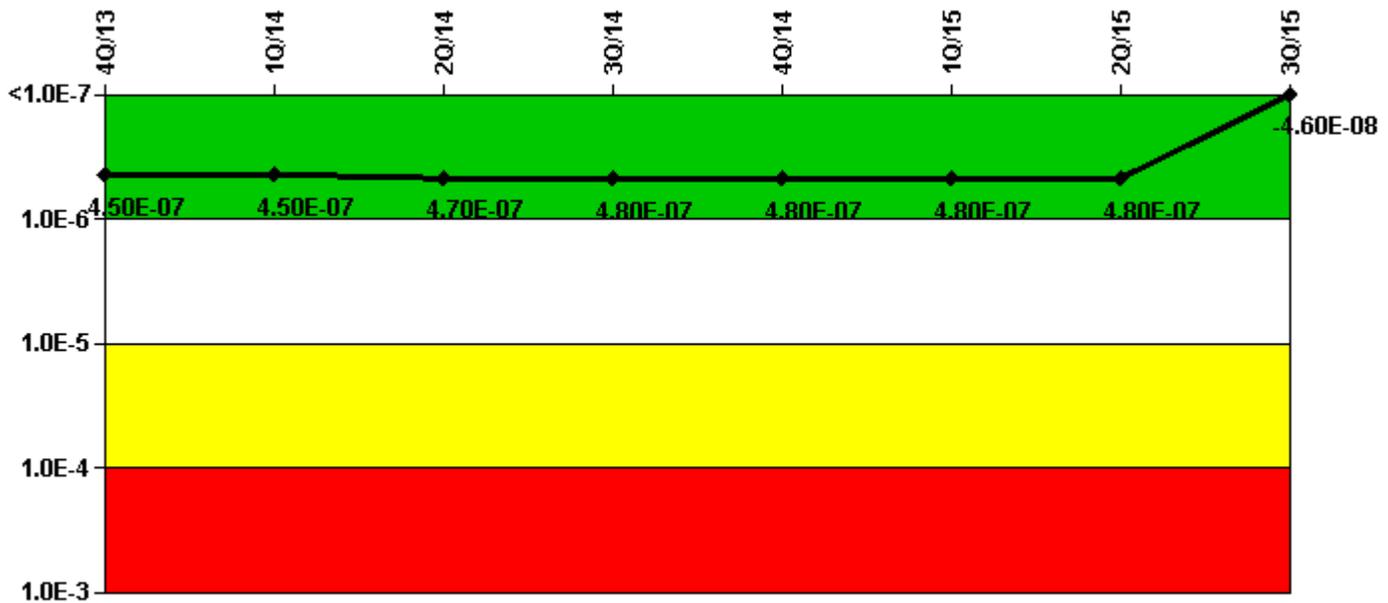
Notes

Safety System Functional Failures (PWR)	4Q/13	1Q/14	2Q/14	3Q/14	4Q/14	1Q/15	2Q/15	3Q/15
Safety System Functional Failures	0	0	0	0	0	1	0	0
Indicator value	1	0	0	0	0	1	1	1

Licensee Comments:

2Q/15: An assessment revealed a SSFF for March 2015 (see LER 50-280, 50-281/2015-001-00). Historical data was corrected with no change in color.

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/13	1Q/14	2Q/14	3Q/14	4Q/14	1Q/15	2Q/15	3Q/15
UAI (ΔCDF)	6.96E-09	5.58E-09	8.52E-10	1.06E-09	1.44E-09	2.02E-10	-1.06E-09	-1.33E-08
URI (ΔCDF)	4.47E-07	4.49E-07	4.72E-07	4.77E-07	4.80E-07	4.80E-07	4.83E-07	-3.22E-08
PLE	NO	NO						
Indicator value	4.50E-07	4.50E-07	4.70E-07	4.80E-07	4.80E-07	4.80E-07	4.80E-07	-4.60E-08

Licensee Comments:

2Q/15: Risk Cap Invoked.

1Q/15: Risk Cap Invoked.

4Q/14: Risk Cap Invoked.

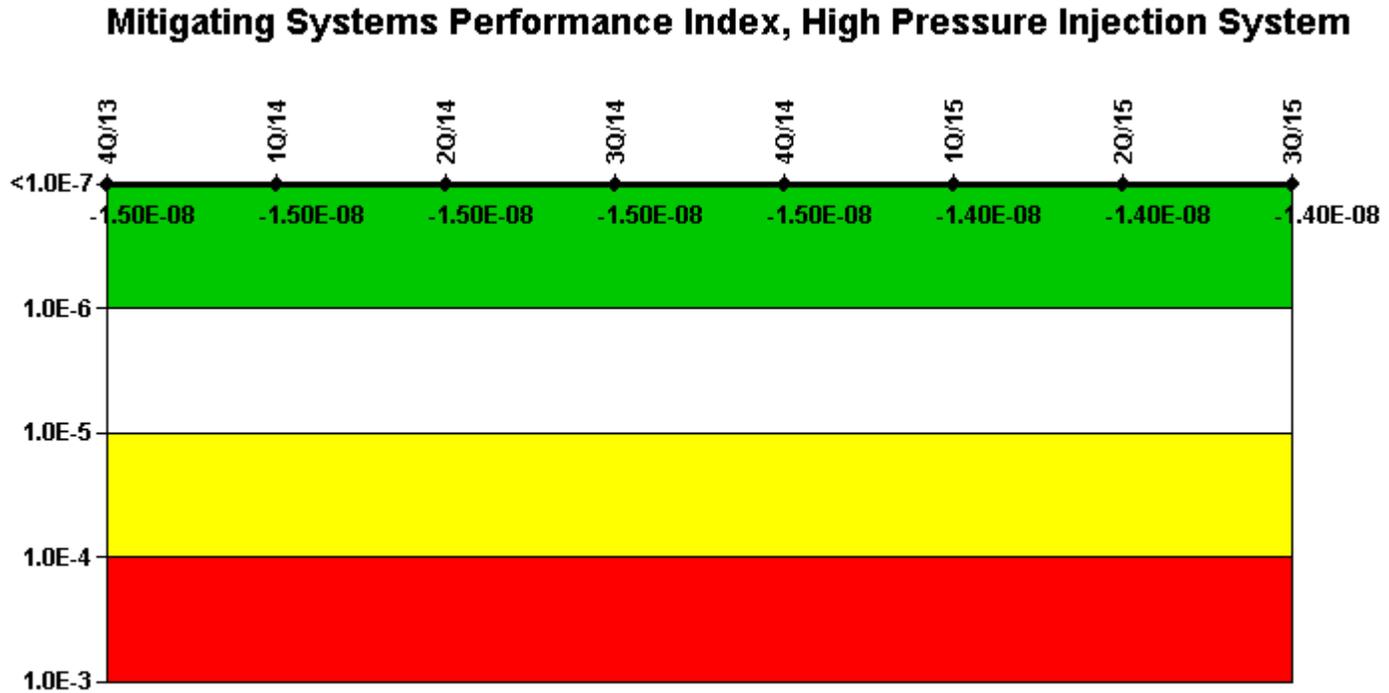
3Q/14: Risk Cap Invoked. A review determined a minor discrepancy of 4 minutes of unavailability for #3 diesel for August 2013. Historical data was changed with no change in color.

2Q/14: Risk Cap Invoked.

1Q/14: Risk Cap Invoked. An assessment determined unavailable hours for December 2012 were not correct. Historical data was corrected with no change in color.

4Q/13: Risk Cap Invoked.

4Q/13: Risk Cap Invoked.



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

Notes

Mitigating Systems Performance Index, High Pressure Injection System	4Q/13	1Q/14	2Q/14	3Q/14	4Q/14	1Q/15	2Q/15	3Q/15
UAI (Δ CDF)	-4.78E-10	-4.15E-10	-4.41E-10	-4.89E-10	-6.00E-10	-6.34E-10	-6.29E-10	-7.17E-10
URI (Δ CDF)	-1.44E-08	-1.42E-08	-1.45E-08	-1.42E-08	-1.40E-08	-1.36E-08	-1.36E-08	-1.36E-08
PLE	NO							
Indicator value	-1.50E-08	-1.50E-08	-1.50E-08	-1.50E-08	-1.50E-08	-1.40E-08	-1.40E-08	-1.40E-08

Licensee Comments:

4Q/14: Changed PRA Parameter(s). An MSPI review identified several probabilistic risk analysis coefficients that were incorrect. The MSPI Basis Document and coefficients were corrected with no change in color.

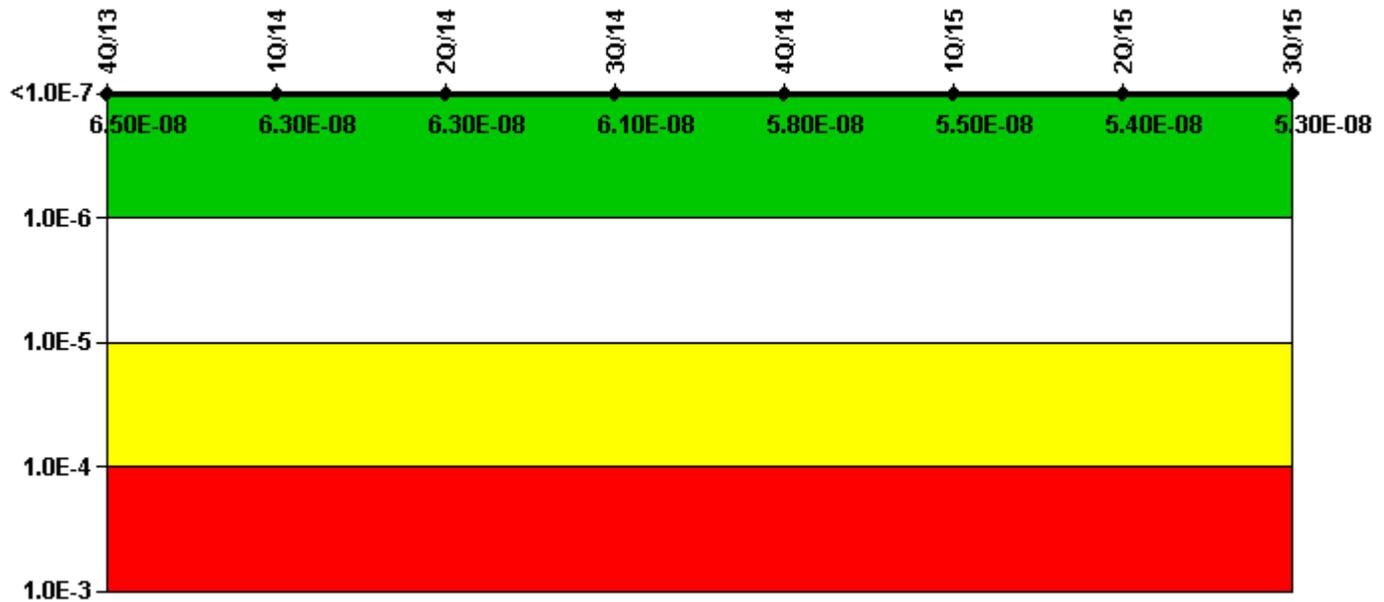
3Q/14: Changed PRA Parameter(s).

2Q/14: Changed PRA Parameter(s).

1Q/14: Changed PRA Parameter(s).

4Q/13: Changed PRA Parameter(s).

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/13	1Q/14	2Q/14	3Q/14	4Q/14	1Q/15	2Q/15	3Q/15
UAI (Δ CDF)	-2.97E-09	-3.23E-09	-3.33E-09	-3.33E-09	-3.25E-09	-3.25E-09	-3.30E-09	-3.30E-09
URI (Δ CDF)	6.78E-08	6.62E-08	6.63E-08	6.47E-08	6.15E-08	5.86E-08	5.72E-08	5.58E-08
PLE	NO							
Indicator value	6.50E-08	6.30E-08	6.30E-08	6.10E-08	5.80E-08	5.50E-08	5.40E-08	5.30E-08

Licensee Comments:

4Q/14: Changed PRA Parameter(s). An MSPI review identified several probabilistic risk analysis coefficients that were incorrect. The MSPI Basis Document and coefficients were corrected with no change in color.

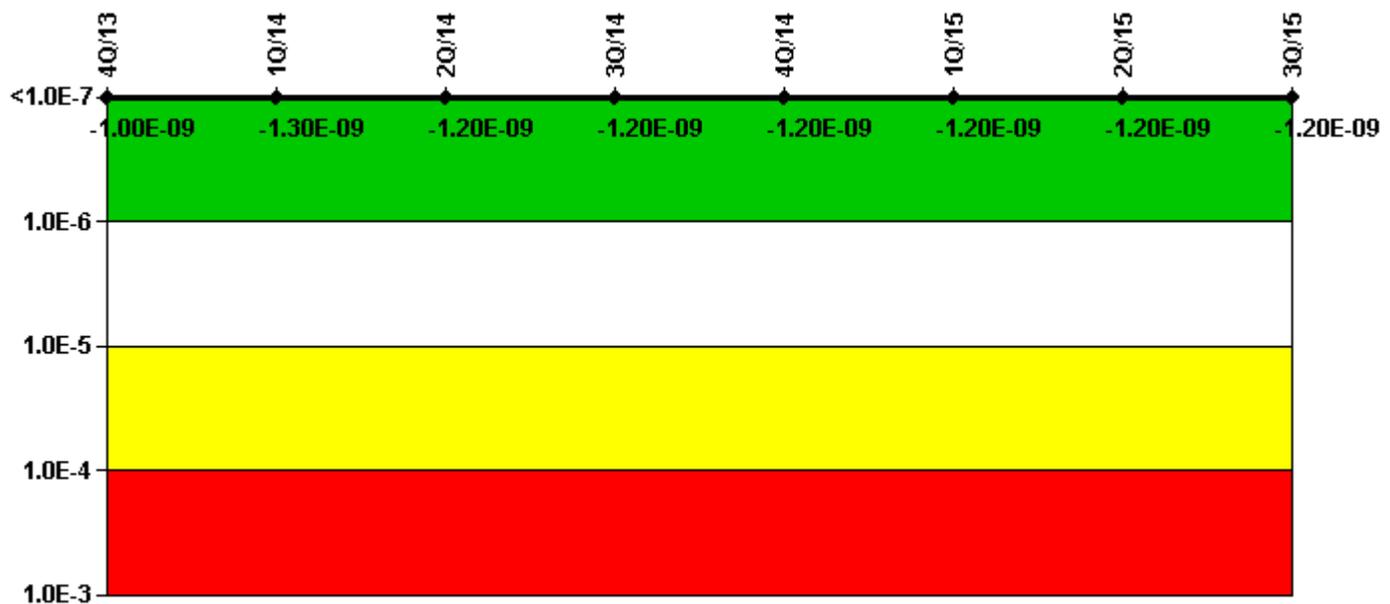
3Q/14: Changed PRA Parameter(s).

2Q/14: Changed PRA Parameter(s).

1Q/14: Changed PRA Parameter(s).

4Q/13: 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/13	1Q/14	2Q/14	3Q/14	4Q/14	1Q/15	2Q/15	3Q/15
UAI (Δ CDF)	6.15E-11	-2.25E-10	-2.26E-10	-2.38E-10	-2.42E-10	-2.65E-10	-2.70E-10	-2.70E-10
URI (Δ CDF)	-1.08E-09	-1.06E-09	-9.84E-10	-9.75E-10	-9.65E-10	-9.46E-10	-9.46E-10	-9.46E-10
PLE	NO							
Indicator value	-1.00E-09	-1.30E-09	-1.20E-09	-1.20E-09	-1.20E-09	-1.20E-09	-1.20E-09	-1.20E-09

Licensee Comments:

4Q/14: Changed PRA Parameter(s). An MSPI review identified several probabilistic risk analysis coefficients that

were incorrect. The MSPI Basis Document and coefficients were corrected with no change in color.

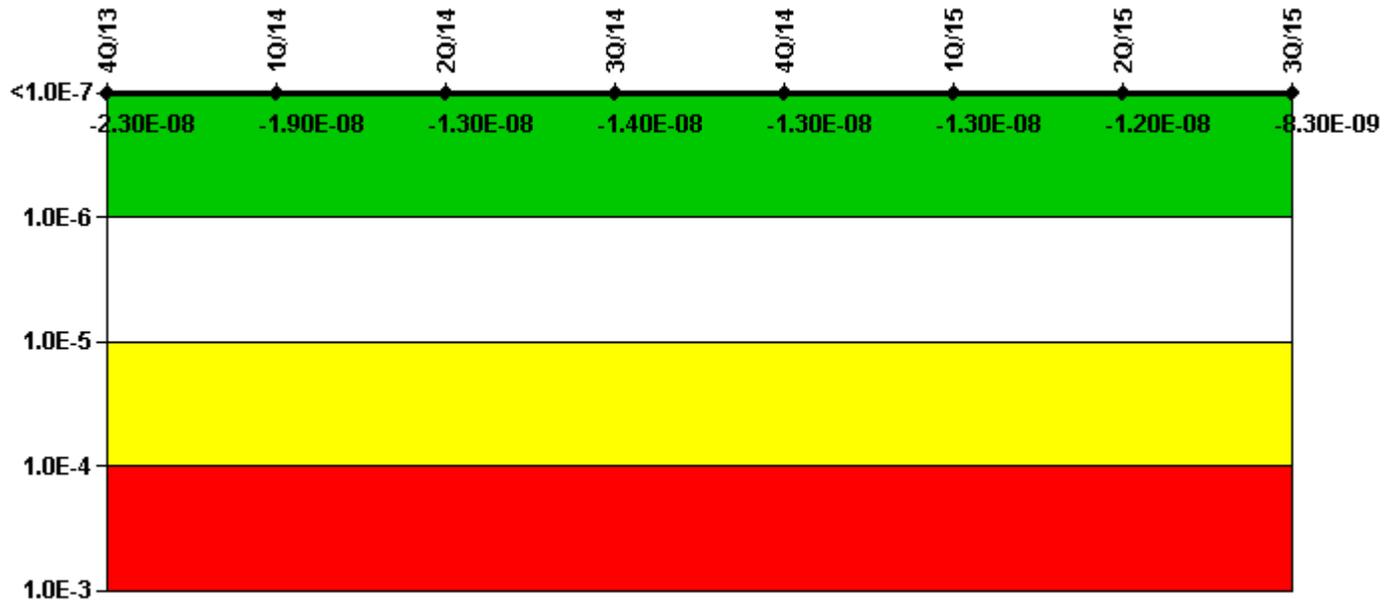
3Q/14: Changed PRA Parameter(s).

2Q/14: Changed PRA Parameter(s).

1Q/14: Changed PRA Parameter(s).

4Q/13: 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/13	1Q/14	2Q/14	3Q/14	4Q/14	1Q/15	2Q/15	3Q/15
UAI (ΔCDF)	-1.52E-09	-1.51E-09	-1.40E-09	-1.40E-09	-1.27E-09	-1.27E-09	-1.27E-09	-1.25E-09
URI (ΔCDF)	-2.18E-08	-1.71E-08	-1.21E-08	-1.22E-08	-1.19E-08	-1.13E-08	-1.09E-08	-7.07E-09
PLE	NO							
Indicator value	-2.30E-08	-1.90E-08	-1.30E-08	-1.40E-08	-1.30E-08	-1.30E-08	-1.20E-08	-8.30E-09

Licensee Comments:

4Q/14: Changed PRA Parameter(s). An MSPI review identified several probabilistic risk analysis coefficients that were incorrect. The MSPI Basis Document and coefficients were corrected with no change in color.

3Q/14: Changed PRA Parameter(s).

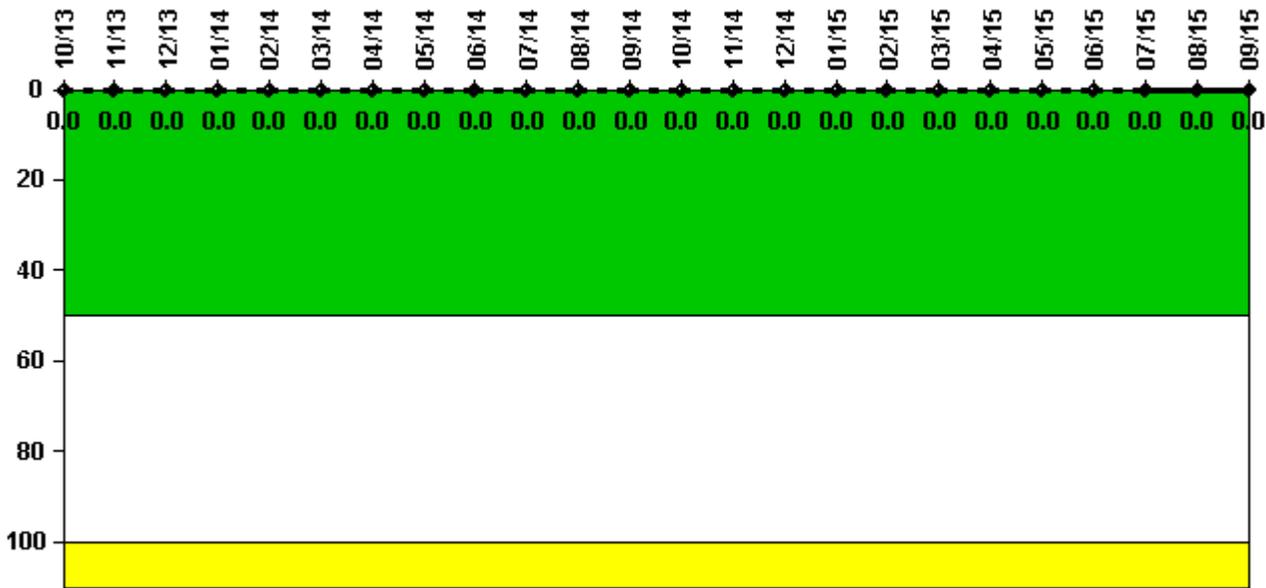
2Q/14: Failure No. 311011 on March 29 was added which changed the first quarter indicator with no change in color. See LER report No. 50-280/2014-001-00.

2Q/14: Changed PRA Parameter(s).

1Q/14: Changed PRA Parameter(s).

4Q/13: Changed PRA Parameter(s).

Reactor Coolant System Activity



Thresholds: White > 50.0 Yellow > 100.0

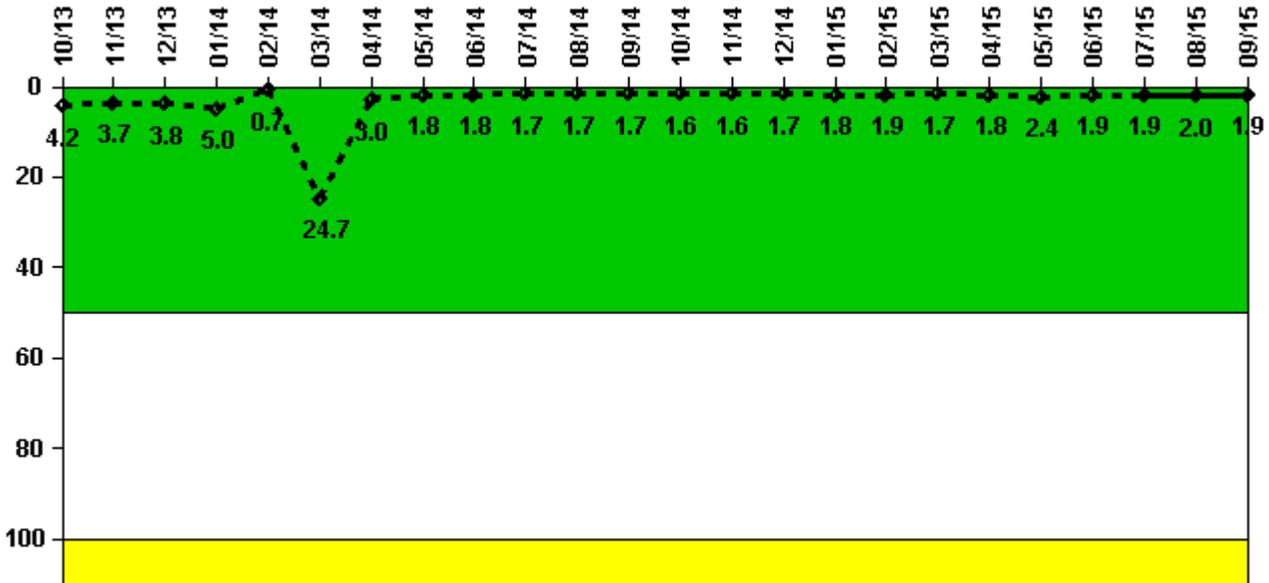
Notes

Reactor Coolant System Activity	10/13	11/13	12/13	1/14	2/14	3/14	4/14	5/14	6/14	7/14	8/14	9/14
Maximum activity	0.000126	0.000230	0.000132	0.000145	0.000145	0.000236	0.000151	0.000439	0.000066	0.000079	0.000077	0.000100
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	0	0	0	0	0	0	0	0
Reactor Coolant System Activity	10/14	11/14	12/14	1/15	2/15	3/15	4/15	5/15	6/15	7/15	8/15	9/15
Maximum activity	0.000079	0.000085	0.000109	0.000095	0.000138	0.000113	0.000103	0.000115	0.000126	0.000116	0.000064	0.000130
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	0	0	0	0	0	0	0	0

Licensee Comments: none

Reactor Coolant System Leakage



Thresholds: White > 50.0 Yellow > 100.0

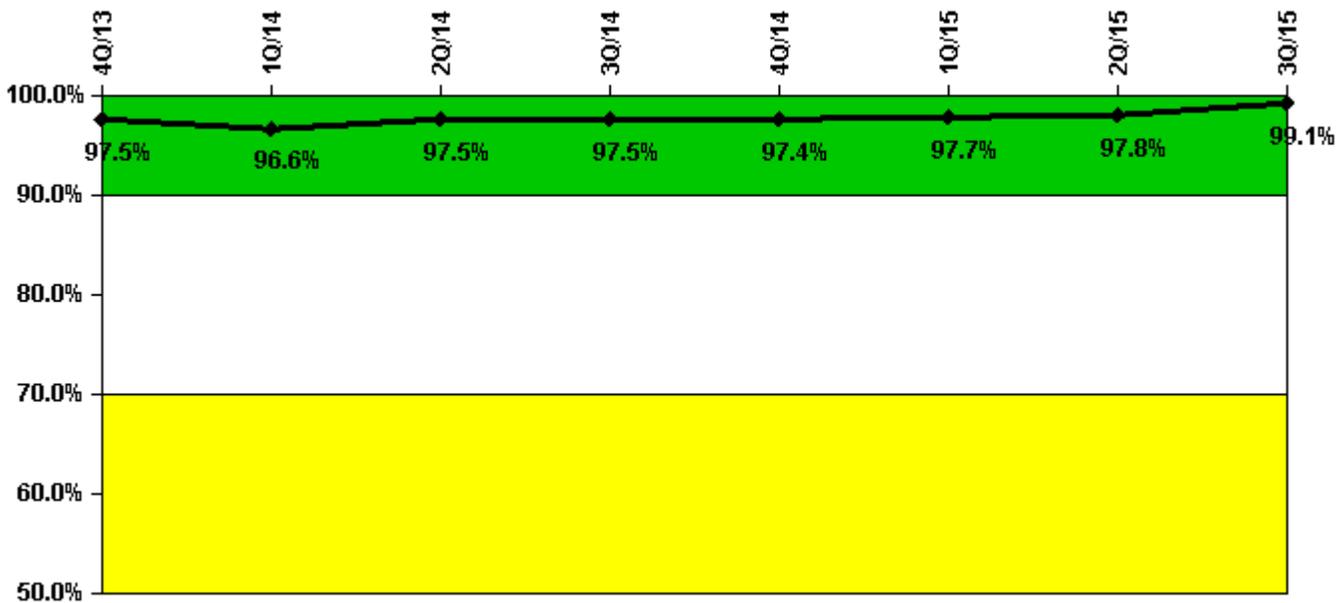
Notes

Reactor Coolant System Leakage	10/13	11/13	12/13	1/14	2/14	3/14	4/14	5/14	6/14	7/14	8/14	9/14
Maximum leakage	0.420	0.370	0.380	0.500	0.070	2.470	0.300	0.180	0.180	0.170	0.170	0.170

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	4.2	3.7	3.8	5.0	0.7	24.7	3.0	1.8	1.8	1.7	1.7	1.7
Reactor Coolant System Leakage	10/14	11/14	12/14	1/15	2/15	3/15	4/15	5/15	6/15	7/15	8/15	9/15
Maximum leakage	0.160	0.160	0.170	0.180	0.190	0.170	0.180	0.240	0.190	0.190	0.200	0.190
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	1.6	1.6	1.7	1.8	1.9	1.7	1.8	2.4	1.9	1.9	2.0	1.9

Licensee Comments: none

Drill/Exercise Performance



Thresholds: White < 90.0% Yellow < 70.0%

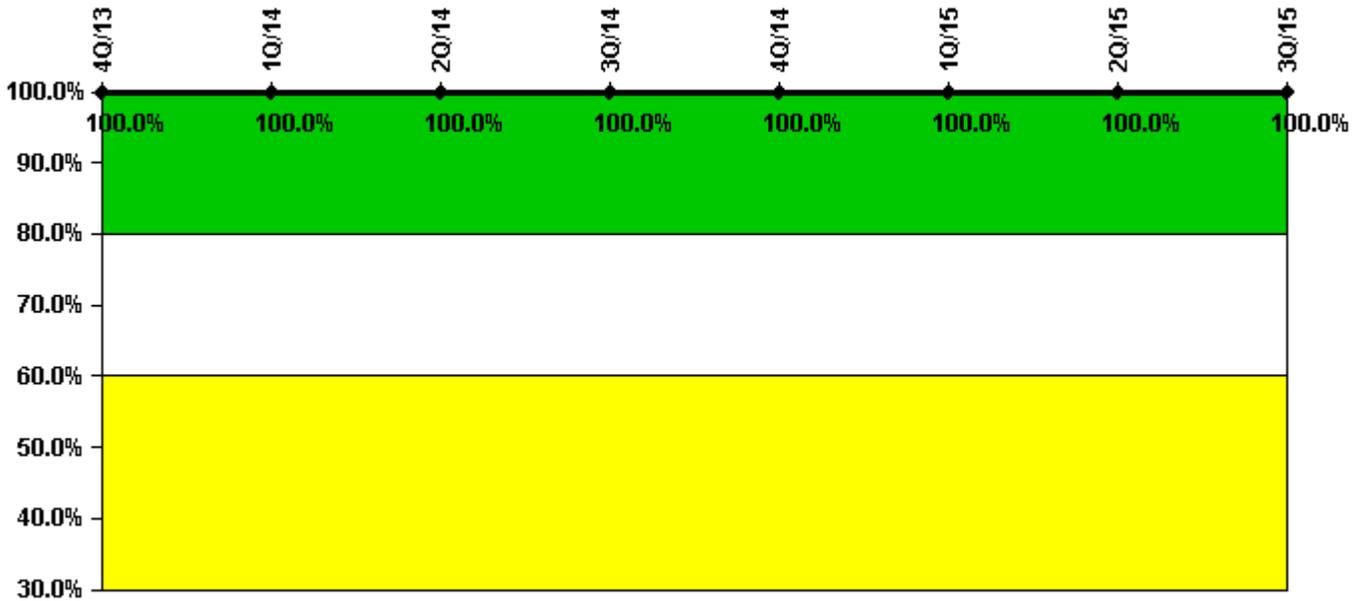
Notes

Drill/Exercise Performance	4Q/13	1Q/14	2Q/14	3Q/14	4Q/14	1Q/15	2Q/15	3Q/15
Successful opportunities	14.0	36.0	28.0	33.0	19.0	31.0	31.0	35.0
Total opportunities	14.0	38.0	28.0	33.0	19.0	31.0	31.0	35.0
Indicator value	97.5%	96.6%	97.5%	97.5%	97.4%	97.7%	97.8%	99.1%

Licensee Comments:

3Q/14: Further review of a March 2014 ERO Drill determined an initial successful DEP opportunity was not successful. Historical data was corrected with no change in color.

ERO Drill Participation



Thresholds: White < 80.0% Yellow < 60.0%

Notes

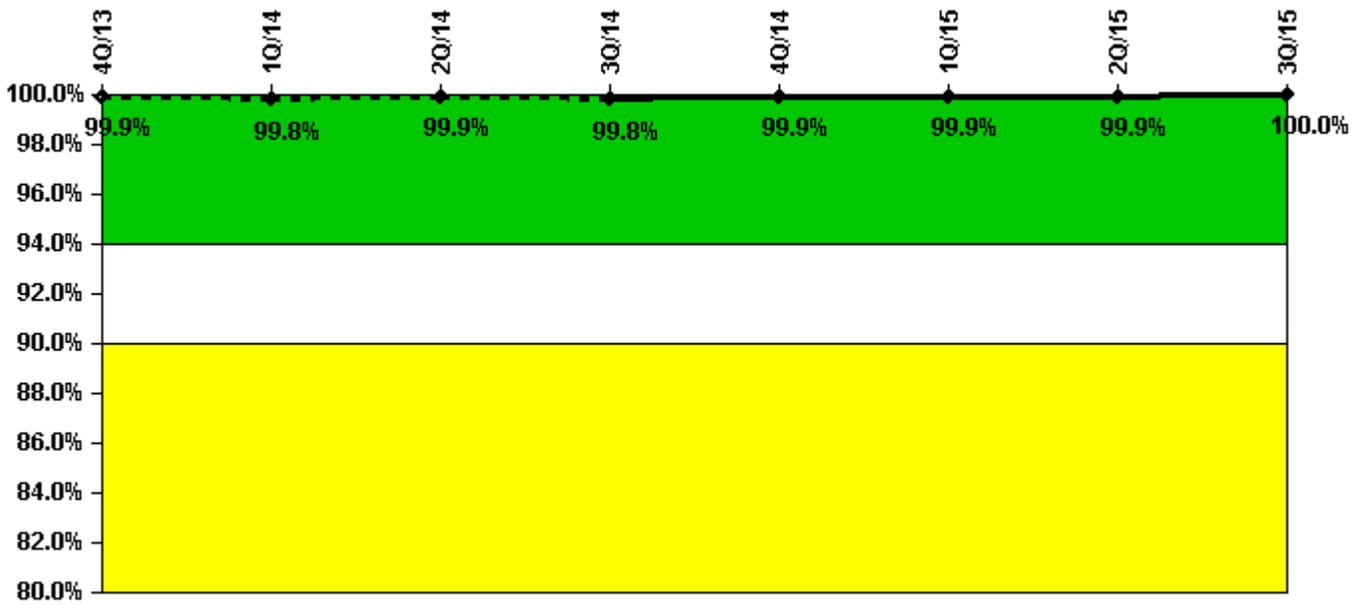
ERO Drill Participation	4Q/13	1Q/14	2Q/14	3Q/14	4Q/14	1Q/15	2Q/15	3Q/15
Participating Key personnel	159.0	156.0	152.0	154.0	151.0	141.0	157.0	157.0
Total Key personnel	159.0	156.0	152.0	154.0	151.0	141.0	157.0	157.0
Indicator value	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Licensee Comments:

2Q/15: An assessment revealed additional key personnel for March 2015. Historical data was corrected with no change in color.

3Q/14: An assessment determined the total number of personnel in key ERO positions was inaccurate. Historical data was corrected with no change in color.

Alert & Notification System



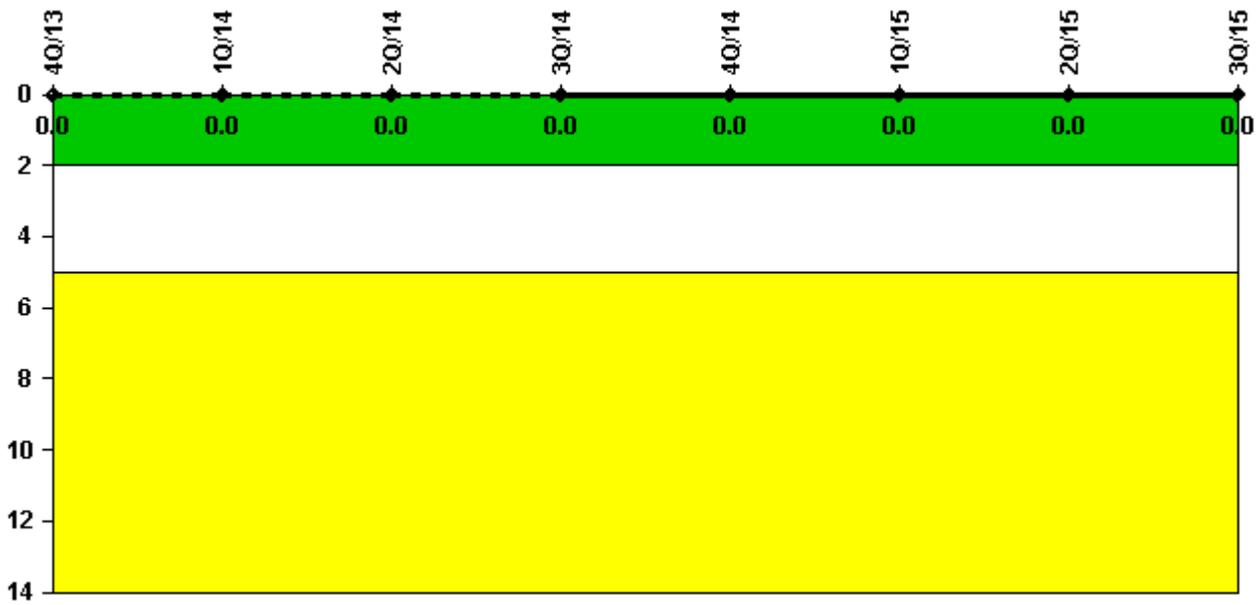
Thresholds: White < 94.0% Yellow < 90.0%

Notes

Alert & Notification System	4Q/13	1Q/14	2Q/14	3Q/14	4Q/14	1Q/15	2Q/15	3Q/15
Successful siren-tests	566	496	568	567	497	567	497	639
Total sirens-tests	568	497	568	568	497	568	497	639
Indicator value	99.9%	99.8%	99.9%	99.8%	99.9%	99.9%	99.9%	100.0%

Licensee Comments: none

Occupational Exposure Control Effectiveness



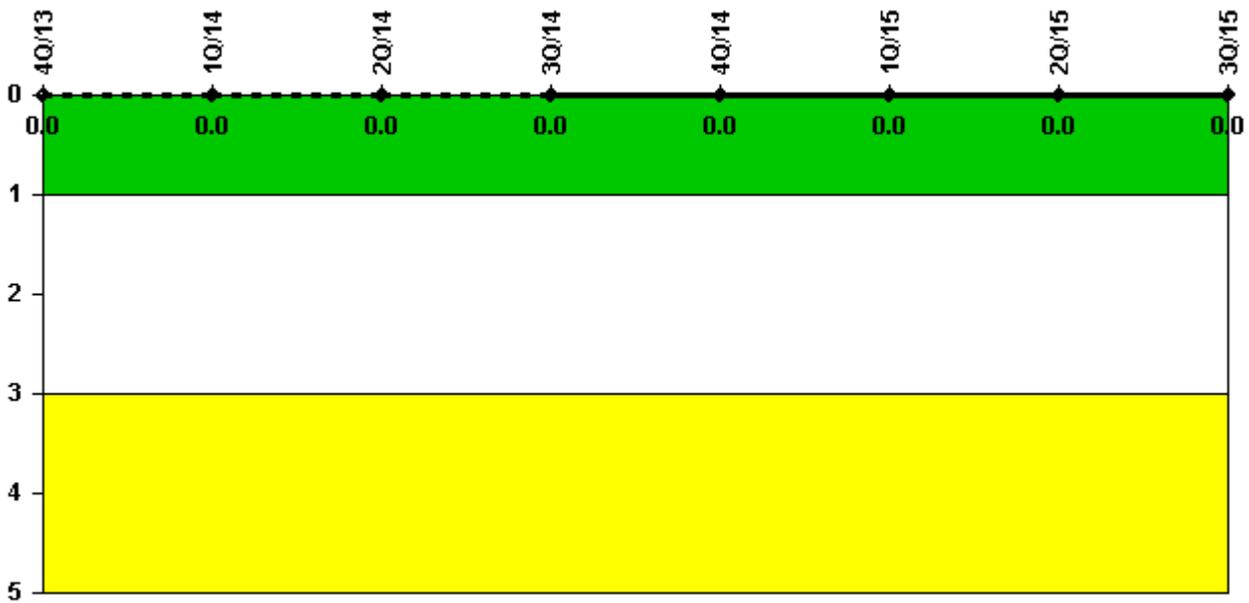
Thresholds: White > 2.0 Yellow > 5.0

Notes

Occupational Exposure Control Effectiveness	4Q/13	1Q/14	2Q/14	3Q/14	4Q/14	1Q/15	2Q/15	3Q/15
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							

Licensee Comments: none

RETS/ODCM Radiological Effluent



Thresholds: White > 1.0 Yellow > 3.0

Notes

RETS/ODCM Radiological Effluent	4Q/13	1Q/14	2Q/14	3Q/14	4Q/14	1Q/15	2Q/15	3Q/15
RETS/ODCM occurrences	0	0	0	0	0	0	0	0
Indicator value	0	0	0	0	0	0	0	0

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.

 [Action Matrix Summary](#) | [Inspection Findings Summary](#) | [PI Summary](#) | [Reactor Oversight Process](#)

Last Modified: December 15, 2015