

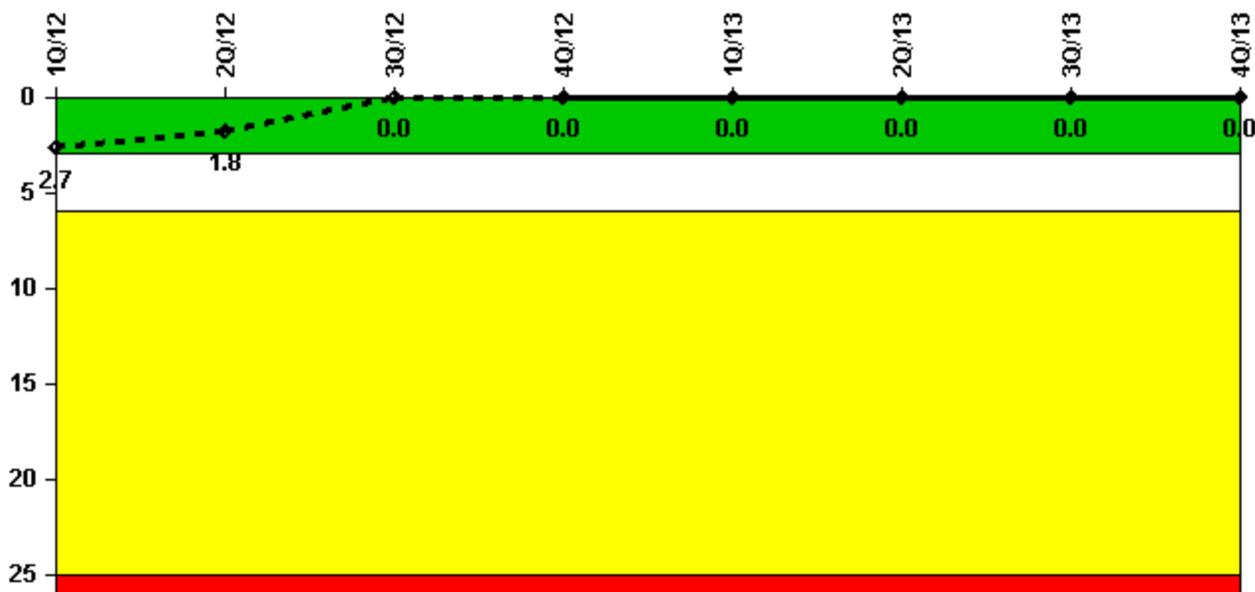
Sequoyah 1

4Q/2013 Performance Indicators

The solid trend line represents the current reporting period.

Licensee's General Comments: none

Unplanned Scrams per 7000 Critical Hrs



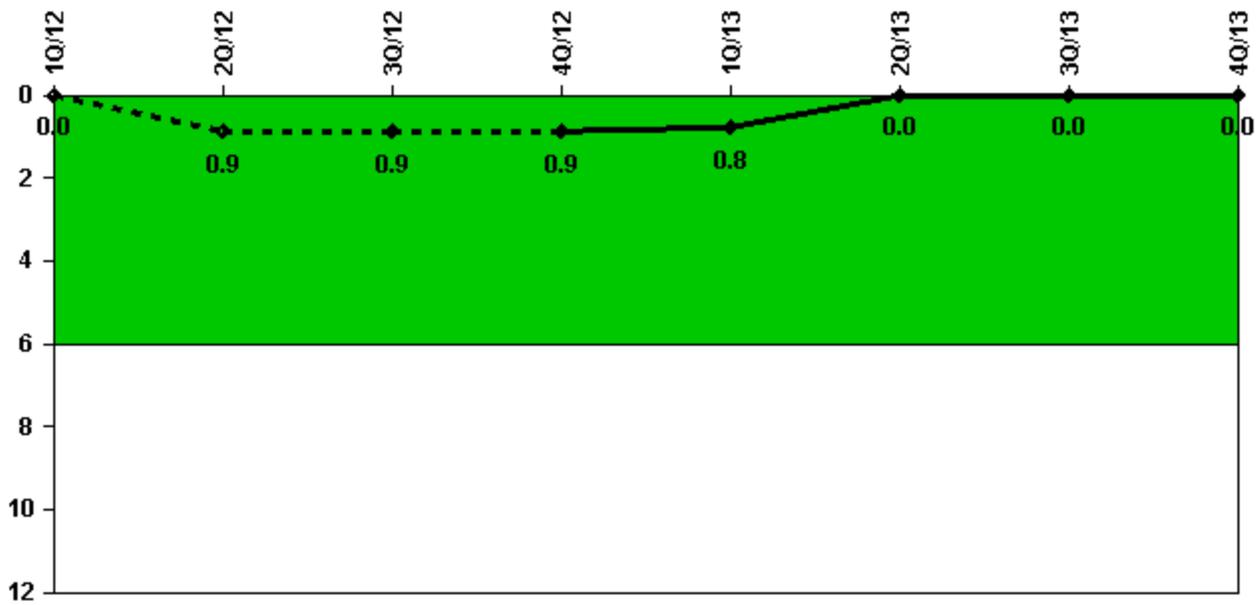
Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

Notes

Unplanned Scrams per 7000 Critical Hrs	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13	2Q/13	3Q/13	4Q/13
Unplanned scrams	0	0	0	0	0	0	0	0
Critical hours	1386.4	2184.0	2208.0	2209.0	2159.0	2184.0	2208.0	1304.9
Indicator value	2.7	1.8	0	0	0	0	0	0

Licensee Comments: none

Unplanned Power Changes per 7000 Critical Hrs



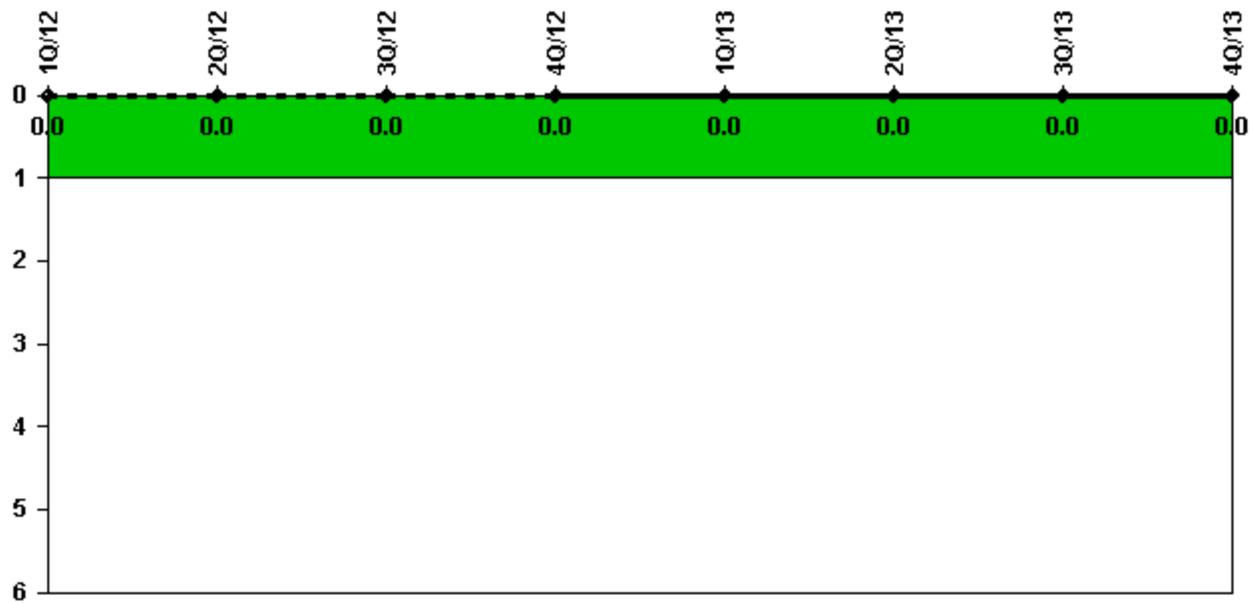
Thresholds: White > 6.0

Notes

Unplanned Power Changes per 7000 Critical Hrs	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13	2Q/13	3Q/13	4Q/13
Unplanned power changes	0	1.0	0	0	0	0	0	0
Critical hours	1386.4	2184.0	2208.0	2209.0	2159.0	2184.0	2208.0	1304.9
Indicator value	0	0.9	0.9	0.9	0.8	0	0	0

Licensee Comments: none

Unplanned Scrams with Complications



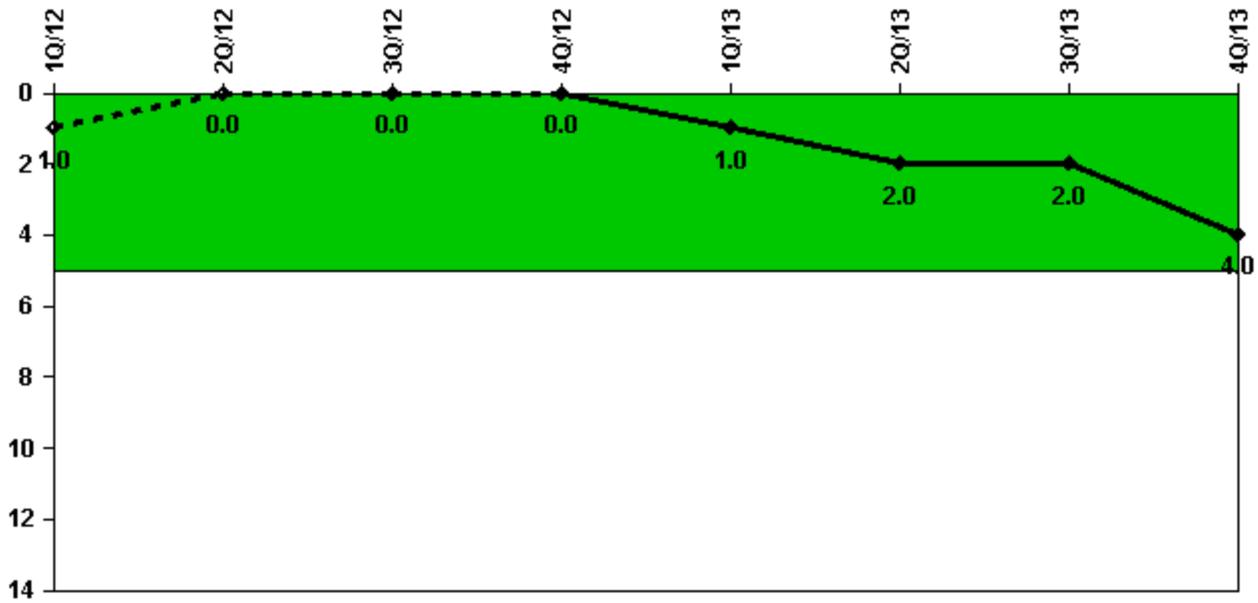
Thresholds: White > 1.0

Notes

Unplanned Scrams with Complications	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13	2Q/13	3Q/13	4Q/13
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

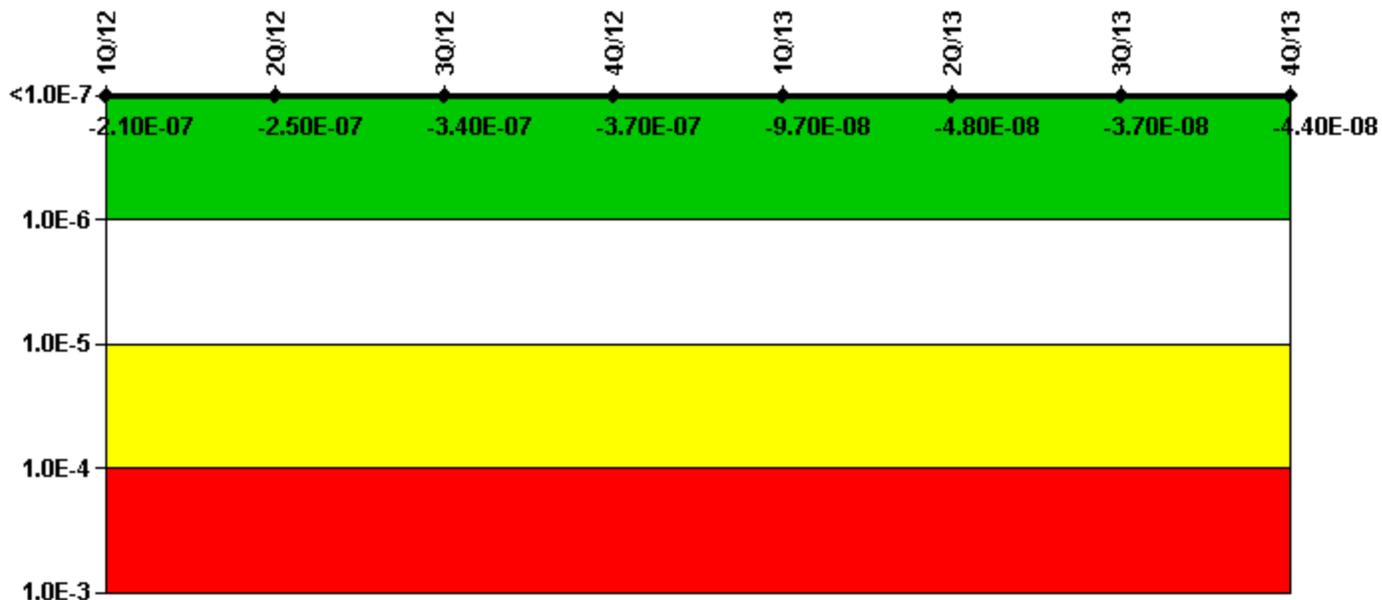
Safety System Functional Failures (PWR)	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13	2Q/13	3Q/13	4Q/13
Safety System Functional Failures	0	0	0	0	1	1	0	2
Indicator value	1	0	0	0	1	2	2	4

Licensee Comments:

2Q/13: LER 327/328/2013-001-00

1Q/13: LER 20-327/2012-001

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	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13	2Q/13	3Q/13	4Q/13
UAI (Δ CDF)	6.06E-08	1.63E-08	1.67E-08	2.54E-08	4.18E-08	8.19E-08	9.71E-08	9.27E-08
URI (Δ CDF)	-2.72E-07	-2.65E-07	-3.60E-07	-3.95E-07	-1.39E-07	-1.29E-07	-1.34E-07	-1.36E-07
PLE	NO							
Indicator value	-2.10E-07	-2.50E-07	-3.40E-07	-3.70E-07	-9.70E-08	-4.80E-08	-3.70E-08	-4.40E-08

Licensee Comments:

4Q/12: Changed PRA Parameter(s). The PRA Model of Record was revised 9/1/2012, updating the PRA model using the CAFTA program. The base numbers used in the MSPI database were also updated in accordance with NEI 99-02 Rev 6. As a result of the PRA model change, the CDF, Fussel-Vesely and Basic Event Probabilities for all monitored trains and components were revised.

1Q/12: Changed PRA Parameter(s). Revised PRA values and scoping for the PRA Model of Record dated 5/27/11 as recalculated in Calc MDN-000-999-2011-0255 Rev 1 & 2 including adding the EDG FO Pumps to scope as required by a FAQ to NEI 99-02. Errors in calc Rev 0 corrected in CDE back thru 3rd quarter 2011 as required by NEI 99-02. Ref PER 483857.

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	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13	2Q/13	3Q/13	4Q/13
UAI (Δ CDF)	8.35E-09	8.54E-09	9.93E-09	2.62E-08	2.59E-08	2.86E-08	2.16E-08	2.22E-08
URI (Δ CDF)	-4.22E-10	-4.23E-10	-4.24E-10	-6.33E-10	-6.34E-10	-6.34E-10	-6.35E-10	-6.36E-10
PLE	NO							
Indicator value	7.90E-09	8.10E-09	9.50E-09	2.60E-08	2.50E-08	2.80E-08	2.10E-08	2.20E-08

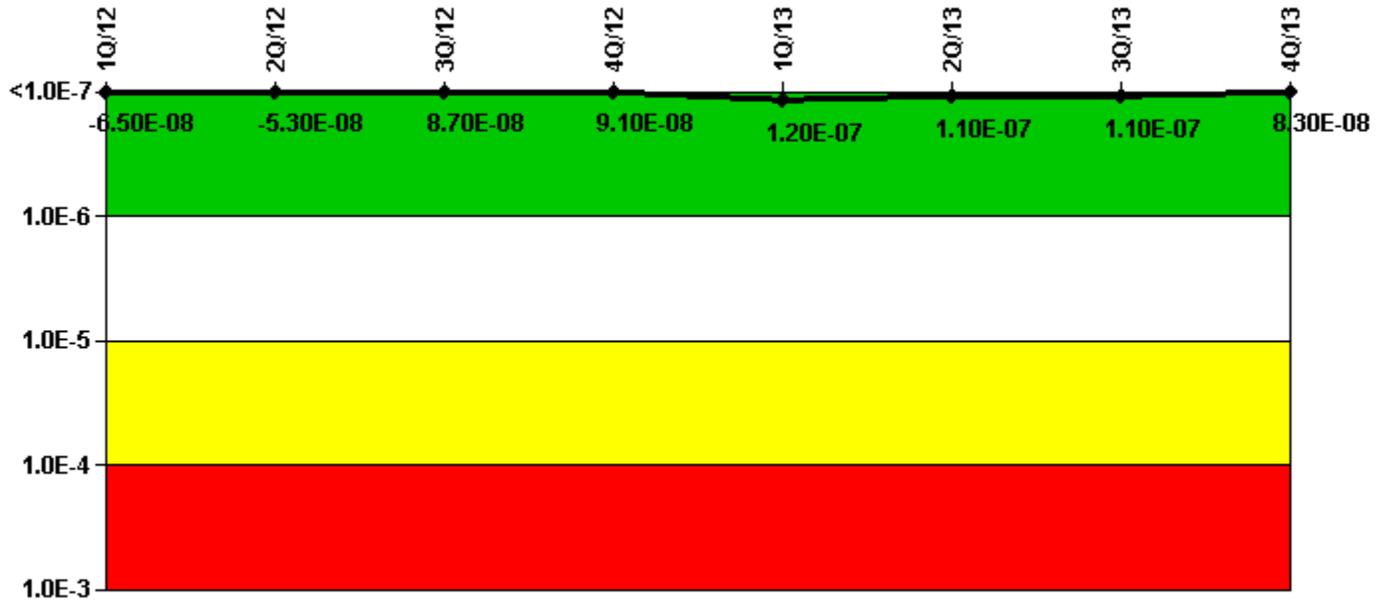
Licensee Comments:

4Q/12: Changed PRA Parameter(s). The PRA Model of Record was revised 9/1/2012, updating the PRA model using the CAFTA program. The base numbers used in the MSPI database were also updated in accordance with NEI 99-02 Rev 6. As a result of the PRA model change, the CDF, Fussel-Vesely and Basic Event Probabilities for all monitored trains and components were revised.

1Q/12: Revised PRA values and scoping for the PRA Model of Record dated 5/27/11 as recalculated in Calc MDN-000-999-2011-0255 Rev 1 & 2. Errors in calc Rev 0 corrected in CDE back thru 3rd quarter 2011 as required by NEI 99-02. Ref PER 483857.

1Q/12: Changed PRA Parameter(s). Revised PRA values and scoping for the PRA Model of Record dated 5/27/11 as recalculated in Calc MDN-000-999-2011-0255 Rev 1 & 2. Errors in calc Rev 0 corrected in CDE back thru 3rd quarter 2011 as required by NEI 99-02. Ref PER 483857.

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	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13	2Q/13	3Q/13	4Q/13
UAI (Δ CDF)	2.15E-07	2.23E-07	3.62E-07	2.23E-07	2.50E-07	2.46E-07	2.41E-07	2.11E-07
URI (Δ CDF)	-2.80E-07	-2.75E-07	-2.75E-07	-1.32E-07	-1.32E-07	-1.32E-07	-1.32E-07	-1.27E-07
PLE	NO							
Indicator value	-6.50E-08	-5.30E-08	8.70E-08	9.10E-08	1.20E-07	1.10E-07	1.10E-07	8.30E-08

Licensee Comments:

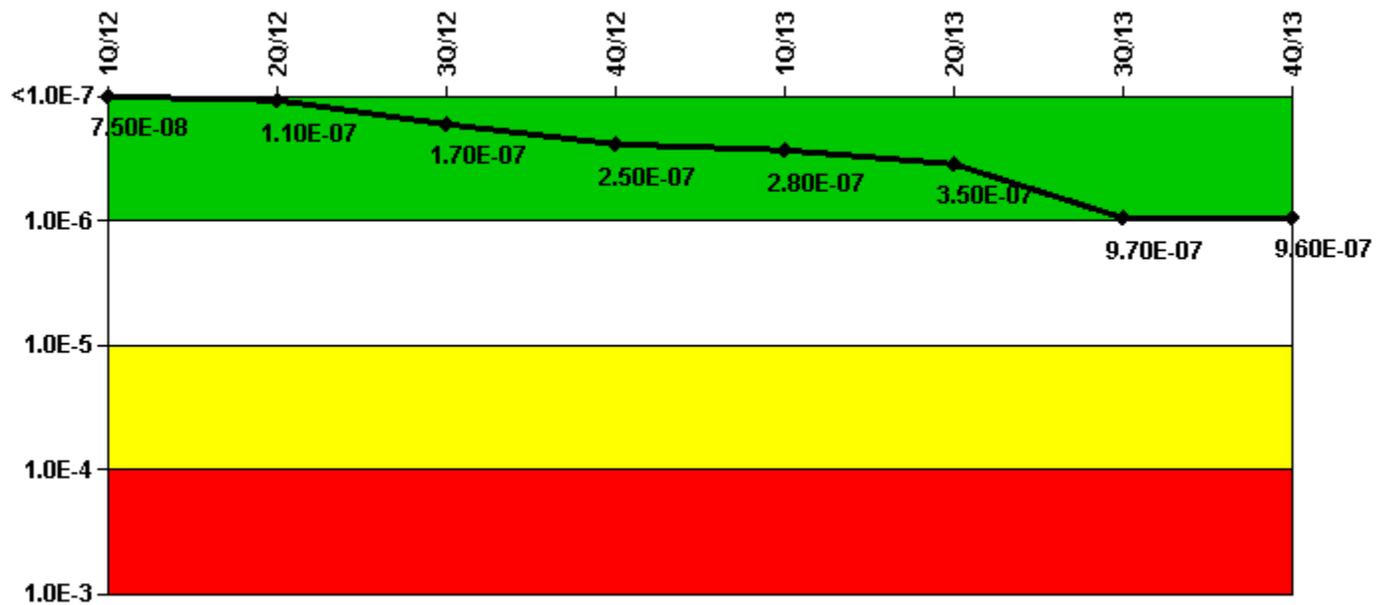
4Q/12: Changed PRA Parameter(s). The PRA Model of Record was revised 9/1/2012, updating the PRA model using the CAFTA program. The base numbers used in the MSPI database were also updated in accordance with NEI 99-02 Rev 6. As a result of the PRA model change, the CDF, Fussel-Vesely and Basic Event Probabilities for all monitored trains and components were revised.

1Q/12: Revised PRA values and scoping for the PRA Model of Record dated 5/27/11 as recalculated in Calc MDN-000-999-2011-0255 Rev 1 & 2. Errors in calc Rev 0 corrected in CDE back thru 3rd quarter 2011 as required by NEI 99-02. Ref PER 483857.

1Q/12: Revised PRA values and scoping for the PRA Model of Record dated 5/27/11 as recalculated in Calc MDN-000-999-2011-0255 Rev 1 & 2. Errors in calc Rev 0 corrected in CDE back thru 3rd quarter 2011 as required by

NEI 99-02. Ref PER 483857.

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	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13	2Q/13	3Q/13	4Q/13
UAI (ΔCDF)	2.50E-07	2.87E-07	3.48E-07	4.63E-07	4.96E-07	5.65E-07	6.91E-07	6.81E-07
URI (ΔCDF)	-1.75E-07	-1.75E-07	-1.75E-07	-2.10E-07	-2.14E-07	-2.17E-07	2.80E-07	2.77E-07
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	7.50E-08	1.10E-07	1.70E-07	2.50E-07	2.80E-07	3.50E-07	9.70E-07	9.60E-07

Licensee Comments:

4Q/13: Risk Cap Invoked.

3Q/13: Risk Cap Invoked. The failure of 1-FCV-074-0003 to close was determined to be the starting time of this Unplanned Unavailability. The dual indication on 1-FCV-063-0072 was not classified as the initiating time from a MSPI point of view.

4Q/12: The PRA Model of Record was revised 9/1/2012, updating the PRA model using the CAFTA program. The

base numbers used in the MSPI database were also updated in accordance with NEI 99-02 Rev 6. As a result of the PRA model change, the CDF, Fussel-Vesely and Basic Event Probabilities for all monitored trains and components were revised.

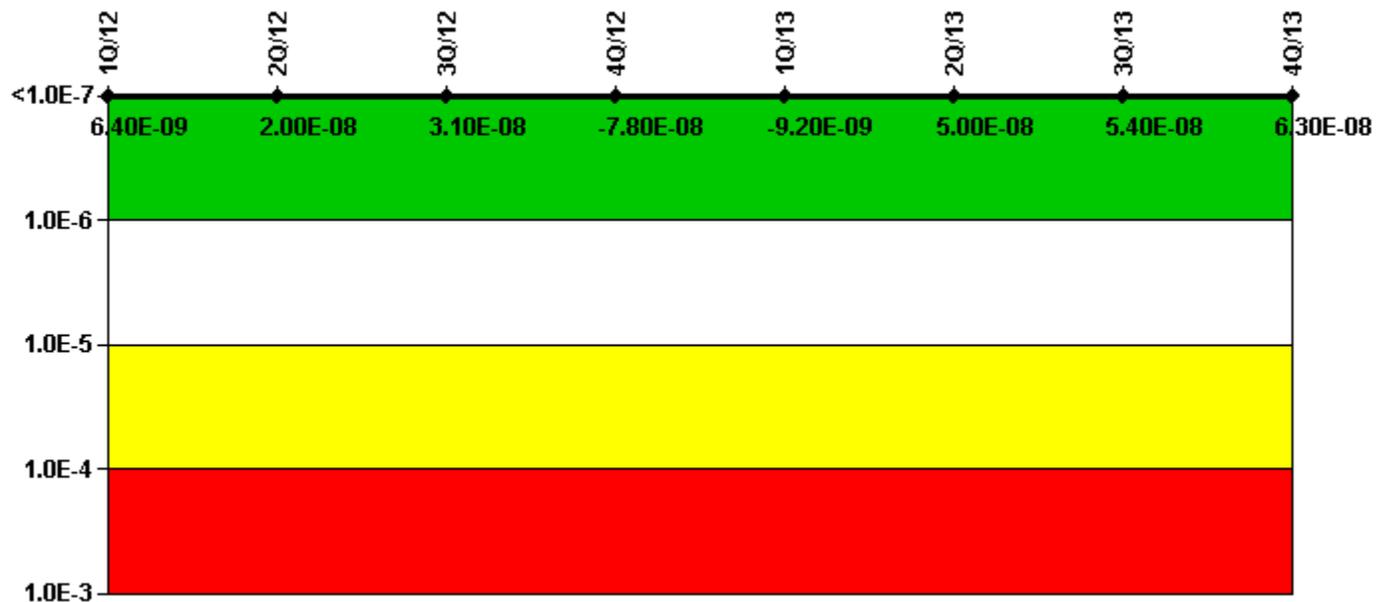
4Q/12: Changed PRA Parameter(s). The PRA Model of Record was revised 9/1/2012, updating the PRA model using the CAFTA program. The base numbers used in the MSPI database were also updated in accordance with NEI 99-02 Rev 6. As a result of the PRA model change, the CDF, Fussel-Vesely and Basic Event Probabilities for all monitored trains and components were revised.

1Q/12: Revised PRA values and scoping for the PRA Model of Record dated 5/27/11 as recalculated in Calc MDN-000-999-2011-0255 Rev 1 & 2. Errors in calc Rev 0 corrected in CDE back thru 3rd quarter 2011 as required by NEI 99-02. Ref PER 483857.

1Q/12: Revised PRA values and scoping for the PRA Model of Record dated 5/27/11 as recalculated in Calc MDN-000-999-2011-0255 Rev 1 & 2. Errors in calc Rev 0 corrected in CDE back thru 3rd quarter 2011 as required by NEI 99-02. Ref PER 483857.

1Q/12: Revised PRA values and scoping for the PRA Model of Record dated 5/27/11 as recalculated in Calc MDN-000-999-2011-0255 Rev 1 & 2. Errors in calc Rev 0 corrected in CDE back thru 3rd quarter 2011 as required by NEI 99-02. Ref PER 483857.

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									
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Water Systems	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13	2Q/13	3Q/13	4Q/13
UAI (ΔCDF)	8.12E-08	9.48E-08	1.06E-07	5.07E-08	1.19E-07	1.78E-07	1.82E-07	1.91E-07
URI (ΔCDF)	-7.49E-08	-7.49E-08	-7.49E-08	-1.28E-07	-1.28E-07	-1.28E-07	-1.28E-07	-1.28E-07
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	6.40E-09	2.00E-08	3.10E-08	-7.80E-08	-9.20E-09	5.00E-08	5.40E-08	6.30E-08

Licensee Comments:

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

3Q/13: Changed PRA Parameter(s). The planned unavailability baselines for all ERCW pumps were adjusted as needed to reflect past and current planned maintenance not performed every 3 years or less as specified by NEI 99-02.

2Q/13: Changed PRA Parameter(s). The planned unavailability baselines for all ERCW pumps were adjusted as needed to reflect past and current planned maintenance not performed every 3 years or less as specified by NEI 99-02.

1Q/13: The planned unavailability baselines for all ERCW pumps were adjusted as needed to reflect past and current planned maintenance not performed every 3 years or less as specified by NEI 99-02.

4Q/12: Changed PRA Parameter(s). The PRA Model of Record was revised 9/1/2012, updating the PRA model using the CAFTA program. The base numbers used in the MSPI database were also updated in accordance with NEI 99-02 Rev 6. As a result of the PRA model change, the CDF, Fussel-Vesely and Basic Event Probabilities for all monitored trains and components were revised. The planned unavailability baselines for all ERCW pumps were adjusted as needed to reflect past and current planned maintenance not performed every 3 years or less as specified by NEI 99-02.

3Q/12: Changed PRA Parameter(s). The planned unavailability baselines for all ERCW pumps were adjusted as needed to reflect past and current planned maintenance not performed every 3 years or less as specified by NEI 99-02.

3Q/12: Changed PRA Parameter(s). The planned unavailability baselines for all ERCW pumps were adjusted as needed to reflect past and current planned maintenance not performed every 3 years or less as specified by NEI 99-02.

2Q/12: Changed PRA Parameter(s). The planned unavailability baselines for all ERCW pumps were adjusted as needed to reflect past and current planned maintenance not performed every 3 years or less as specified by NEI 99-02.

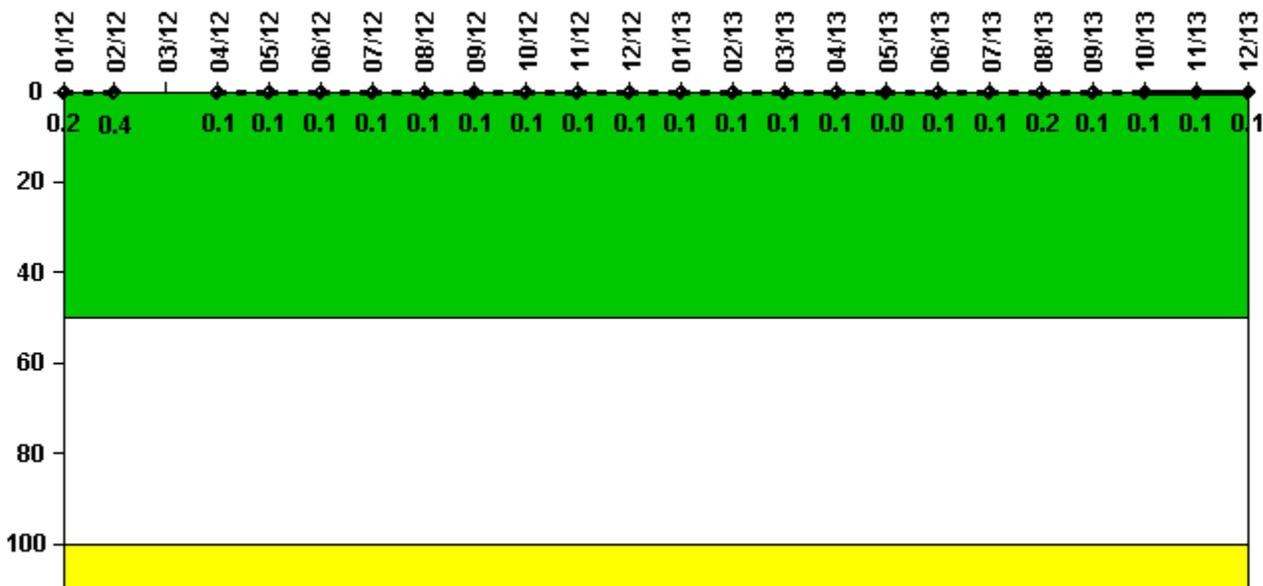
2Q/12: The planned unavailability baselines for all ERCW pumps were adjusted as needed to reflect past and current planned maintenance not performed every 3 years or less as specified by NEI 99-02.

1Q/12: Changed PRA Parameter(s). Revised PRA values and scoping for the PRA Model of Record dated 5/27/11 as recalculated in Calc MDN-000-999-2011-0255 Rev 1 & 2. Errors in calc Rev 0 corrected in CDE back thru 3rd quarter 2011 as required by NEI 99-02. Ref PER 483857. The planned unavailability baselines for all ERCW pumps were adjusted as needed to reflect past and current planned maintenance not performed every 3 years or less as specified by NEI 99-02.

1Q/12: Changed PRA Parameter(s). Revised PRA values and scoping for the PRA Model of Record dated 5/27/11 as recalculated in Calc MDN-000-999-2011-0255 Rev 1 & 2. Errors in calc Rev 0 corrected in CDE back thru 3rd quarter 2011 as required by NEI 99-02. Ref PER 483857. The planned unavailability baselines for all ERCW

pumps were adjusted as needed to reflect past and current planned maintenance not performed every 3 years or less as specified by NEI 99-02.

Reactor Coolant System Activity



Thresholds: White > 50.0 Yellow > 100.0

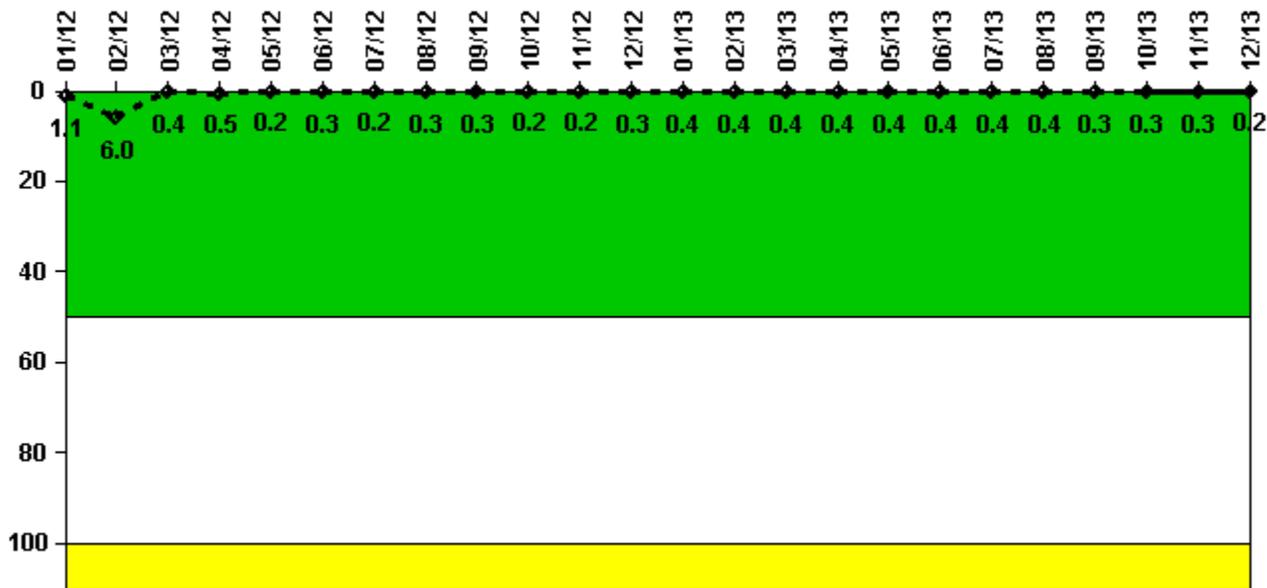
Notes

Reactor Coolant System Activity	1/12	2/12	3/12	4/12	5/12	6/12	7/12	8/12	9/12	10/12	11/12	12/12
Maximum activity	0.000584	0.001269	N/A	0.000284	0.000305	0.000289	0.000327	0.000307	0.000326	0.000380	0.000360	0.000452
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	0.2	0.4	N/A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1

Reactor Coolant System Activity	1/13	2/13	3/13	4/13	5/13	6/13	7/13	8/13	9/13	10/13	11/13	12/13
Maximum activity	0.000412	0.000445	0.000430	0.000465	0.000063	0.000491	0.000510	0.000566	0.000504	0.000405	0.000187	0.000232
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	0.1	0.1	0.2	0.1	0.1	0.1	0.1

Licensee Comments: none

Reactor Coolant System Leakage



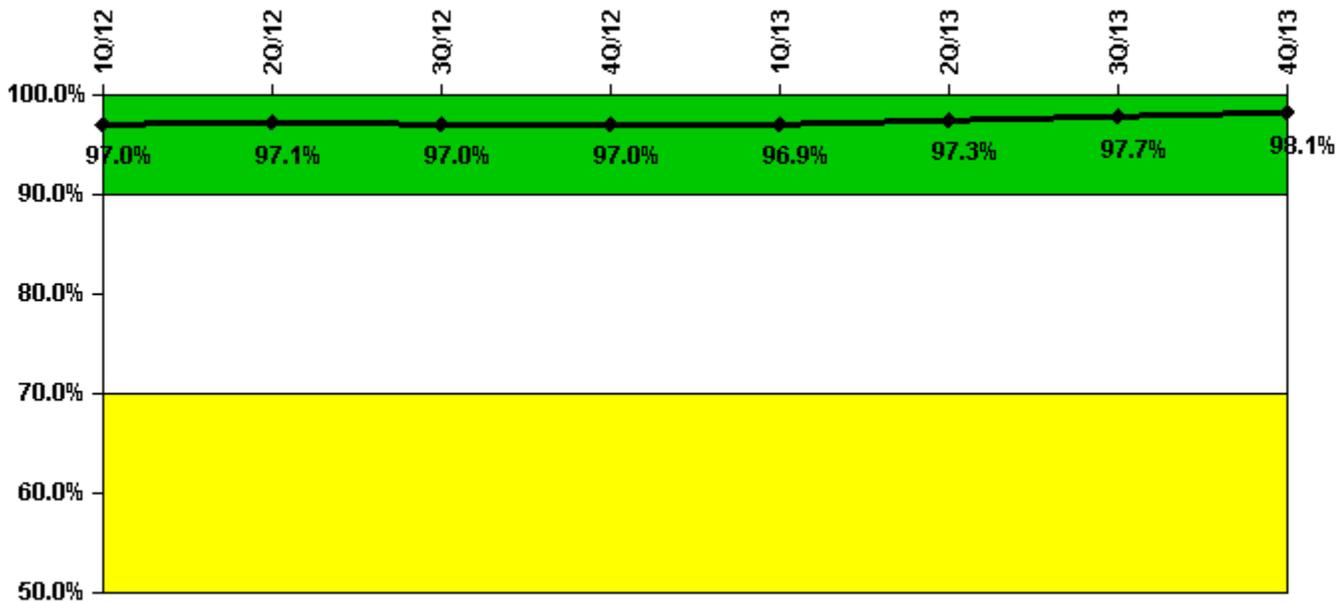
Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Leakage	1/12	2/12	3/12	4/12	5/12	6/12	7/12	8/12	9/12	10/12	11/12	12/12
Maximum leakage	0.110	0.600	0.040	0.050	0.020	0.030	0.020	0.030	0.030	0.020	0.020	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	1.1	6.0	0.4	0.5	0.2	0.3	0.2	0.3	0.3	0.2	0.2	0.3
Reactor Coolant System Leakage	1/13	2/13	3/13	4/13	5/13	6/13	7/13	8/13	9/13	10/13	11/13	12/13
Maximum leakage	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.030	0.030	0.030	0.020
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	0.3	0.3	0.2							

Licensee Comments: none

Drill/Exercise Performance



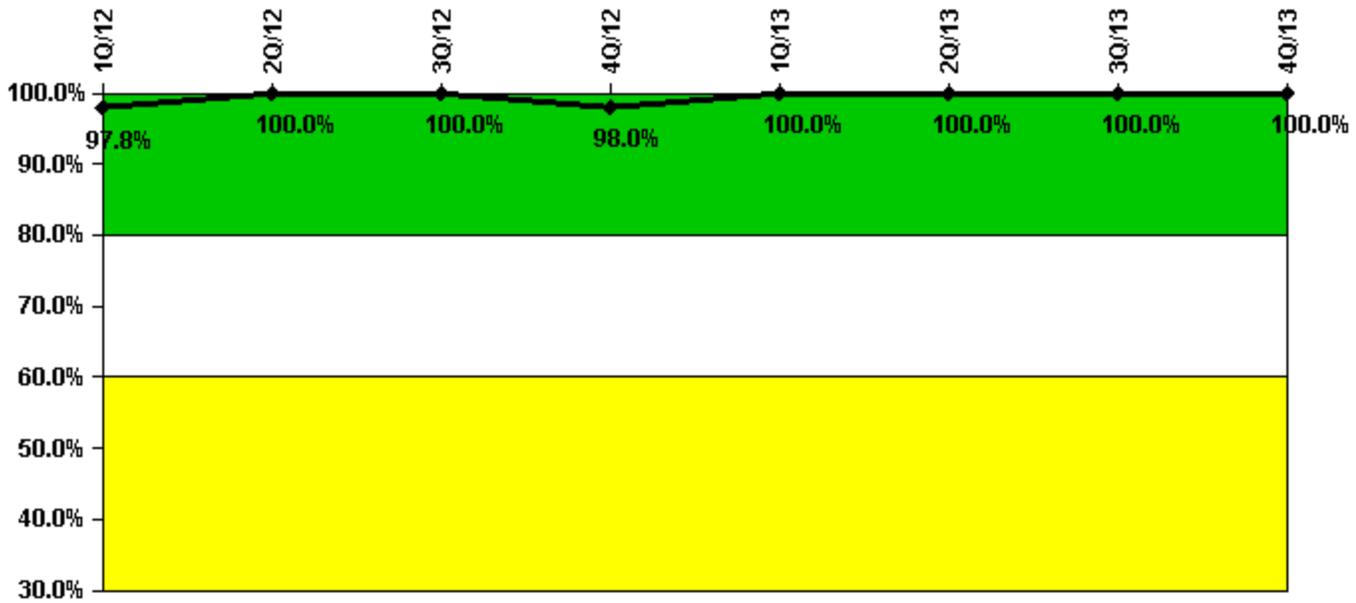
Thresholds: White < 90.0% Yellow < 70.0%

Notes

Drill/Exercise Performance	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13	2Q/13	3Q/13	4Q/13
Successful opportunities	6.0	32.0	87.0	10.0	41.0	50.0	82.0	0
Total opportunities	6.0	32.0	90.0	10.0	42.0	50.0	84.0	0
Indicator value	97.0%	97.1%	97.0%	97.0%	96.9%	97.3%	97.7%	98.1%

Licensee Comments: none

ERO Drill Participation



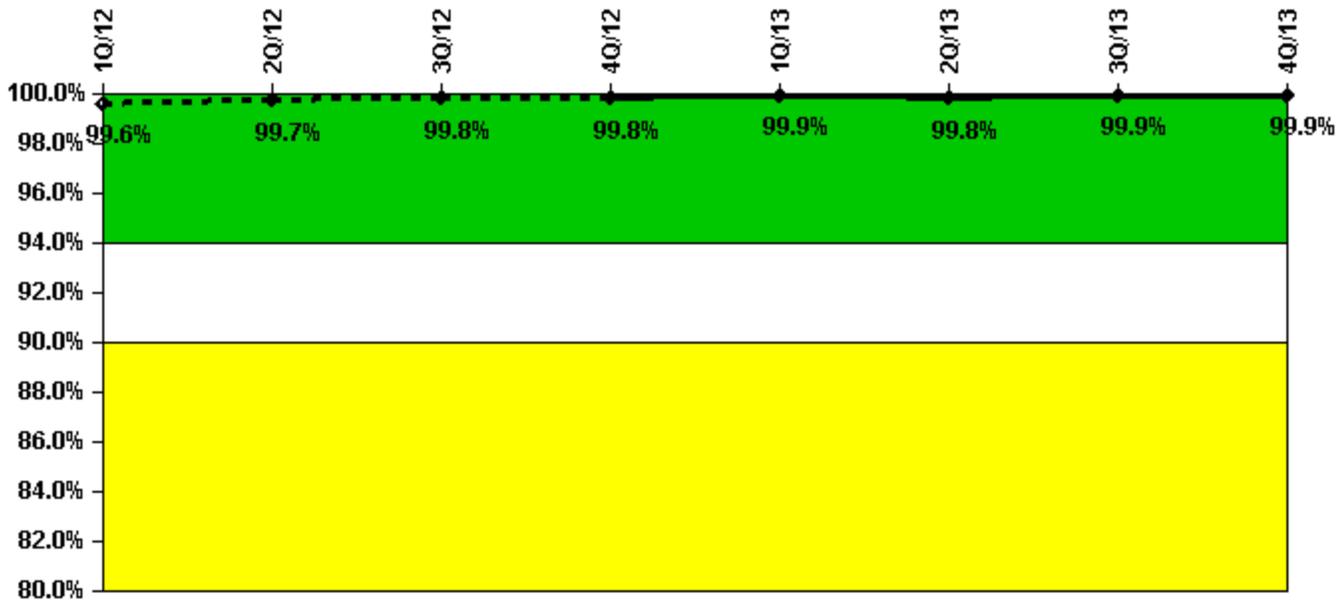
Thresholds: White < 80.0% Yellow < 60.0%

Notes

ERO Drill Participation	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13	2Q/13	3Q/13	4Q/13
Participating Key personnel	88.0	99.0	97.0	99.0	97.0	98.0	97.0	92.0
Total Key personnel	90.0	99.0	97.0	101.0	97.0	98.0	97.0	92.0
Indicator value	97.8%	100.0%	100.0%	98.0%	100.0%	100.0%	100.0%	100.0%

Licensee Comments: none

Alert & Notification System



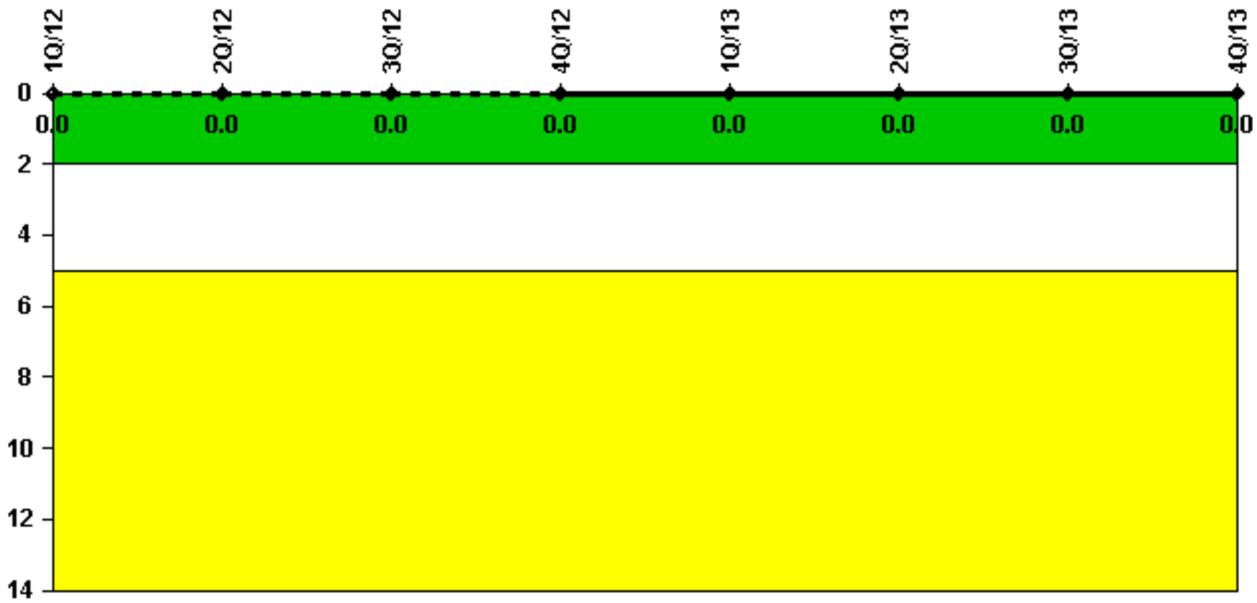
Thresholds: White < 94.0% Yellow < 90.0%

Notes

Alert & Notification System	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13	2Q/13	3Q/13	4Q/13
Successful siren-tests	863	864	861	753	978	889	1014	790
Total sirens-tests	864	864	864	755	978	890	1016	791
Indicator value	99.6%	99.7%	99.8%	99.8%	99.9%	99.8%	99.9%	99.9%

Licensee Comments: none

Occupational Exposure Control Effectiveness



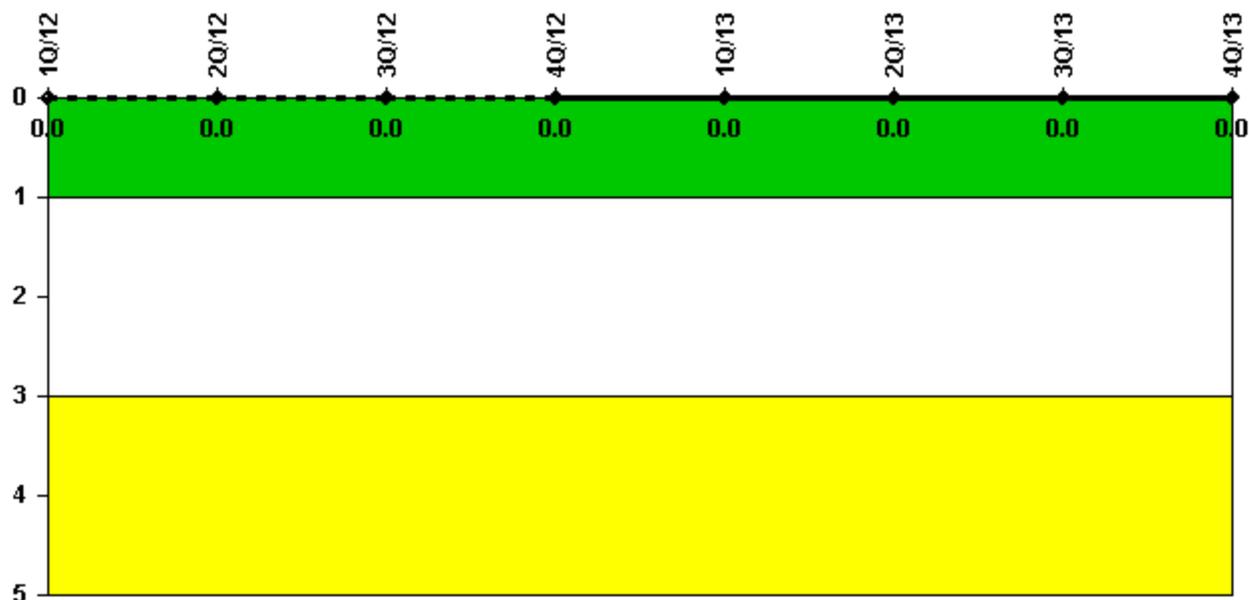
Thresholds: White > 2.0 Yellow > 5.0

Notes

Occupational Exposure Control Effectiveness	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13	2Q/13	3Q/13	4Q/13
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	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13	2Q/13	3Q/13	4Q/13
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: January 22, 2014