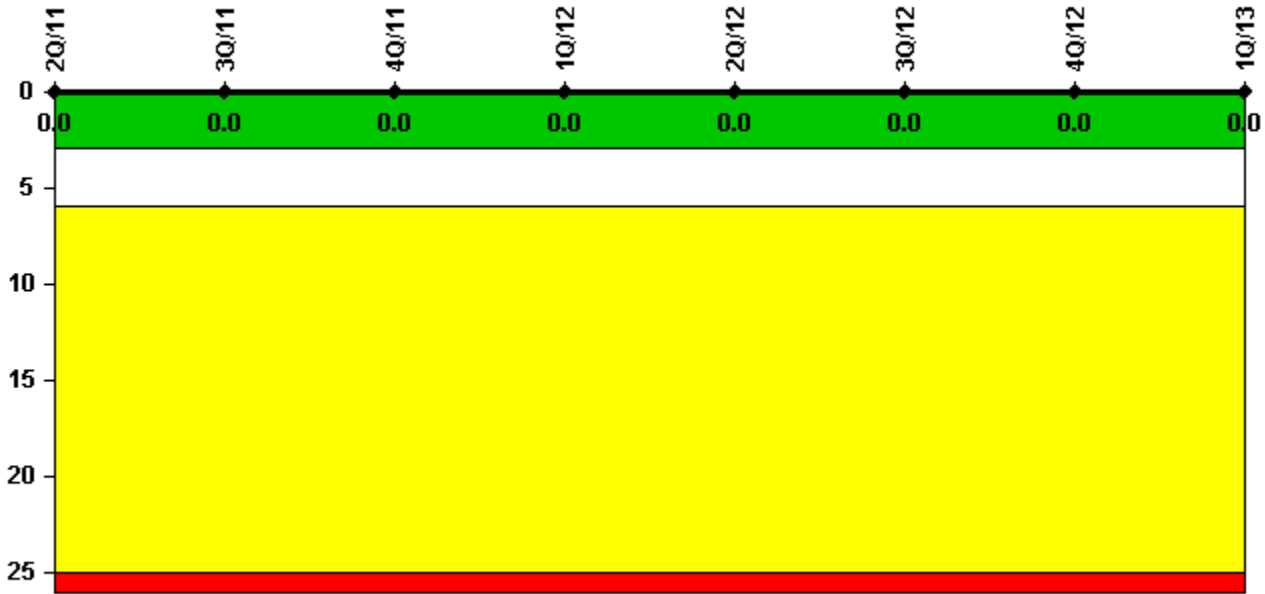


Kewaunee

2Q/2013 Performance Indicators

Licensee's General Comments: none

Unplanned Scrams per 7000 Critical Hrs



Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

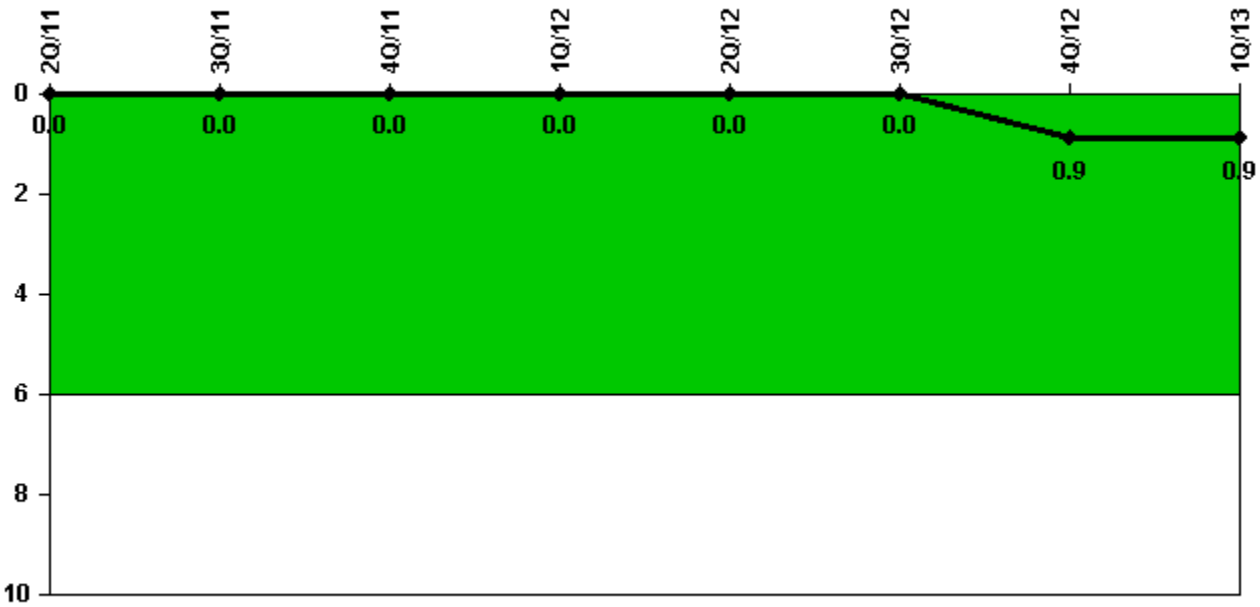
Notes

Unplanned Scrams per 7000 Critical Hrs	2Q/11	3Q/11	4Q/11	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13
Unplanned scrams	0	0	0	0	0	0	0	0
Critical hours	2184.0	2208.0	2209.0	2183.0	1384.3	2208.0	2209.0	2159.0
Indicator value	0	0	0	0	0	0	0	0

Licensee Comments:

2Q/12: The quantity of critical hours for April 2012 was calculated incorrectly and revised to actual in 2nd quarter 2012. The value has been changed from 121.83 hours to 120.52 hours. The change does not impact the color of any performance indicators. The error is documented in corrective action system under CR484764.

Unplanned Power Changes per 7000 Critical Hrs



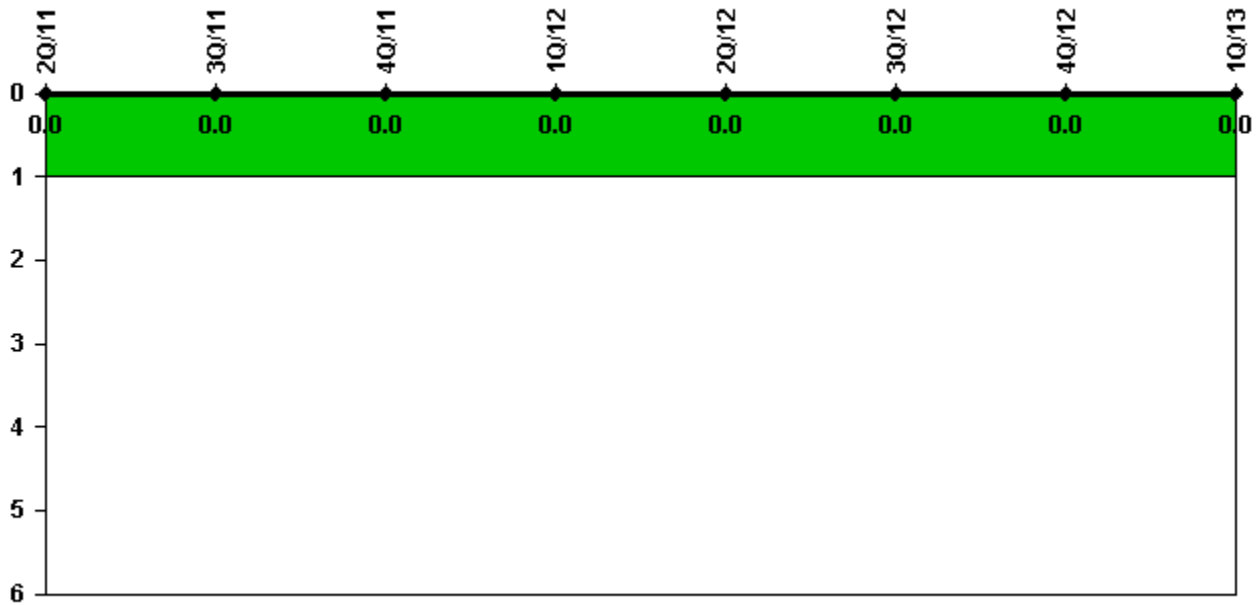
Thresholds: White > 6.0

Notes

Unplanned Power Changes per 7000 Critical Hrs	2Q/11	3Q/11	4Q/11	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13
Unplanned power changes	0	0	0	0	0	0	1.0	0
Critical hours	2184.0	2208.0	2209.0	2183.0	1384.3	2208.0	2209.0	2159.0
Indicator value	0	0	0	0	0	0	0.9	0.9

Licensee Comments: none

Unplanned Scrams with Complications



Thresholds: White > 1.0

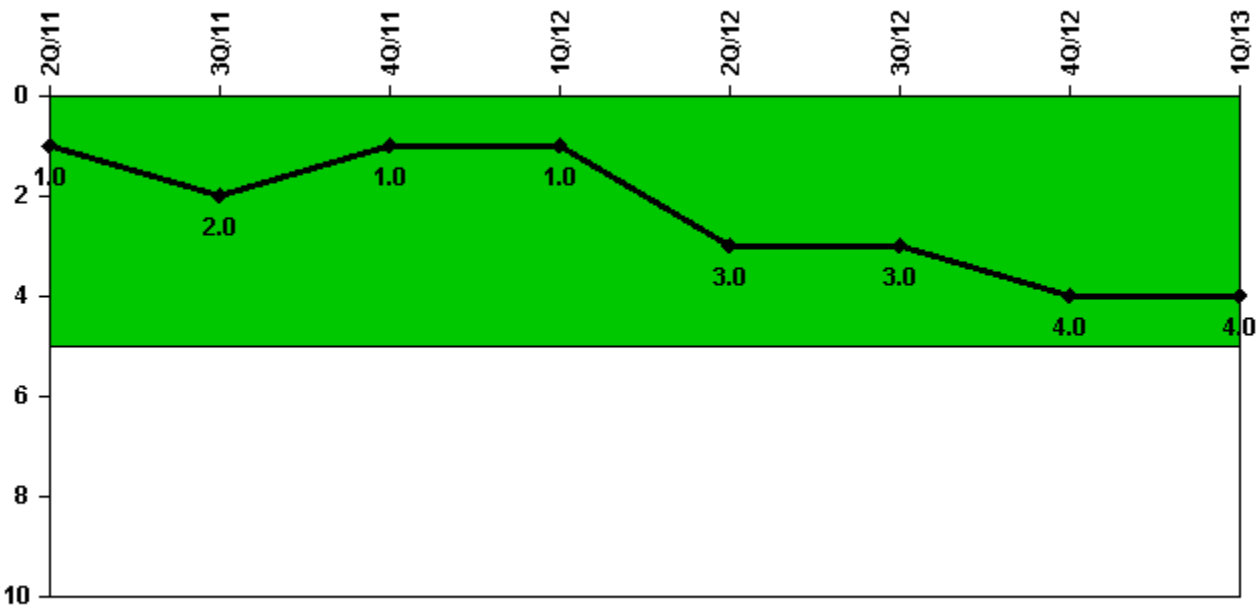
Notes

Unplanned Scrams with Complications	2Q/11	3Q/11	4Q/11	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13
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

Licensee Comments:

2Q/12: The quantity of critical hours for April 2012 was calculated incorrectly and revised to actual in 2nd quarter 2012. The value has been changed from 121.83 hours to 120.52 hours. The change does not impact the color of any performance indicators. The error is documented in corrective action system under CR484764.

Safety System Functional Failures (PWR)



Thresholds: White > 5.0

Notes

Safety System Functional Failures (PWR)	2Q/11	3Q/11	4Q/11	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13
Safety System Functional Failures	0	1	0	0	2	1	1	0
Indicator value	1	2	1	1	3	3	4	4

Licensee Comments:

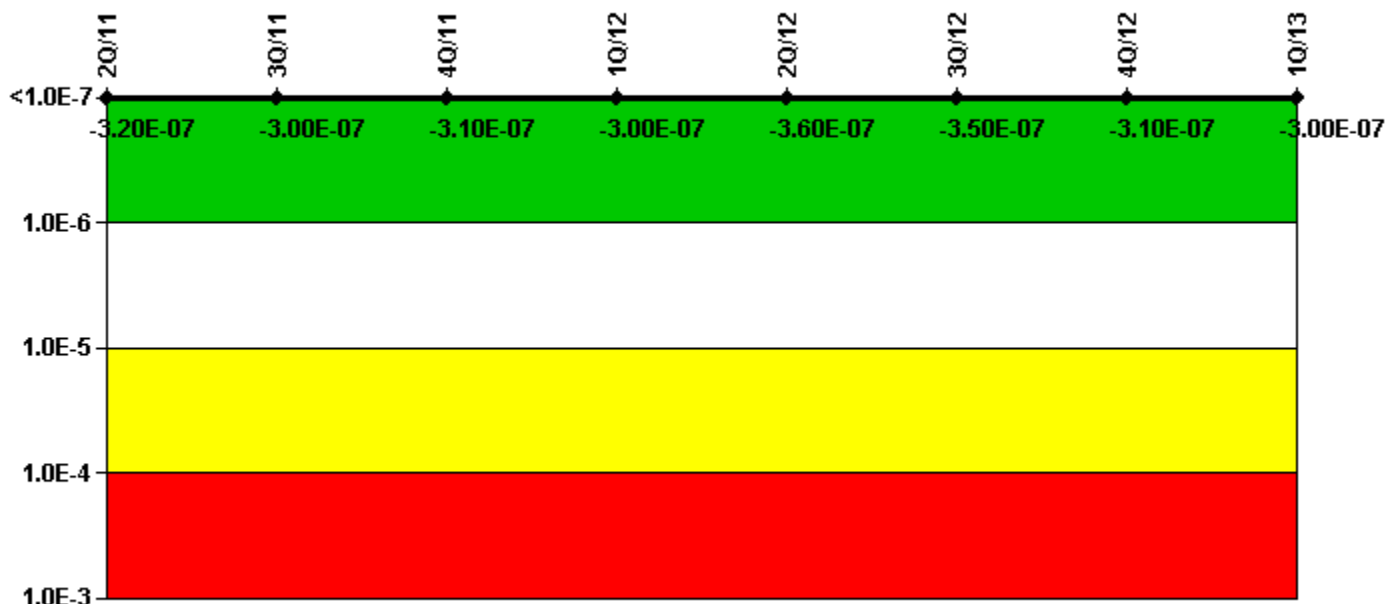
4Q/12: LER 2012-007-00; Minor Thru-Wall Leak at Weld in Safety Injection Suction Piping

3Q/12: LER 2012-005-00; Both Safety Injection Trains Inoperable Due to Venting

2Q/12: April: LER-2012-002-00 -- Safety Injection Inoperable for Longer Period Than Allowed by Technical Specifications. June: LER-2012-004-00 -- Pressure Boundary Leakage from Socket Weld on 3/4-Inch Pipe to Sample Valve RHR-600

3Q/11: LER 2011-005-00; Shield Building Ventilation Train Inoperable for Longer Period Than Allowed by Technical Specifications

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	2Q/11	3Q/11	4Q/11	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13
UAI (Δ CDF)	-6.82E-08	-6.65E-08	-6.65E-08	-6.15E-08	-6.15E-08	-6.15E-08	-6.15E-08	-6.15E-08
URI (Δ CDF)	-2.53E-07	-2.30E-07	-2.42E-07	-2.37E-07	-2.95E-07	-2.85E-07	-2.53E-07	-2.38E-07
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-3.20E-07	-3.00E-07	-3.10E-07	-3.00E-07	-3.60E-07	-3.50E-07	-3.10E-07	-3.00E-07

Licensee Comments:

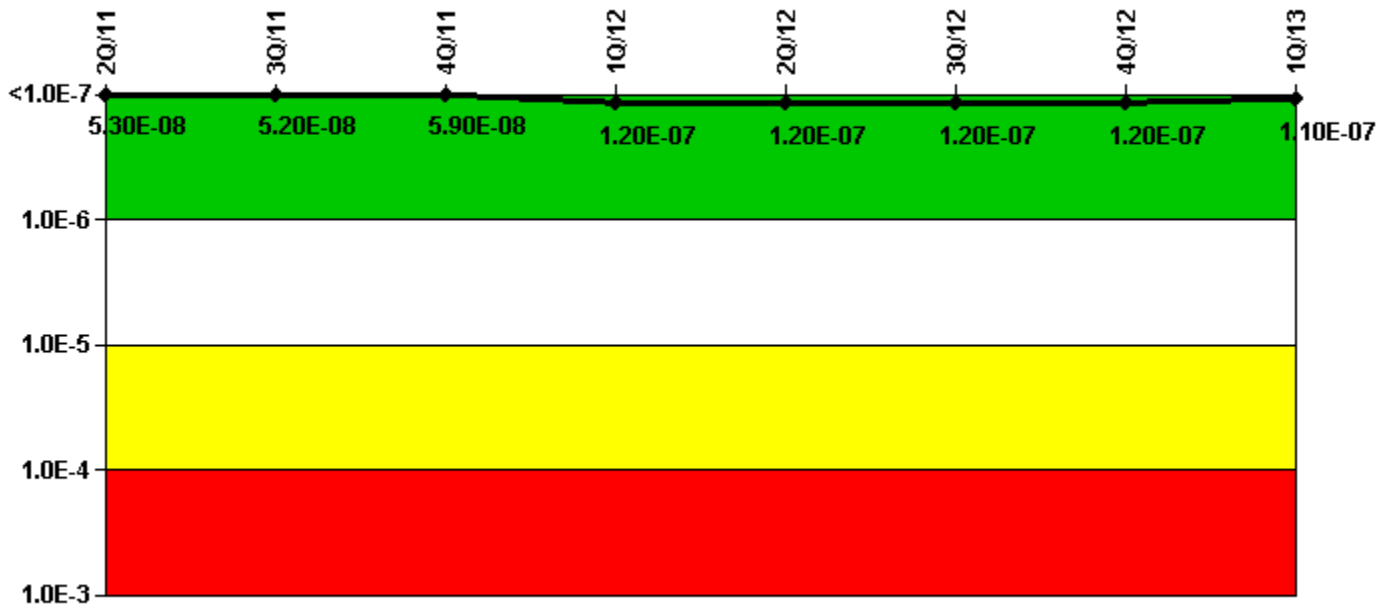
1Q/12: The MSPI Basis Document was revised in December 2011 for changes that became effective in 1st quarter 2012. New PRA coefficients were entered to reflect PRA model changes due to modifications to the AFW system and the move of EDG overhaul work to an on-line activity. The basis document was also revised to incorporate changes due to FAQs 480, 482 and 484.

4Q/11: MSPI Basis Document Update-- PRA coefficients were changed for first quarter 2012 to reflect a PRA model update made because the KPS EDG overhauls were moved from an outage activity to an on-line activity. This added 168 hours per train of baseline unavailability for the 36 month window to the model. This change is reflected in the basis document. The basis document was revised to reflect FAQs 480, 482 and 484.

2Q/11: The MSPI Basis document (Rev. 10) and PRA coefficients in CDE have been updated to reflect a modification to the AFW system that was performed during the spring refueling outage. The new PRA coefficients are based on PRA model K009A, and are documented in Dominion PRA Notebook KPS.RA.PR.1, Revision 4. The PRA coefficients for all systems were impacted by the changes to the PRA model. These changes are effective in

the third quarter of 2011.

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	2Q/11	3Q/11	4Q/11	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13
UAI (Δ CDF)	7.27E-08	7.08E-08	7.82E-08	3.25E-08	3.45E-08	3.29E-08	2.82E-08	2.02E-08
URI (Δ CDF)	-2.00E-08	-1.91E-08	-1.91E-08	8.96E-08	8.67E-08	8.81E-08	9.29E-08	9.29E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	5.30E-08	5.20E-08	5.90E-08	1.20E-07	1.20E-07	1.20E-07	1.20E-07	1.10E-07

Licensee Comments:

1Q/12: The MSPI Basis Document was revised in December 2011 for changes that became effective in 1st quarter 2012. New PRA coefficients were entered to reflect PRA model changes due to modifications to the AFW system and the move of EDG overhaul work to an on-line activity. The basis document was also revised to incorporate changes due to FAQs 480, 482 and 484.

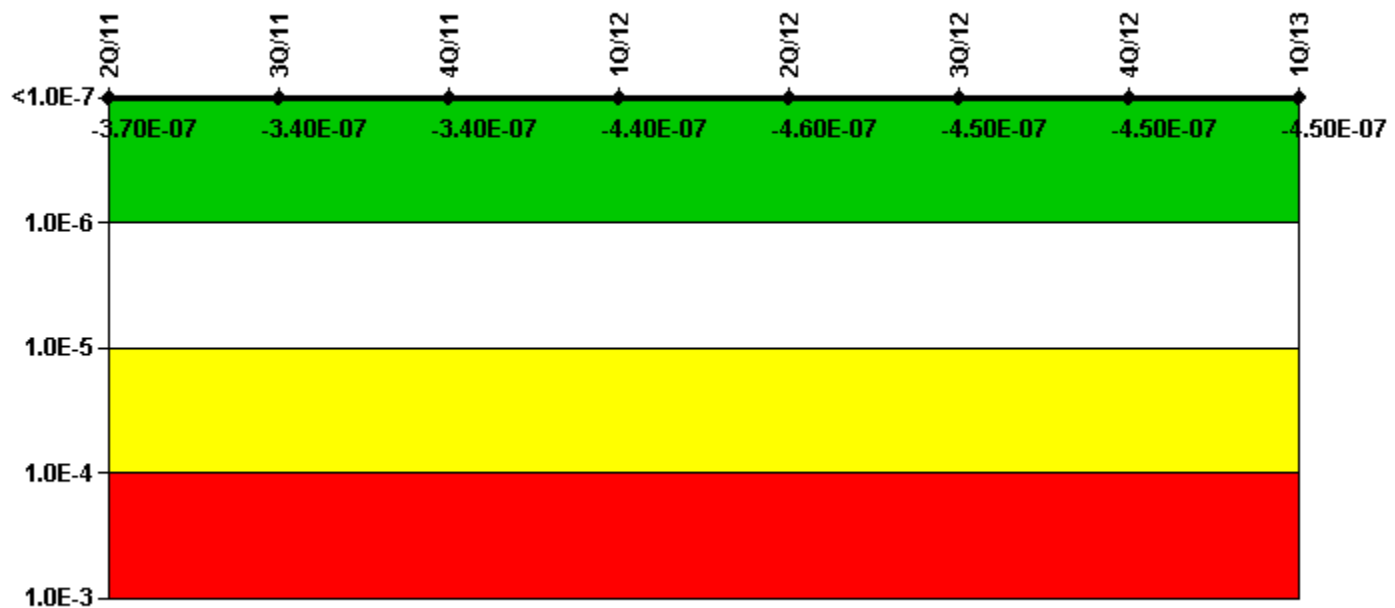
1Q/12: It was identified in 2nd QTR 2012 that a problem with an SI Pump breaker in 1st QTR 2012 should be counted as a failure of an MSPI component. The decision was based on off-site testing by a vendor that

determined the breaker may not be able to be re-closed after an initial closure and opening. The 1st quarter data was revised to include a demand failure for SI Pump B. The indicator remains green.

4Q/11: MSPI Basis Document Update-- PRA coefficients were changed for first quarter 2012 to reflect a PRA model update made because the KPS EDG overhauls were moved from an outage activity to an on-line activity. This added 168 hours per train of baseline unavailability for the 36 month window to the model. This change is reflected in the basis document. The basis document was revised to reflect FAQs 480, 482 and 484.

2Q/11: The MSPI Basis document (Rev. 10) and PRA coefficients in CDE have been updated to reflect a modification to the AFW system that was performed during the spring refueling outage. The new PRA coefficients are based on PRA model K009A, and are documented in Dominion PRA Notebook KPS.RA.PR.1, Revision 4. The PRA coefficients for all systems were impacted by the changes to the PRA model. These changes are effective in the third quarter of 2011.

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	2Q/11	3Q/11	4Q/11	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13
UAI (ΔCDF)	-5.89E-08	-6.76E-08	-6.80E-08	-7.47E-08	-7.96E-08	-9.02E-08	-8.81E-08	-9.11E-08
URI (ΔCDF)	-3.14E-07	-2.72E-07	-2.75E-07	-3.67E-07	-3.77E-07	-3.64E-07	-3.60E-07	-3.64E-07
PLE	NO	NO	NO	NO	NO	NO	NO	NO
	-3.70E-	-3.40E-	-3.40E-	-4.40E-	-4.60E-	-4.50E-	-4.50E-	-4.50E-

Indicator value	07	07	07	07	07	07	07
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Licensee Comments:

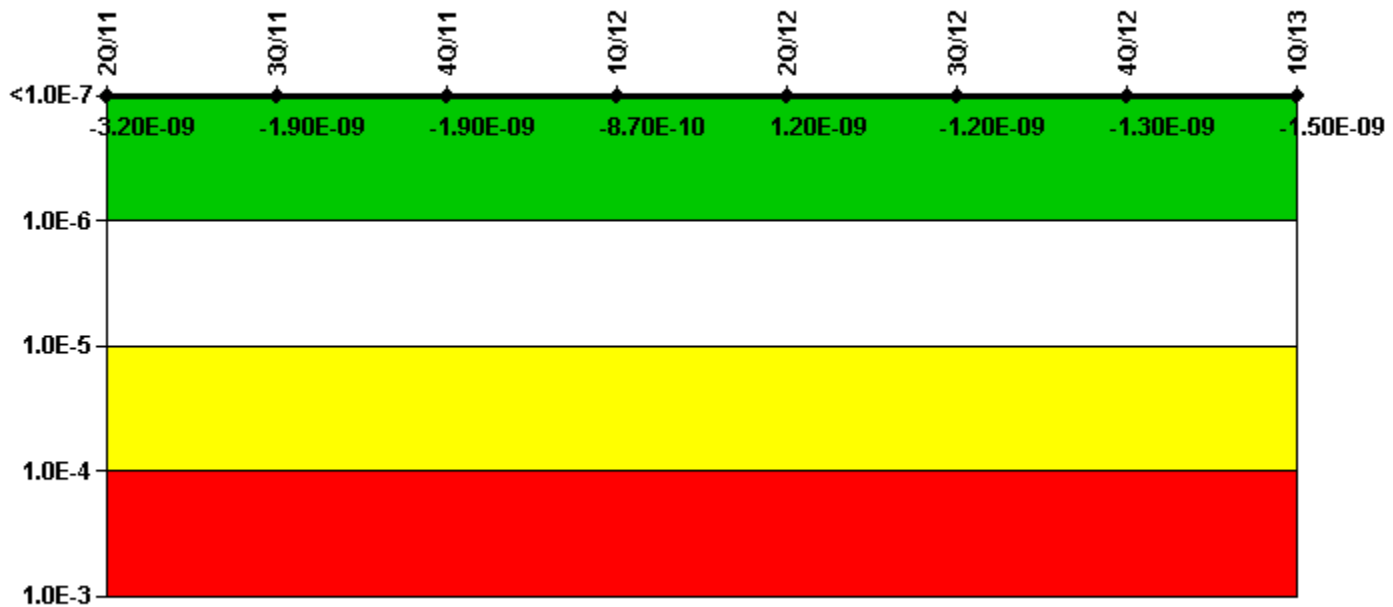
1Q/12: The MSPI Basis Document was revised in December 2011 for changes that became effective in 1st quarter 2012. New PRA coefficients were entered to reflect PRA model changes due to modifications to the AFW system and the move of EDG overhaul work to an on-line activity. The basis document was also revised to incorporate changes due to FAQs 480, 482 and 484.

4Q/11: MSPI Basis Document Update-- PRA coefficients were changed for first quarter 2012 to reflect a PRA model update made because the KPS EDG overhauls were moved from an outage activity to an on-line activity. This added 168 hours per train of baseline unavailability for the 36 month window to the model. This change is reflected in the basis document. The basis document was revised to reflect FAQs 480, 482 and 484.

2Q/11: 9-3-2011: Changed unplanned hours to planned hours. The train was already OOS for planned maintenance and testing. When the issue with the control switch was identified the station chose to replace the switch prior to returning the train to service. Evaluation of the control switch determined that it would not have prevented the AFW train from performing its function.

2Q/11: The MSPI Basis document (Rev. 10) and PRA coefficients in CDE have been updated to reflect a modification to the AFW system that was performed during the spring refueling outage. The new PRA coefficients are based on PRA model K009A, and are documented in Dominion PRA Notebook KPS.RA.PR.1, Revision 4. The changes to the AFW system included new crossover piping from each motor driven AFW pump to the opposite train steam generator which provides the capability to feed either of the two steam generators from either of the motor driven AFW pumps or the turbine driven AFW pump. The Birnbaum values for the motor driven AFW pumps discharge valves (AFW-2A and AFW-2B) dropped well below 1E-06, thus will no longer be monitored components. The PRA coefficients for all systems were impacted by the changes to the PRA model. These changes are effective in the third quarter of 2011.

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	2Q/11	3Q/11	4Q/11	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13
UAI (ΔCDF)	3.10E-09	2.67E-09	2.62E-09	3.11E-09	5.62E-09	2.90E-09	2.41E-09	2.04E-09
URI (ΔCDF)	-6.27E-09	-4.53E-09	-4.52E-09	-3.98E-09	-4.39E-09	-4.10E-09	-3.66E-09	-3.58E-09
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-3.20E-09	-1.90E-09	-1.90E-09	-8.70E-10	1.20E-09	-1.20E-09	-1.30E-09	-1.50E-09

Licensee Comments:

1Q/12: The MSPI Basis Document was revised in December 2011 for changes that became effective in 1st quarter 2012. New PRA coefficients were entered to reflect PRA model changes due to modifications to the AFW system and the move of EDG overhaul work to an on-line activity. The basis document was also revised to incorporate changes due to FAQs 480, 482 and 484.

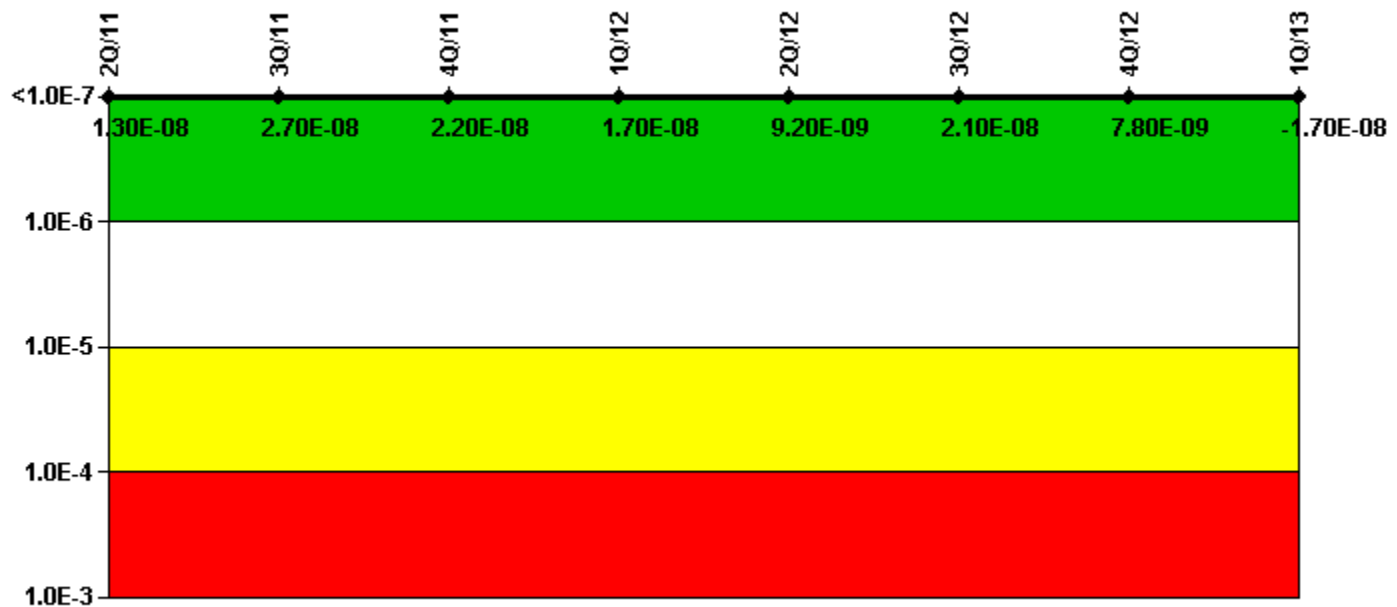
1Q/12: During review of reliability data in 2nd QTR of 2012 it was identified that demand starts for RHH sump recirculation valves SI-350B and SI-351B were missed in 1st QTR 2012. The data has been corrected. The indicator remains green.

4Q/11: MSPI Basis Document Update-- PRA coefficients were changed for first quarter 2012 to reflect a PRA model update made because the KPS EDG overhauls were moved from an outage activity to an on-line activity. This added 168 hours per train of baseline unavailability for the 36 month window to the model. This change is reflected in the basis document. The basis document was revised to reflect FAQs 480, 482 and 484.

2Q/11: The MSPI Basis document (Rev. 10) and PRA coefficients in CDE have been updated to reflect a

modification to the AFW system that was performed during the spring refueling outage. The new PRA coefficients are based on PRA model K009A, and are documented in Dominion PRA Notebook KPS.RA.PR.1, Revision 4. The PRA coefficients for all systems were impacted by the changes to the PRA model. These changes are effective in the third quarter of 2011.

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	2Q/11	3Q/11	4Q/11	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13
UAI (Δ CDF)	3.68E-08	5.06E-08	5.37E-08	4.44E-08	3.67E-08	4.82E-08	3.45E-08	1.01E-08
URI (Δ CDF)	-2.40E-08	-2.40E-08	-3.13E-08	-2.71E-08	-2.74E-08	-2.69E-08	-2.67E-08	-2.69E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	1.30E-08	2.70E-08	2.20E-08	1.70E-08	9.20E-09	2.10E-08	7.80E-09	-1.70E-08

Licensee Comments:

2Q/12: The quantity of critical hours for April 2012 was calculated incorrectly and revised to actual in 2nd quarter 2012. The value has been changed from 121.83 hours to 120.52 hours. The change does not impact the color of any performance indicators. The error is documented in corrective action system under CR484764.

1Q/12: Changed PRA Parameter(s). The MSPI Basis Document was revised in December 2011 for changes that became effective in 1st quarter 2012. New PRA coefficients were entered to reflect PRA model changes due to modifications to the AFW system and the move of EDG overhaul work to an on-line activity. The basis document was also revised to incorporate changes due to FAQs 480, 482 and 484.

4Q/11: MSPI Basis Document Update-- PRA coefficients were changed for first quarter 2012 to reflect a PRA model update made because the KPS EDG overhauls were moved from an outage activity to an on-line activity. This added 168 hours per train of baseline unavailability for the 36 month window to the model. This change is reflected in the basis document. The basis document was revised to reflect FAQs 480, 482 and 484.

4Q/11: Changed PRA Parameter(s).

4Q/11: Changed PRA Parameter(s). A data transposition error in CDE was identified and corrected in February 2012 for the PRA coefficients for component cooling water pump B unavailability event. The incorrect values were new as of 1st Quarter 2012 and were corrected in 1st Quarter 2012, therefore there was no impact on the green indicator color. Reliability data was revised for SW in December 2010, January 2011 and March 2011. Reliability data was revised for AFW in September 2009 and March 2011. Each of these changes was due to identification of differences in recorded values between two trains of the station sequential events recorder as documented in condition report CR458739. None of the changes resulted in the color of the indicator changing from green. Due to planned replacement of SW and CCW pumps in 2009, 2010 and 2011, the device records were revised to document the out-of-service and in-service date and times for the pumps. This required re-entry of the reliability data and PRA coefficients. An extensive change record is generated due to re-entry of the data, but no changes were made to the data. Thus, no changes were made that impact the color of the MSPI performance indicators.

3Q/11: There were 3.75 hours of Service Water (SW) out of service (OOS) time on 9/12/2011 that did not need to be counted for the SW system. The unavailability had been taken because the activity limited the ability to isolate the two trains of SW from each other, which is the safety related position. It was later found that the redundant train isolatin valve was closed during the entire activity, thus meeting the functional requirements. Removal of the 3.75 hours of unavailabiity for 3rd quarter 2011 did not impact te green color rating of the system.

3Q/11: Changed PRA Parameter(s). A data transposition error in CDE was identified and corrected in February 2012 for the PRA coefficients for component cooling water pump B unavailability event. The incorrect values were new as of 1st Quarter 2012 and were corrected in 1st Quarter 2012, therefore there was no impact on the green indicator color. Reliability data was revised for SW in December 2010, January 2011 and March 2011. Reliability data was revised for AFW in September 2009 and March 2011. Each of these changes was due to identification of differences in recorded values between two trains of the station sequential events recorder as documented in condition report CR458739. None of the changes resulted in the color of the indicator changing from green. Due to planned replacement of SW and CCW pumps in 2009, 2010 and 2011, the device records were revised to document the out-of-service and in-service date and times for the pumps. This required re-entry of the reliability data and PRA coefficients. An extensive change record is generated due to re-entry of the data, but no changes were made to the data. Thus, no changes were made that impact the color of the MSPI performance indicators.

3Q/11: Changed PRA Parameter(s).

2Q/11: The MSPI Basis document (Rev. 10) and PRA coefficients in CDE have been updated to reflect a modification to the AFW system that was performed during the spring refueling outage. The new PRA coefficients are based on PRA model K009A, and are documented in Dominion PRA Notebook KPS.RA.PR.1, Revision 4. The PRA coefficients for all systems were impacted by the changes to the PRA model. These changes are effective in the third quarter of 2011.

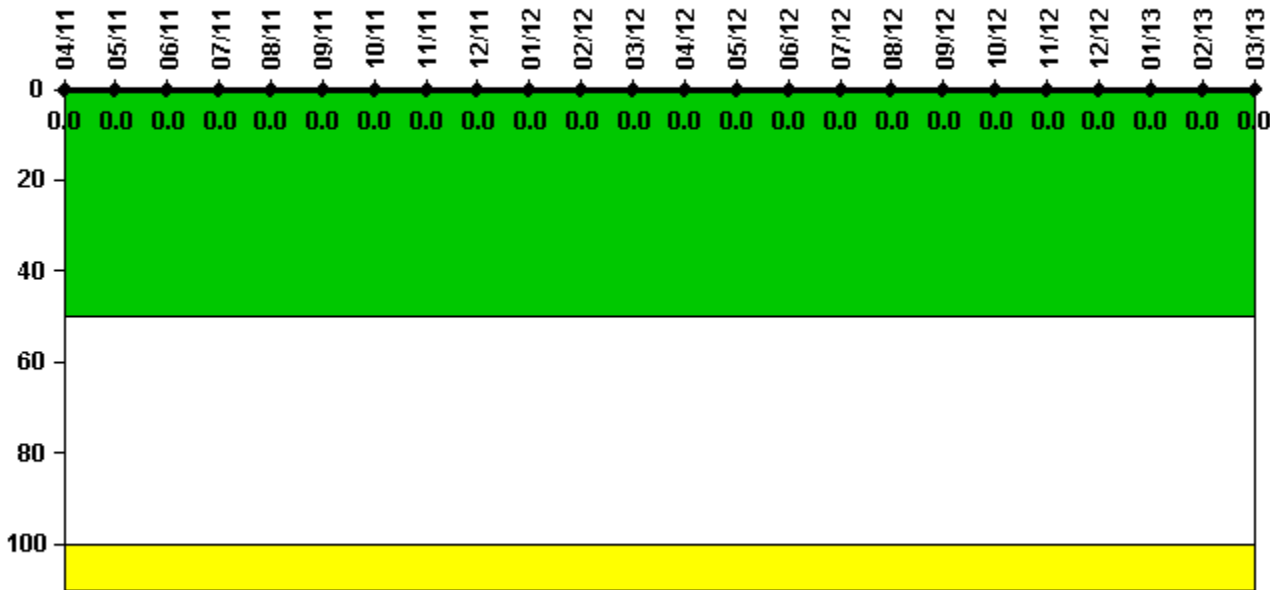
2Q/11: Changed PRA Parameter(s). A data transposition error in CDE was identified and corrected in February 2012 for the PRA coefficients for component cooling water pump B unavailability event. The incorrect values were new as of 1st Quarter 2012 and were corrected in 1st Quarter 2012, therefore there was no impact on the green indicator color. Reliability data was revised for SW in December 2010, January 2011 and March 2011. Reliability data was revised for AFW in September 2009 and March 2011. Each of these changes was due to identification of

differences in recorded values between two trains of the station sequential events recorder as documented in condition report CR458739. None of the changes resulted in the color of the indicator changing from green. Due to planned replacement of SW and CCW pumps in 2009, 2010 and 2011, the device records were revised to document the out-of-service and in-service date and times for the pumps. This required re-entry of the reliability data and PRA coefficients. An extensive change record is generated due to re-entry of the data, but no changes were made to the data. Thus, no changes were made that impact the color of the MSPI performance indicators.

2Q/11: One previously unidentified demand was added to May reliability data for monitored component SW-1306B. This change did not change the green color rating for the cooling water support system.

2Q/11: Changed PRA Parameter(s).

Reactor Coolant System Activity



Thresholds: White > 50.0 Yellow > 100.0

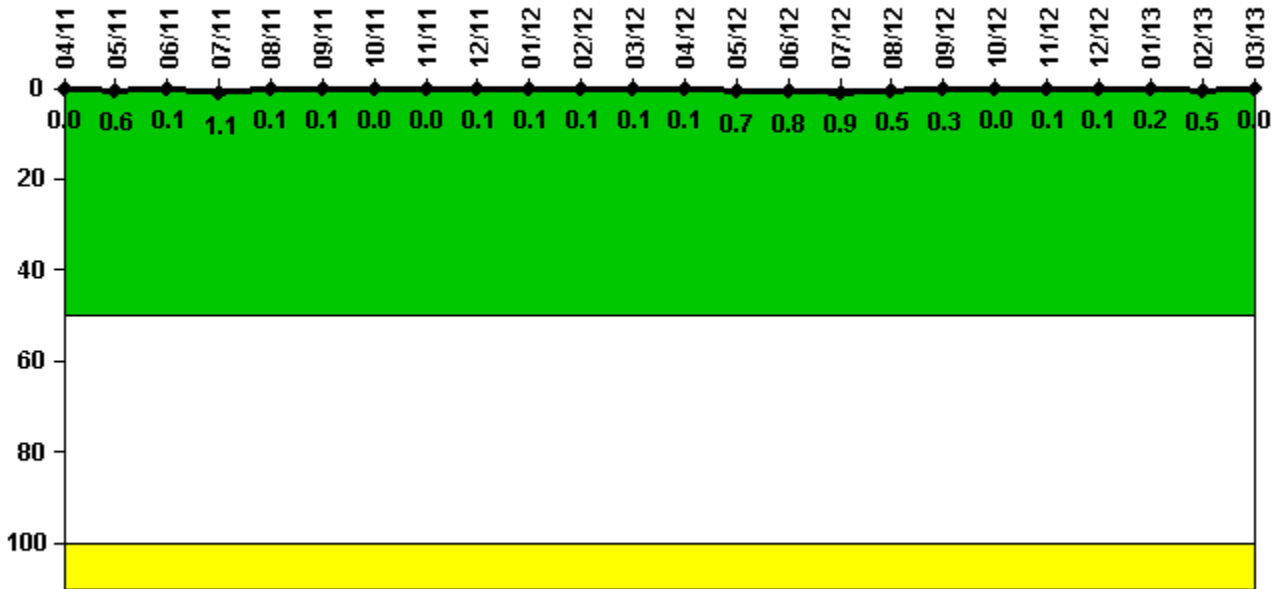
Notes

Reactor Coolant System Activity	4/11	5/11	6/11	7/11	8/11	9/11	10/11	11/11	12/11	1/12	2/12	3/12
Maximum activity	0.000098	0.000097	0.000108	0.000106	0.000096	0.000099	0.000097	0.000112	0.000102	0.000109	0.000104	0.000107
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	4/12	5/12	6/12	7/12	8/12	9/12	10/12	11/12	12/12	1/13	2/13	3/13
Maximum activity	0.000094	0.000238	0.000046	0.000049	0.000044	0.000052	0.000060	0.000067	0.000066	0.000062	0.000067	0.000069
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

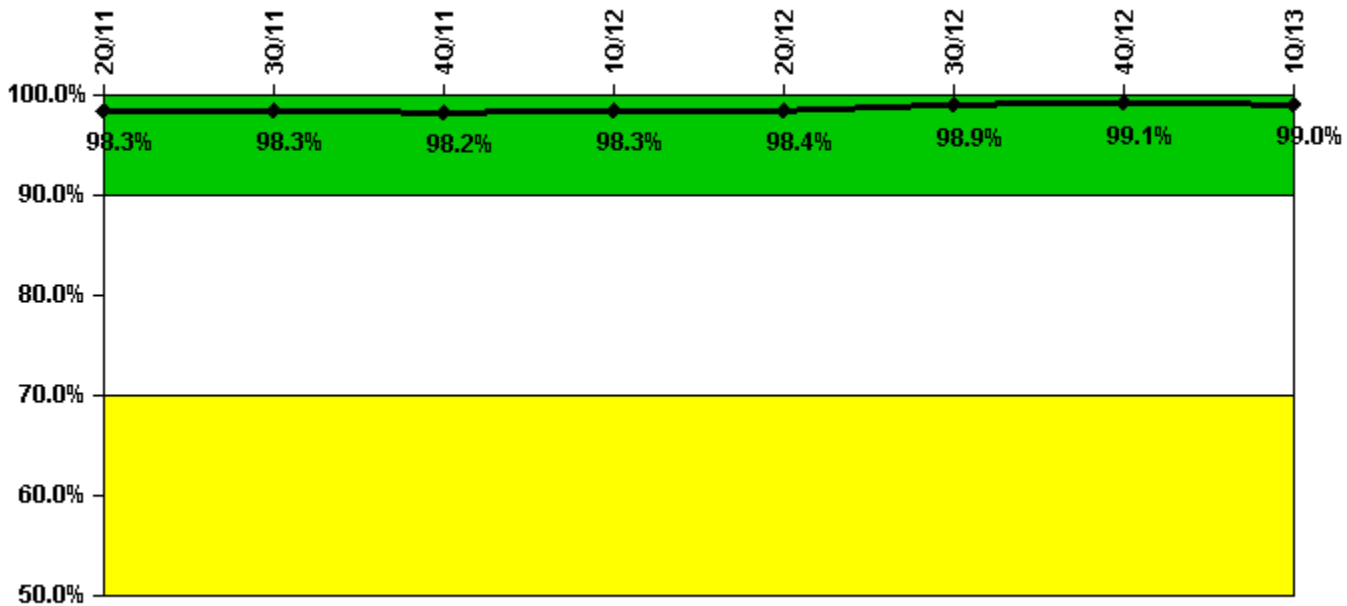
Reactor Coolant System Leakage	4/11	5/11	6/11	7/11	8/11	9/11	10/11	11/11	12/11	1/12	2/12	3/12
Maximum leakage	0.003	0.058	0.014	0.106	0.012	0.009	0.003	0.003	0.007	0.007	0.007	0.008
Technical specification limit	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Indicator value	0	0.6	0.1	1.1	0.1	0.1	0	0	0.1	0.1	0.1	0.1

Reactor Coolant System Leakage	4/12	5/12	6/12	7/12	8/12	9/12	10/12	11/12	12/12	1/13	2/13	3/13
Maximum leakage	0.013	0.068	0.075	0.085	0.048	0.027	0.002	0.008	0.013	0.018	0.052	0.002
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	0.1	0.7	0.8	0.9	0.5	0.3	0	0.1	0.1	0.2	0.5	0

Licensee Comments:

6/12: The RCS Identified Leakrate value for April 2012 was changed from 0.034 gpm to 0.0134 gpm in order to correct a data entry problem. The indicator remains Green. The issue was documented in the corrective action program in CR498692.

Drill/Exercise Performance



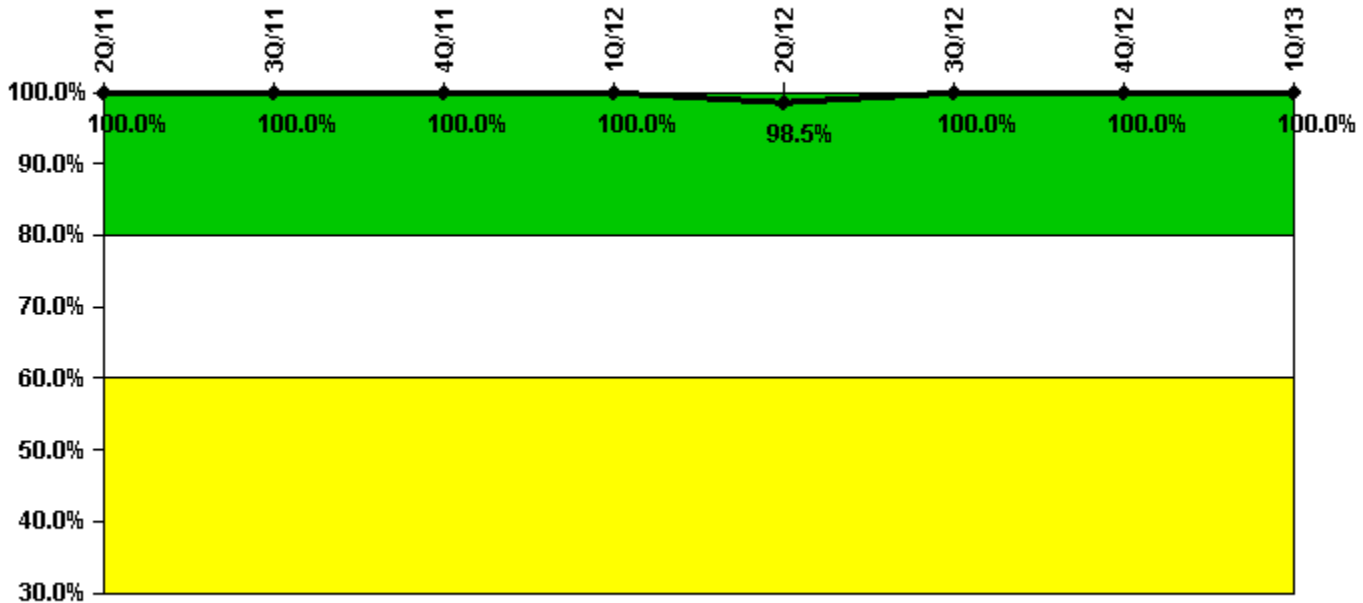
Thresholds: White < 90.0% Yellow < 70.0%

Notes

Drill/Exercise Performance	2Q/11	3Q/11	4Q/11	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13
Successful opportunities	43.0	71.0	82.0	26.0	29.0	25.0	5.0	9.0
Total opportunities	44.0	72.0	83.0	26.0	29.0	25.0	5.0	9.0
Indicator value	98.3%	98.3%	98.2%	98.3%	98.4%	98.9%	99.1%	99.0%

Licensee Comments: none

ERO Drill Participation



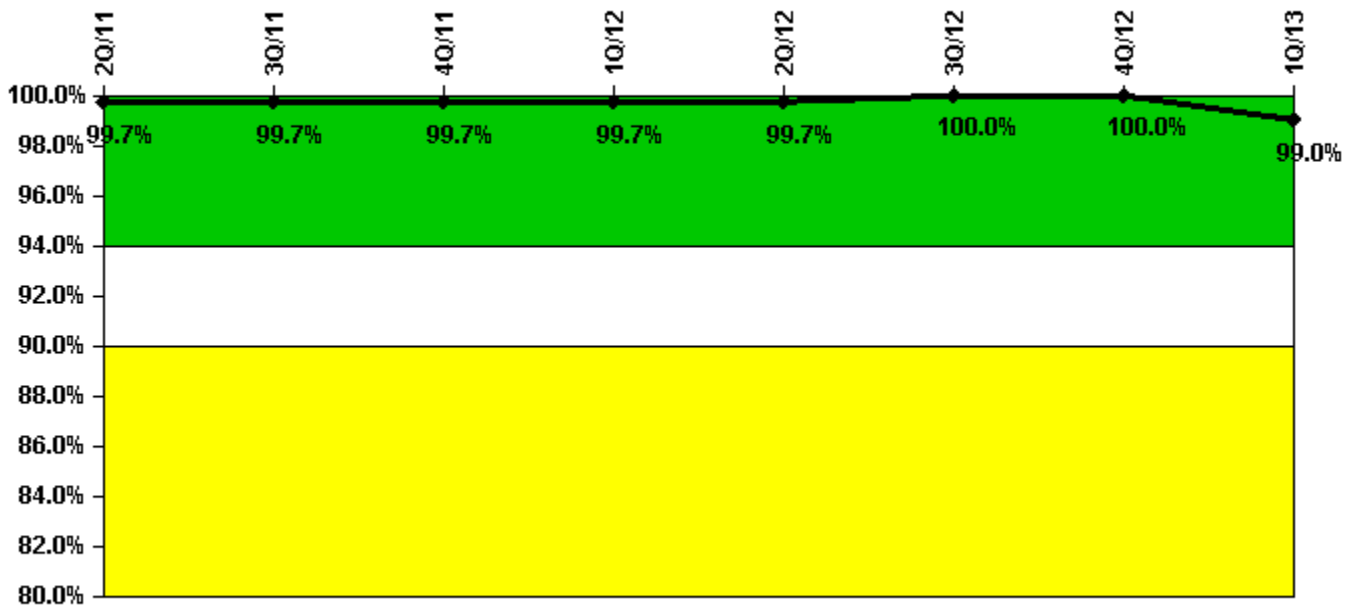
Thresholds: White < 80.0% Yellow < 60.0%

Notes

ERO Drill Participation	2Q/11	3Q/11	4Q/11	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13
Participating Key personnel	63.0	63.0	67.0	67.0	67.0	63.0	65.0	67.0
Total Key personnel	63.0	63.0	67.0	67.0	68.0	63.0	65.0	67.0
Indicator value	100.0%	100.0%	100.0%	100.0%	98.5%	100.0%	100.0%	100.0%

Licensee Comments: none

Alert & Notification System



Thresholds: White < 94.0% Yellow < 90.0%

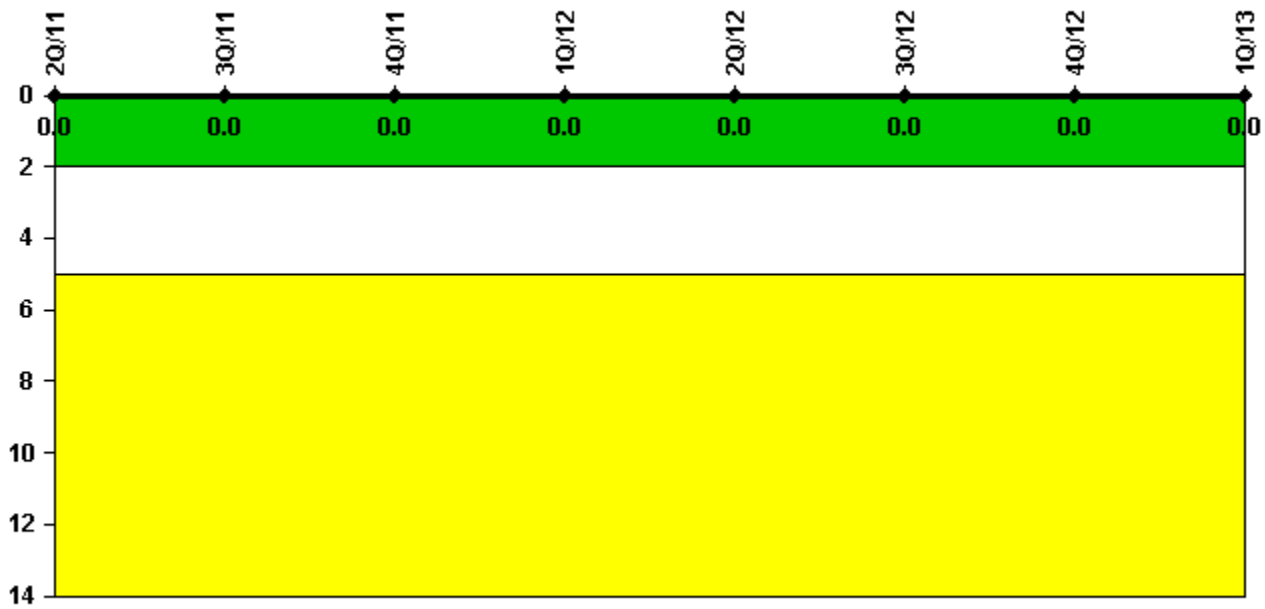
Notes

Alert & Notification System	2Q/11	3Q/11	4Q/11	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13
Successful siren-tests	78	77	78	78	78	78	78	75
Total sirens-tests	78	78	78	78	78	78	78	78
Indicator value	99.7%	99.7%	99.7%	99.7%	99.7%	100.0%	100.0%	99.0%

Licensee Comments:

4Q/11: On October 4, 2011, Kewaunee Power Station implemented it's new FEMA approved Siren System.

Occupational Exposure Control Effectiveness



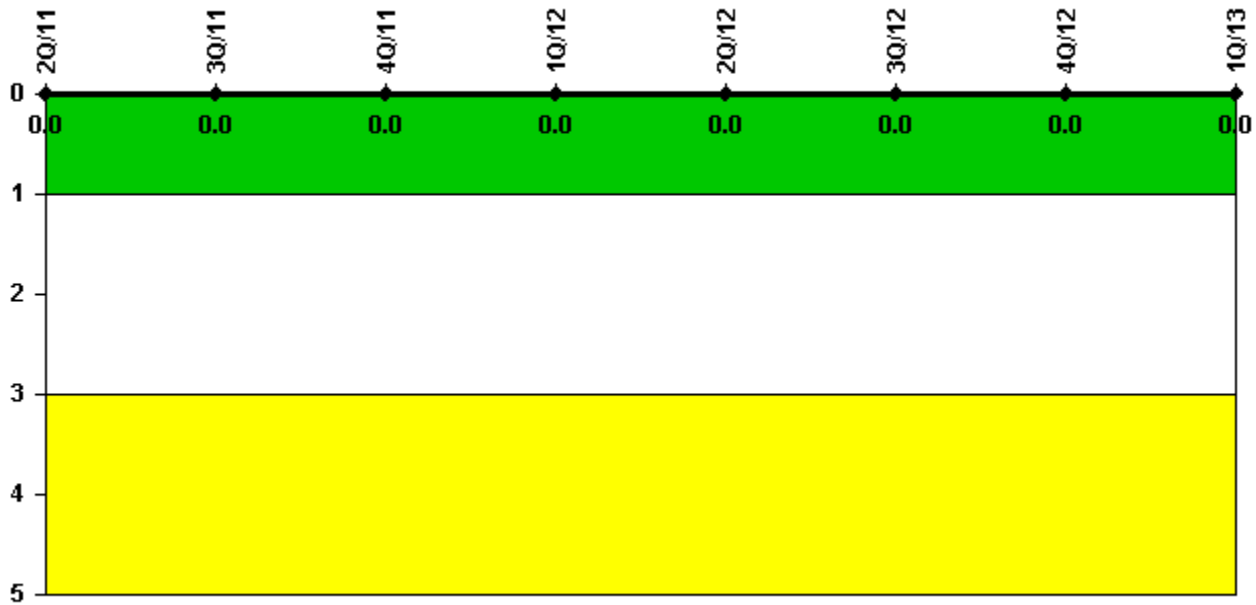
Thresholds: White > 2.0 Yellow > 5.0

Notes

Occupational Exposure Control Effectiveness	2Q/11	3Q/11	4Q/11	1Q/12	2Q/12	3Q/12	4Q/12	1Q/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	0	0	0	0	0	0	0

Licensee Comments: none

RETS/ODCM Radiological Effluent



Thresholds: White > 1.0 Yellow > 3.0

Notes

RETS/ODCM Radiological Effluent	2Q/11	3Q/11	4Q/11	1Q/12	2Q/12	3Q/12	4Q/12	1Q/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: August 5, 2013