

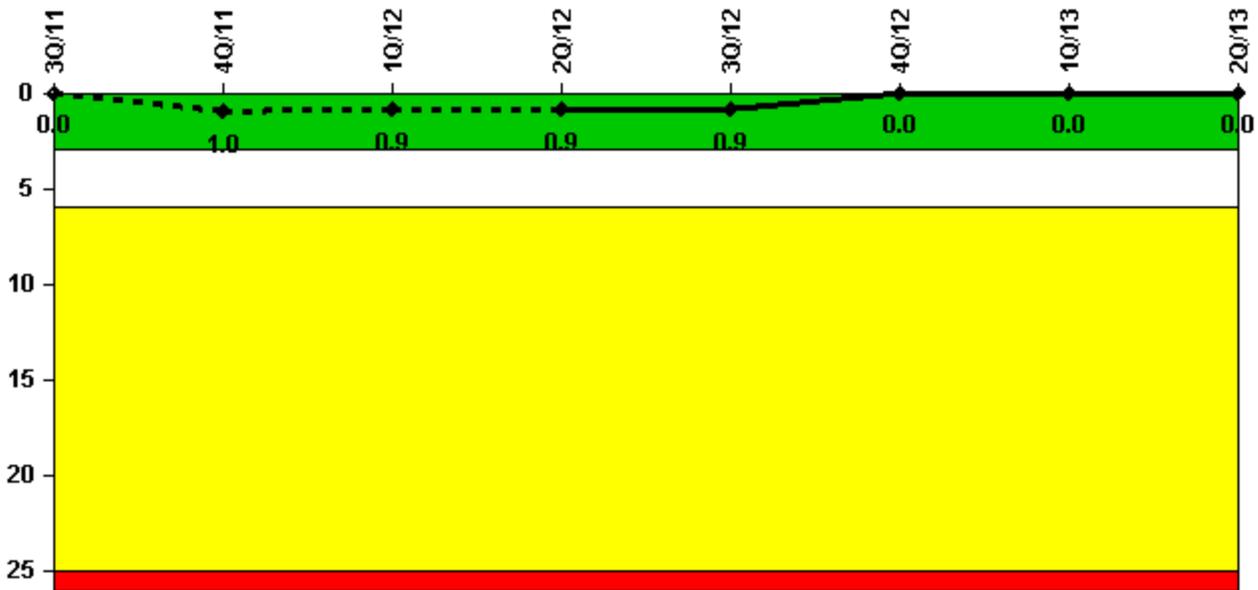
Brunswick 2

2Q/2013 Performance Indicators

The solid trend line represents the current reporting period.

Licensee's General Comments: none

Unplanned Scrams per 7000 Critical Hrs



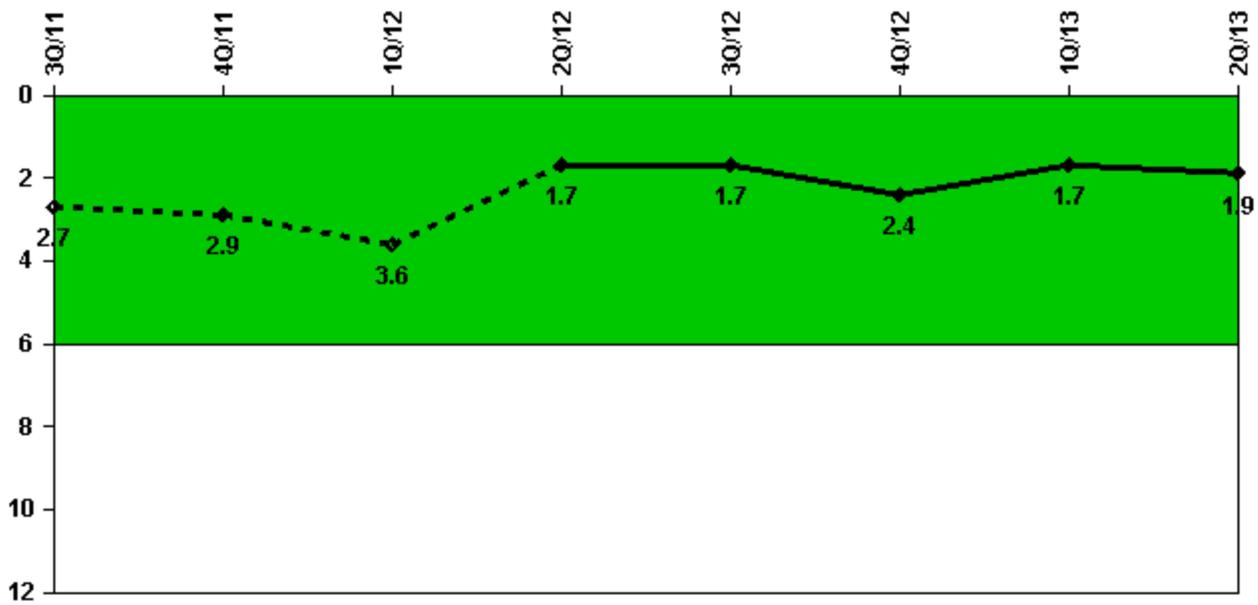
Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

Notes

Unplanned Scrams per 7000 Critical Hrs	3Q/11	4Q/11	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13	2Q/13
Unplanned scrams	0	1.0	0	0	0	0	0	0
Critical hours	2208.0	1605.1	2183.0	2184.0	2208.0	2209.0	1460.9	1353.3
Indicator value	0	1.0	0.9	0.9	0.9	0	0	0

Licensee Comments: none

Unplanned Power Changes per 7000 Critical Hrs



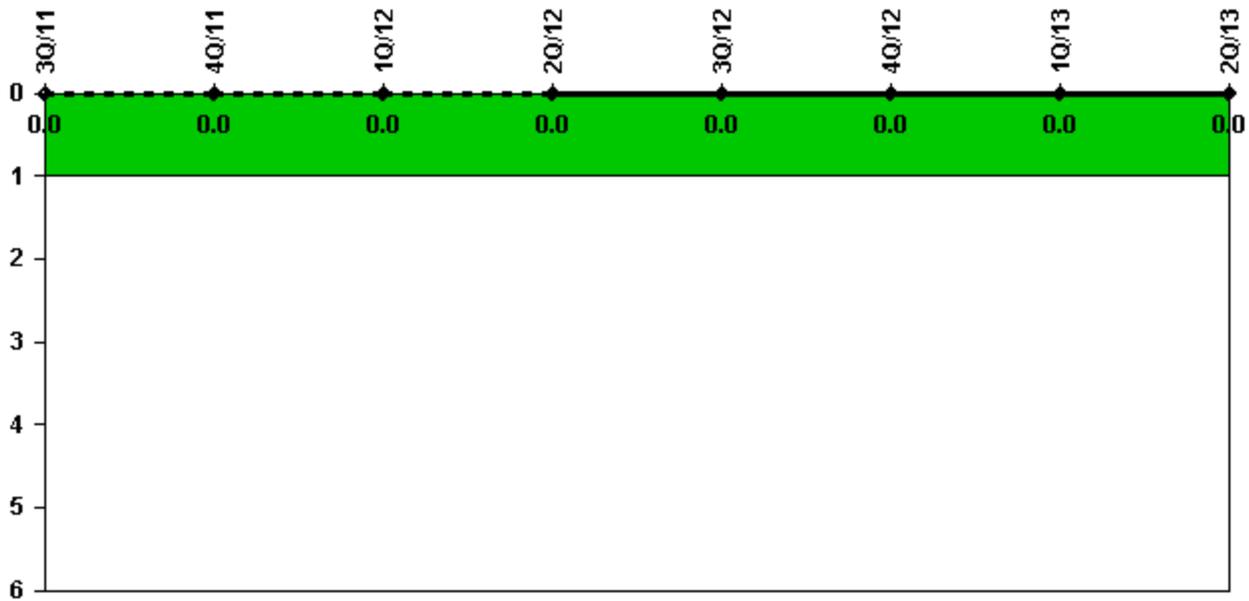
Thresholds: White > 6.0

Notes

Unplanned Power Changes per 7000 Critical Hrs	3Q/11	4Q/11	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13	2Q/13
Unplanned power changes	0	1.0	1.0	0	0	2.0	0	0
Critical hours	2208.0	1605.1	2183.0	2184.0	2208.0	2209.0	1460.9	1353.3
Indicator value	2.7	2.9	3.6	1.7	1.7	2.4	1.7	1.9

Licensee Comments: none

Unplanned Scrams with Complications



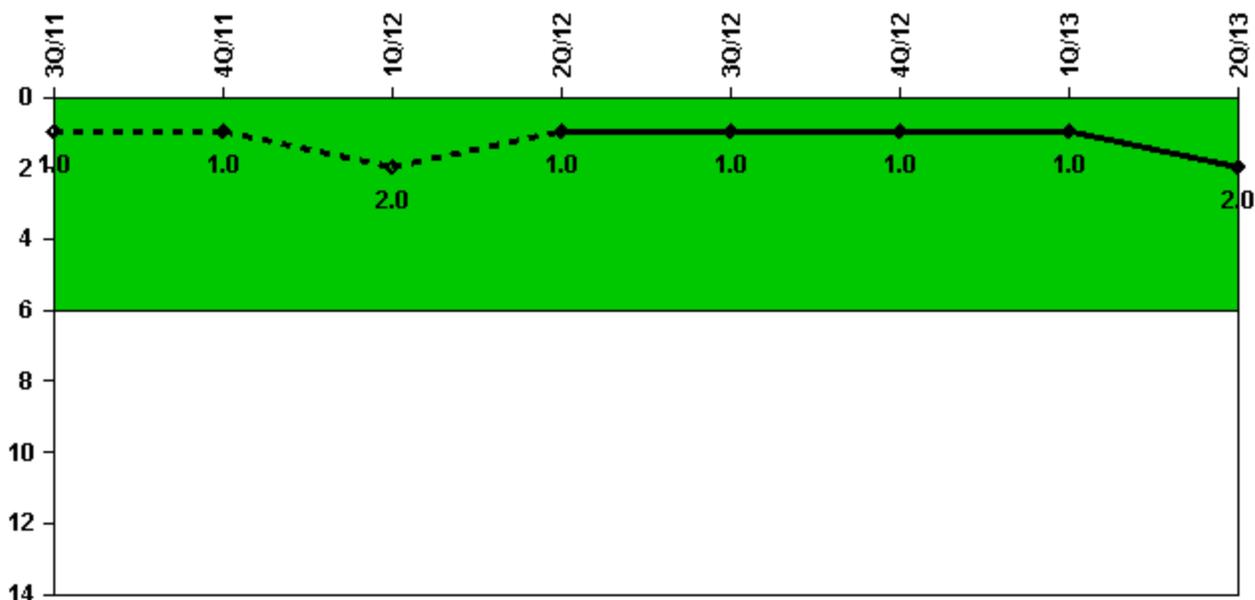
Thresholds: White > 1.0

Notes

Unplanned Scrams with Complications	3Q/11	4Q/11	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13	2Q/13
Scrams with complications	0	0	0	0	0	0	0	0
Indicator value	0.0							

Licensee Comments: none

Safety System Functional Failures (BWR)



Thresholds: White > 6.0

Notes

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

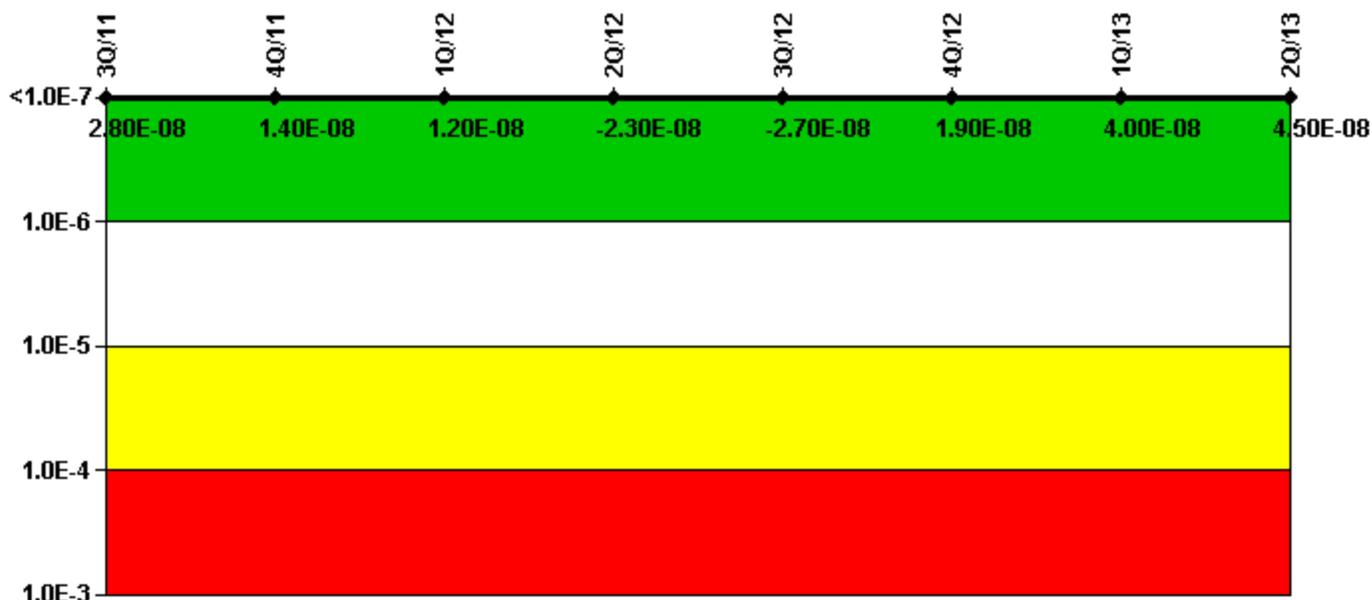
Licensee Comments:

2Q/13: LER 2-2013-002 was submitted on May 28, 2013, for loss of safety function due to the A Loop of RHR being declared inoperable when a valve was discovered with broken yoke-to-bonnet stud, while the B Loop was inoperable due to scheduled maintenance.

1Q/13: LER 1-2012-007 was submitted on February 12, 2013, for an MSPI Safety System Functional Failure (SSFF) that occurred on Unit 1 and Unit 2 for the loss of Control Room Emergency Ventilation (CREV). The loss of CREV occurred due to a human performance error during implementation of a plant modification. It is applicable to both Units since Brunswick has a shared control room.

1Q/12: LER 1-2011-003 was submitted on January 30, 2012, for loss of Control Room Air Conditioning and Emergency Ventilation (CREV) due to failure of the control building instrument air dryer.

Mitigating Systems Performance Index, Emergency AC Power System



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

Notes

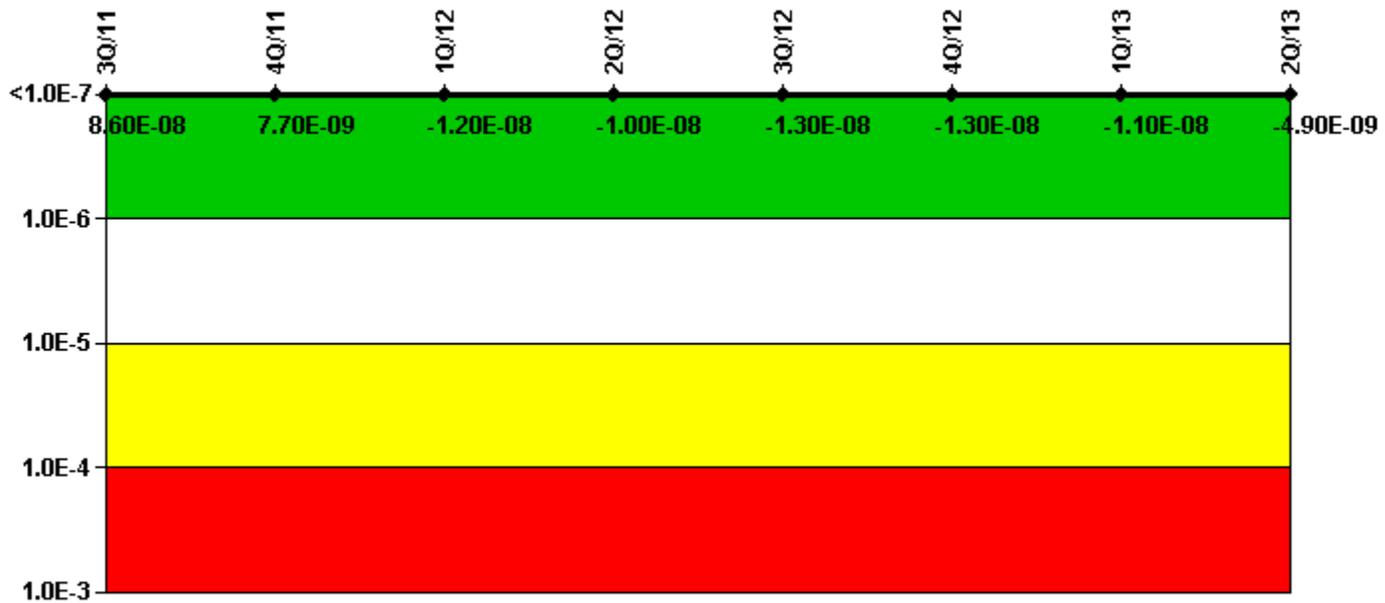
Mitigating Systems Performance Index, Emergency AC Power System	3Q/11	4Q/11	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13	2Q/13
UAI (Δ CDF)	1.25E-09	4.27E-09	1.09E-09	2.46E-09	-4.61E-09	1.48E-09	2.10E-08	2.42E-08
URI (Δ CDF)	2.68E-08	9.61E-09	1.12E-08	-2.56E-08	-2.21E-08	1.79E-08	1.92E-08	2.05E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	2.80E-08	1.40E-08	1.20E-08	-2.30E-08	-2.70E-08	1.90E-08	4.00E-08	4.50E-08

Licensee Comments:

1Q/12: The emergency diesel generators run time hours were revised to incorporate NRC approved FAQ 480. The run time hours decreased, and were entered as estimated beginning in the first quarter of 2012. The Brunswick MSPI Basis Document was revised in the 4th quarter of 2011.

4Q/11: Changed PRA Parameter(s). Changes to Brunswick's plant-specific PRA were made resulting in new MSPI coefficients entered into CDE effective for the 4th quarter of 2011. Model changes included updating accident sequences for loss of offsite power analysis, providing more detailed common cause methods for component failures, changes to data related to component failures was updated to currently available data, and the human reliability analysis was updated to use the industry standard database. The plant-specific PRA and MSPI Basis Document were updated in the 3rd quarter and the 4th quarter of 2011, respectively.

Mitigating Systems Performance Index, High Pressure Injection System



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

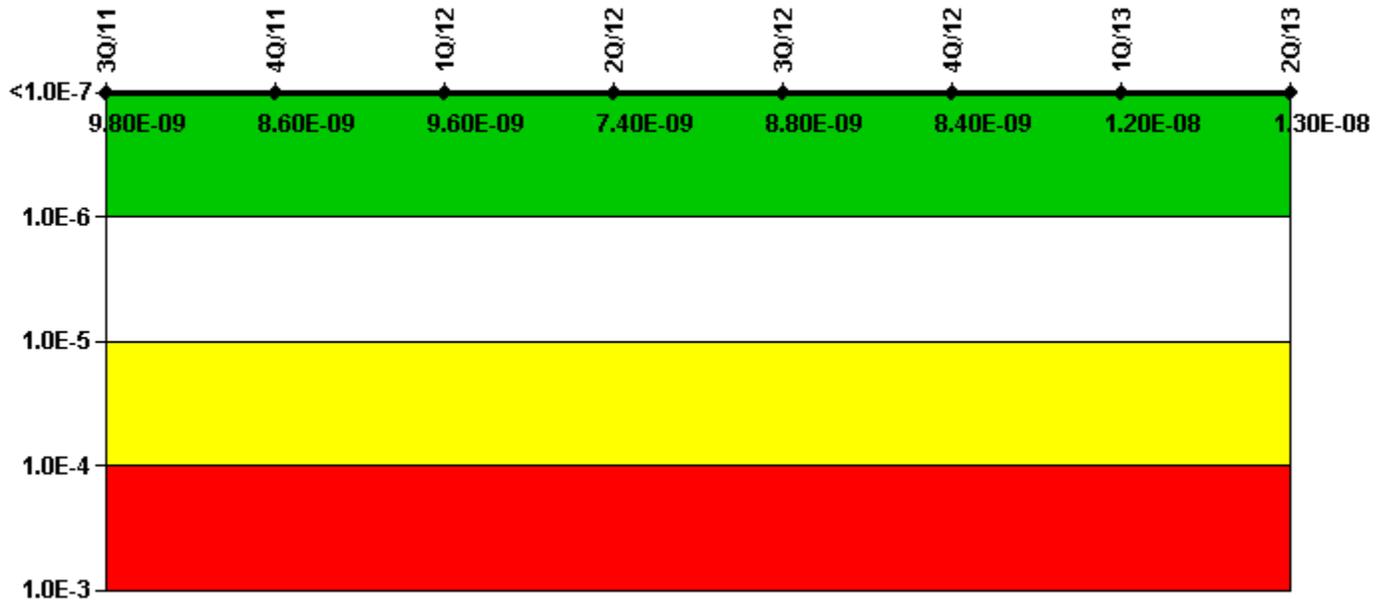
Notes

Mitigating Systems Performance Index, High Pressure Injection System	3Q/11	4Q/11	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13	2Q/13
UAI (Δ CDF)	1.53E-08	-3.06E-09	-3.45E-09	-1.51E-09	-4.24E-09	-4.24E-09	-2.86E-09	3.70E-09
URI (Δ CDF)	7.04E-08	1.07E-08	-8.63E-09	-8.63E-09	-8.63E-09	-8.63E-09	-8.63E-09	-8.63E-09
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	8.60E-08	7.70E-09	-1.20E-08	-1.00E-08	-1.30E-08	-1.30E-08	-1.10E-08	-4.90E-09

Licensee Comments:

4Q/11: Changed PRA Parameter(s). Changes to Brunswick's plant-specific PRA were made resulting in new MSPI coefficients entered into CDE effective for the 4th quarter of 2011. Model changes included updating accident sequences for loss of offsite power analysis, providing more detailed common cause methods for component failures, changes to data related to component failures was updated to currently available data, and the human reliability analysis was updated to use the industry standard database. The plant-specific PRA and MSPI Basis Document were updated in the 3rd quarter and the 4th quarter of 2011, respectively.

Mitigating Systems Performance Index, Heat Removal System



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

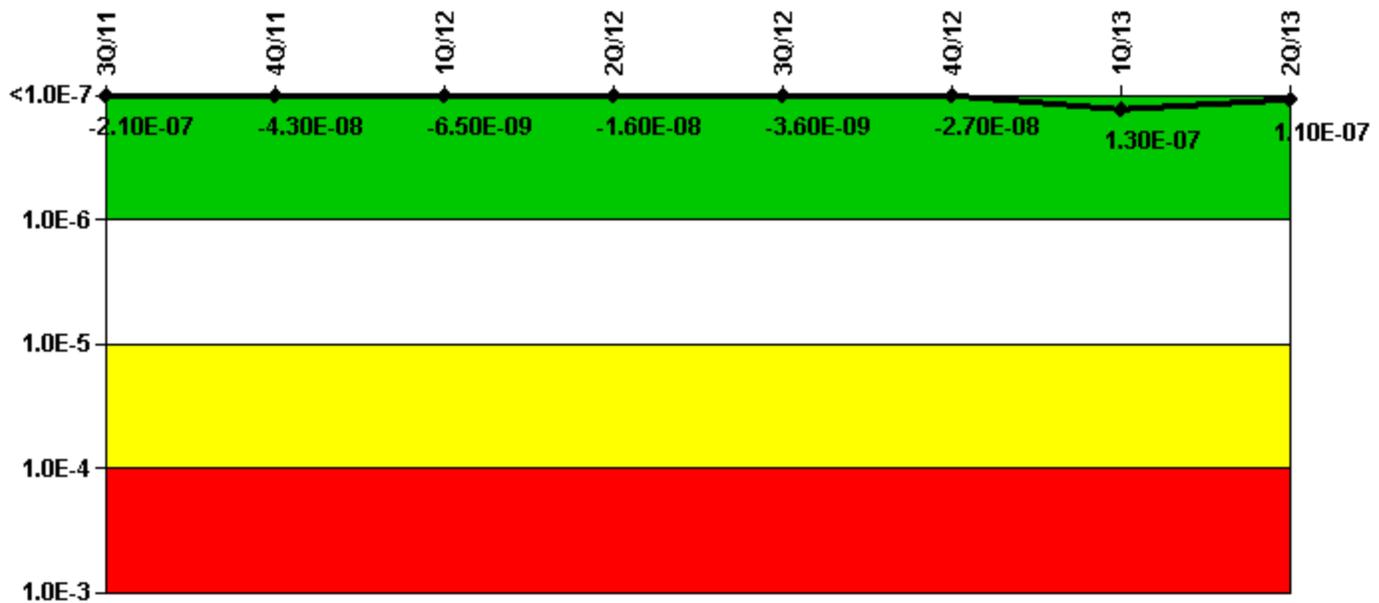
Notes

Mitigating Systems Performance Index, Heat Removal System	3Q/11	4Q/11	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13	2Q/13
UAI (Δ CDF)	9.58E-09	8.76E-09	1.00E-08	8.07E-09	9.78E-09	9.63E-09	1.28E-08	1.37E-08
URI (Δ CDF)	2.25E-10	-1.22E-10	-4.00E-10	-6.70E-10	-9.35E-10	-1.19E-09	-1.19E-09	-1.19E-09
PLE	NO							
Indicator value	9.80E-09	8.60E-09	9.60E-09	7.40E-09	8.80E-09	8.40E-09	1.20E-08	1.30E-08

Licensee Comments:

4Q/11: Changed PRA Parameter(s). Changes to Brunswick's plant-specific PRA were made resulting in new MSPI coefficients entered into CDE effective for the 4th quarter of 2011. Model changes included updating accident sequences for loss of offsite power analysis, providing more detailed common cause methods for component failures, changes to data related to component failures was updated to currently available data, and the human reliability analysis was updated to use the industry standard database. The plant-specific PRA and MSPI Basis Document were updated in the 3rd quarter and the 4th quarter of 2011, respectively.

Mitigating Systems Performance Index, Residual Heat Removal System



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

Notes

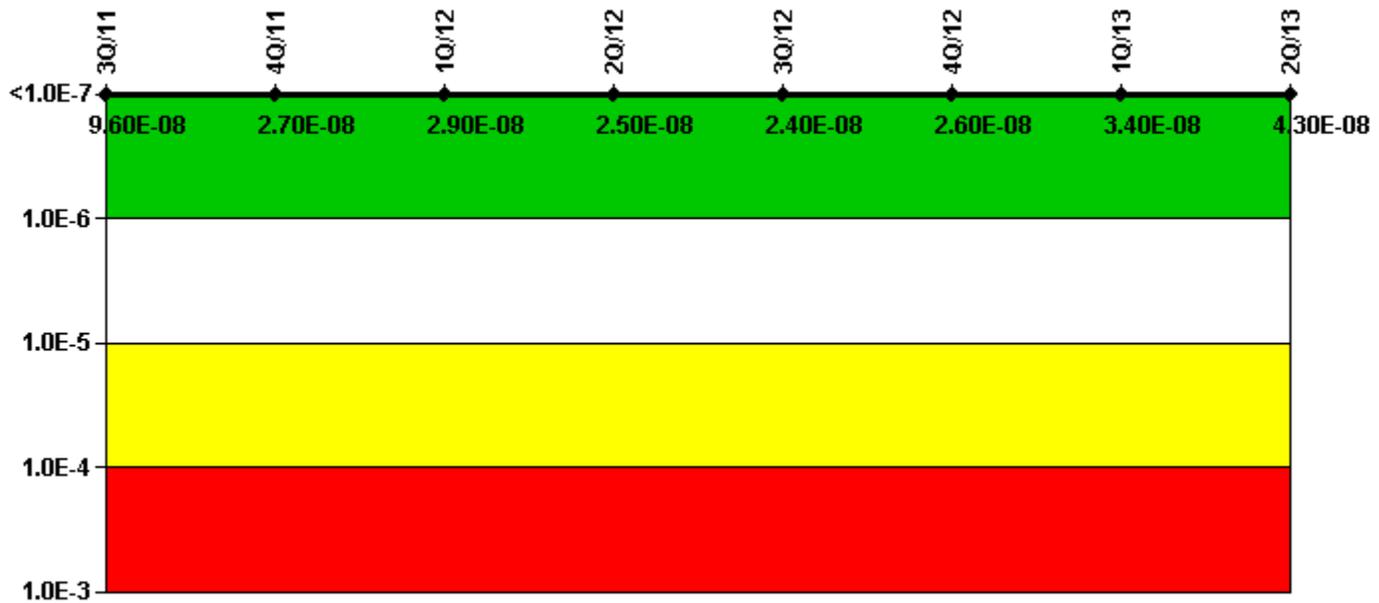
Mitigating Systems Performance Index, Residual Heat Removal System	3Q/11	4Q/11	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13	2Q/13
UAI (Δ CDF)	-4.12E-08	4.53E-08	7.99E-08	6.84E-08	7.89E-08	5.28E-08	4.38E-08	2.37E-08
URI (Δ CDF)	-1.64E-07	-8.83E-08	-8.64E-08	-8.45E-08	-8.24E-08	-8.03E-08	8.76E-08	8.76E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-2.10E-07	-4.30E-08	-6.50E-09	-1.60E-08	-3.60E-09	-2.70E-08	1.30E-07	1.10E-07

Licensee Comments:

1Q/12: Changed PRA Parameter(s). The planned baseline unavailability hours were revised to include a chemical decontamination of the Unit 2 RHR system (an infrequent activity). These hours shall be removed beginning in the 4th quarter of 2014. The Brunswick MSPI Basis Document was revised in the 4th quarter of 2011, incorporating these changes.

4Q/11: Changed PRA Parameter(s). Changes to Brunswick's plant-specific PRA were made resulting in new MSPI coefficients entered into CDE effective for the 4th quarter of 2011. Model changes included updating accident sequences for loss of offsite power analysis, providing more detailed common cause methods for component failures, changes to data related to component failures was updated to currently available data, and the human reliability analysis was updated to use the industry standard database. The plant-specific PRA and MSPI Basis Document were updated in the 3rd quarter and the 4th quarter of 2011, respectively.

Mitigating Systems Performance Index, Cooling Water Systems



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

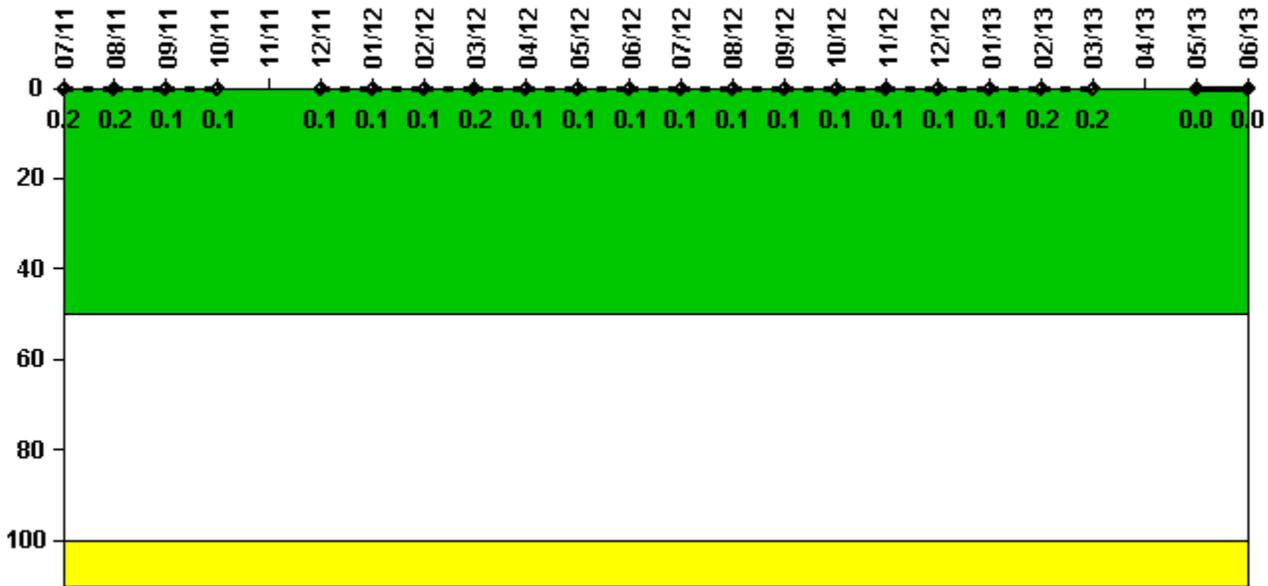
Notes

Mitigating Systems Performance Index, Cooling Water Systems	3Q/11	4Q/11	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13	2Q/13
UAI (Δ CDF)	1.05E-07	3.11E-08	3.26E-08	2.89E-08	2.81E-08	2.94E-08	3.73E-08	4.57E-08
URI (Δ CDF)	-9.40E-09	-3.69E-09	-3.70E-09	-3.71E-09	-3.71E-09	-3.72E-09	-3.73E-09	-2.39E-09
PLE	NO							
Indicator value	9.60E-08	2.70E-08	2.90E-08	2.50E-08	2.40E-08	2.60E-08	3.40E-08	4.30E-08

Licensee Comments:

4Q/11: Changed PRA Parameter(s). Changes to Brunswick's plant-specific PRA were made resulting in new MSPI coefficients entered into CDE effective for the 4th quarter of 2011. Model changes included updating accident sequences for loss of offsite power analysis, providing more detailed common cause methods for component failures, changes to data related to component failures was updated to currently available data, and the human reliability analysis was updated to use the industry standard database. The plant-specific PRA and MSPI Basis Document were updated in the 3rd quarter and the 4th quarter of 2011, respectively.

Reactor Coolant System Activity



Thresholds: White > 50.0 Yellow > 100.0

Notes

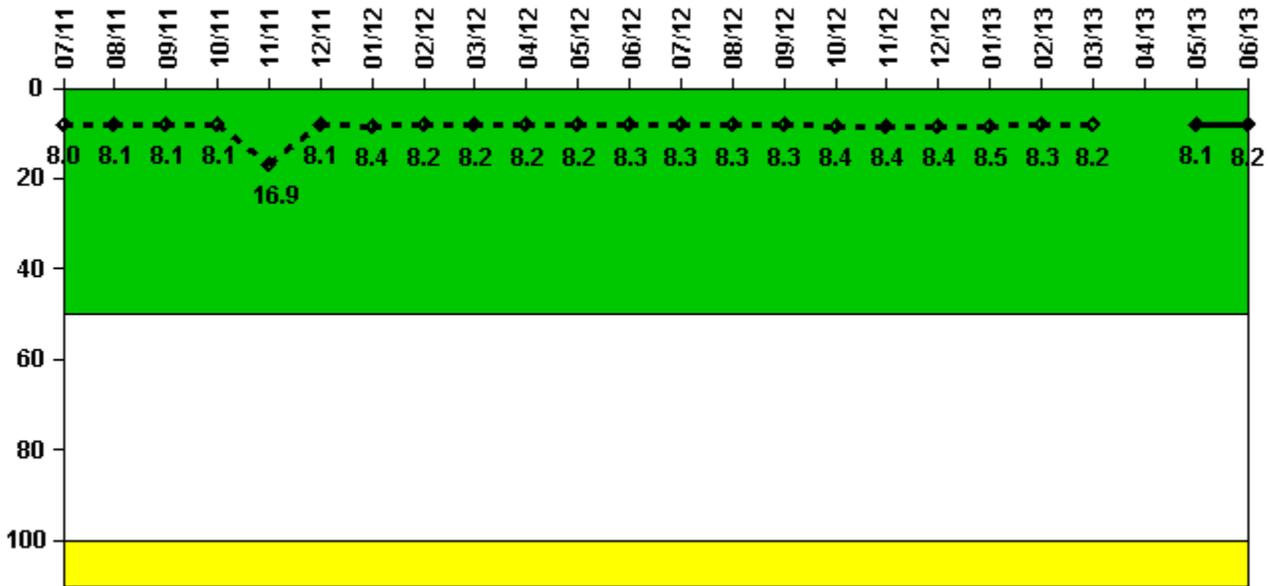
Reactor Coolant System Activity	7/11	8/11	9/11	10/11	11/11	12/11	1/12	2/12	3/12	4/12	5/12	6/12
Maximum activity	0.000302	0.000342	0.000257	0.000299	N/A	0.000209	0.000230	0.000236	0.000312	0.000262	0.000248	0.000233
Technical specification limit	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Indicator value	0.2	0.2	0.1	0.1	N/A	0.1	0.1	0.1	0.2	0.1	0.1	0.1

Reactor Coolant System Activity	7/12	8/12	9/12	10/12	11/12	12/12	1/13	2/13	3/13	4/13	5/13	6/13
Maximum activity	0.000245	0.000290	0.000248	0.000224	0.000209	0.000225	0.000207	0.000314	0.000345	N/A	0.000074	0.000086
Technical specification limit	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Indicator value	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	N/A	0	0

Licensee Comments:

6/13: RCS Specific Activity calculations were unavailable for the month of April due to existing plant conditions while Unit 2 was in refueling outage B221R1 the entire month.

Reactor Coolant System Leakage



Thresholds: White > 50.0 Yellow > 100.0

Notes

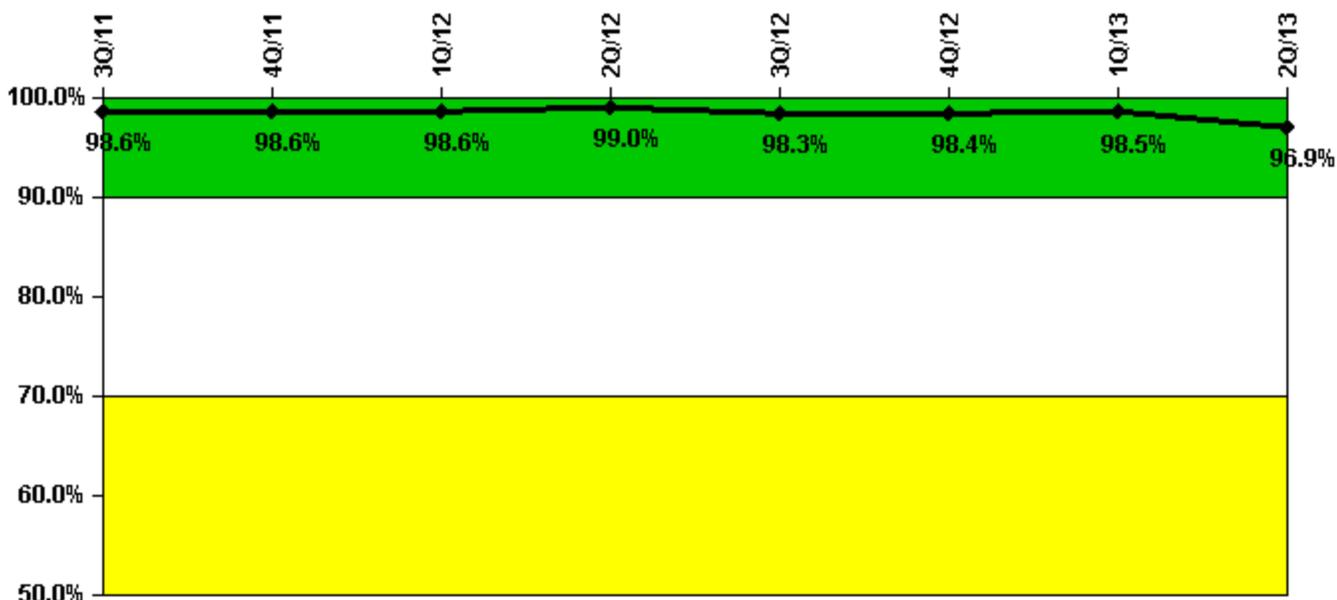
Reactor Coolant System Leakage	7/11	8/11	9/11	10/11	11/11	12/11	1/12	2/12	3/12	4/12	5/12	6/12
Maximum leakage	2.010	2.020	2.020	2.020	4.220	2.020	2.110	2.040	2.040	2.040	2.060	2.070
Technical specification limit	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
Indicator value	8.0	8.1	8.1	8.1	16.9	8.1	8.4	8.2	8.2	8.2	8.2	8.3

Reactor Coolant System Leakage	7/12	8/12	9/12	10/12	11/12	12/12	1/13	2/13	3/13	4/13	5/13	6/13
Maximum leakage	2.080	2.070	2.080	2.090	2.090	2.100	2.120	2.080	2.040	N/A	2.020	2.060
Technical specification limit	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
Indicator value	8.3	8.3	8.3	8.4	8.4	8.4	8.5	8.3	8.2	N/A	8.1	8.2

Licensee Comments:

6/13: RCS Leakage calculations were unavailable for the month of April due to existing plant conditions while Unit 2 was in refueling outage B221R1 the entire month.

Drill/Exercise Performance



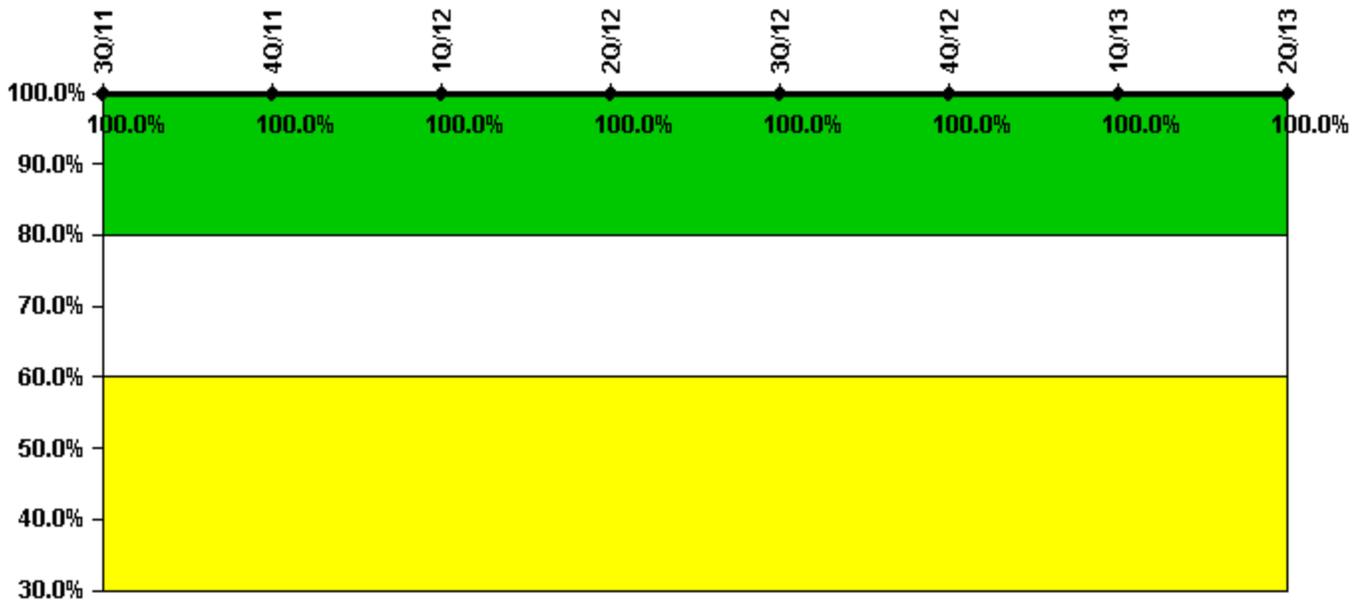
Thresholds: White < 90.0% Yellow < 70.0%

Notes

Drill/Exercise Performance	3Q/11	4Q/11	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13	2Q/13
Successful opportunities	4.0	38.0	8.0	17.0	26.0	46.0	22.0	25.0
Total opportunities	4.0	38.0	8.0	18.0	27.0	47.0	22.0	28.0
Indicator value	98.6%	98.6%	98.6%	99.0%	98.3%	98.4%	98.5%	96.9%

Licensee Comments: none

ERO Drill Participation



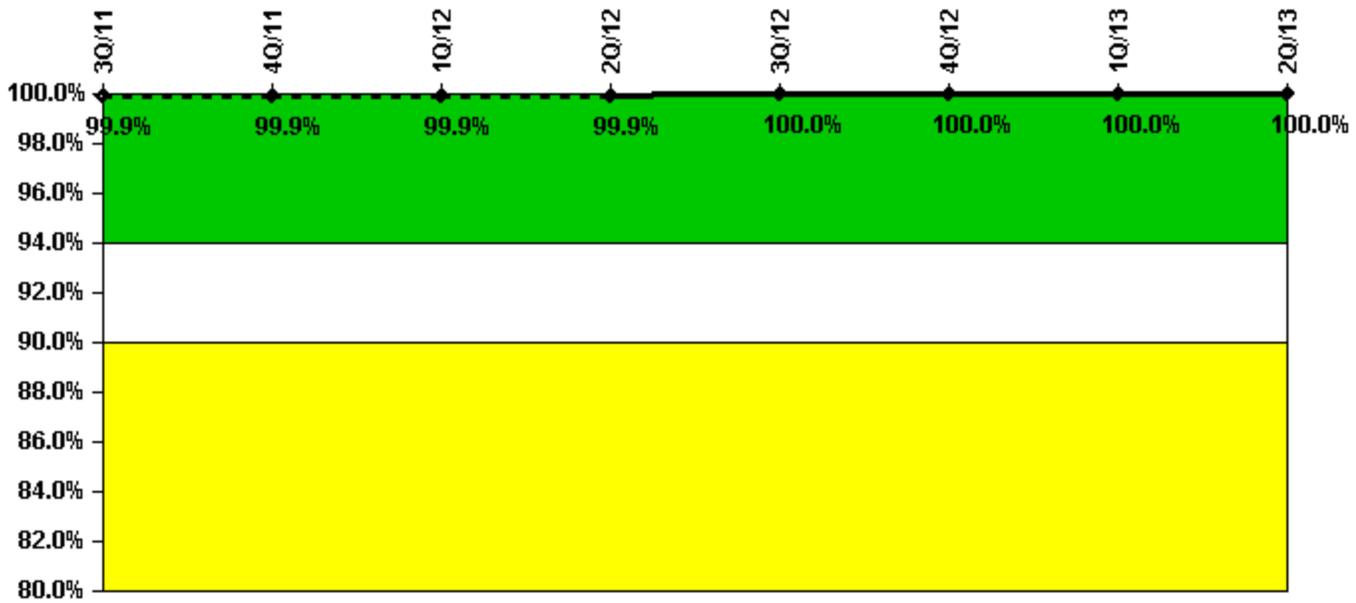
Thresholds: White < 80.0% Yellow < 60.0%

Notes

ERO Drill Participation	3Q/11	4Q/11	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13	2Q/13
Participating Key personnel	105.0	106.0	103.0	103.0	100.0	97.0	98.0	94.0
Total Key personnel	105.0	106.0	103.0	103.0	100.0	97.0	98.0	94.0
Indicator value	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Licensee Comments: none

Alert & Notification System



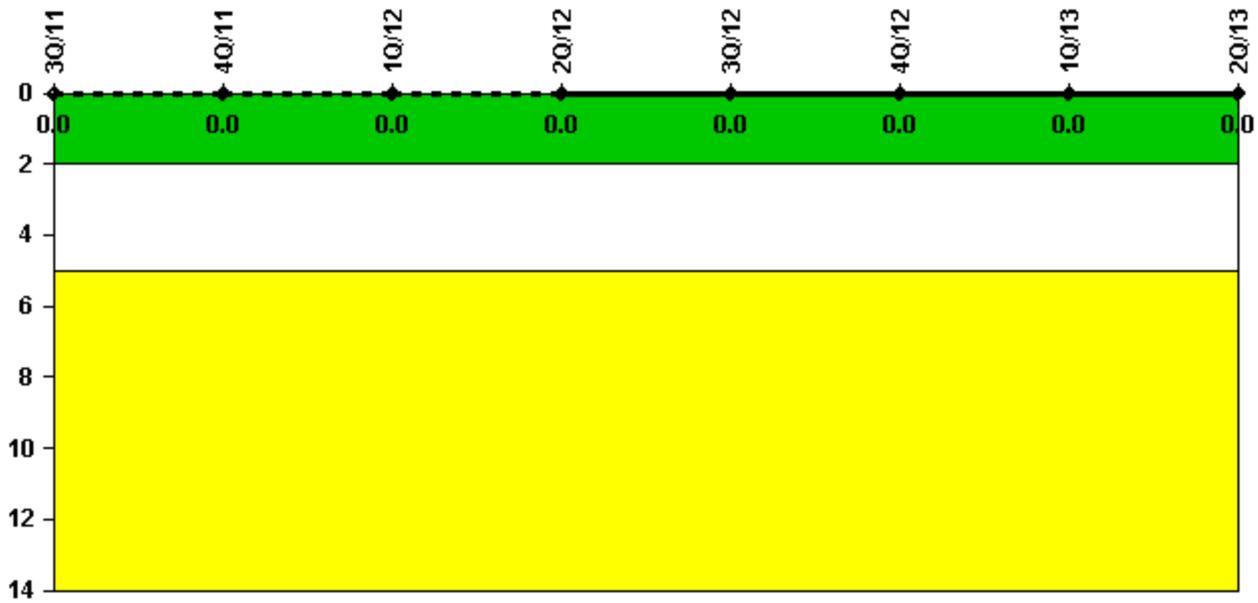
Thresholds: White < 94.0% Yellow < 90.0%

Notes

Alert & Notification System	3Q/11	4Q/11	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13	2Q/13
Successful siren-tests	530	570	532	532	531	570	532	532
Total sirens-tests	532	570	532	532	532	570	532	532
Indicator value	99.9%	99.9%	99.9%	99.9%	100.0%	100.0%	100.0%	100.0%

Licensee Comments: none

Occupational Exposure Control Effectiveness



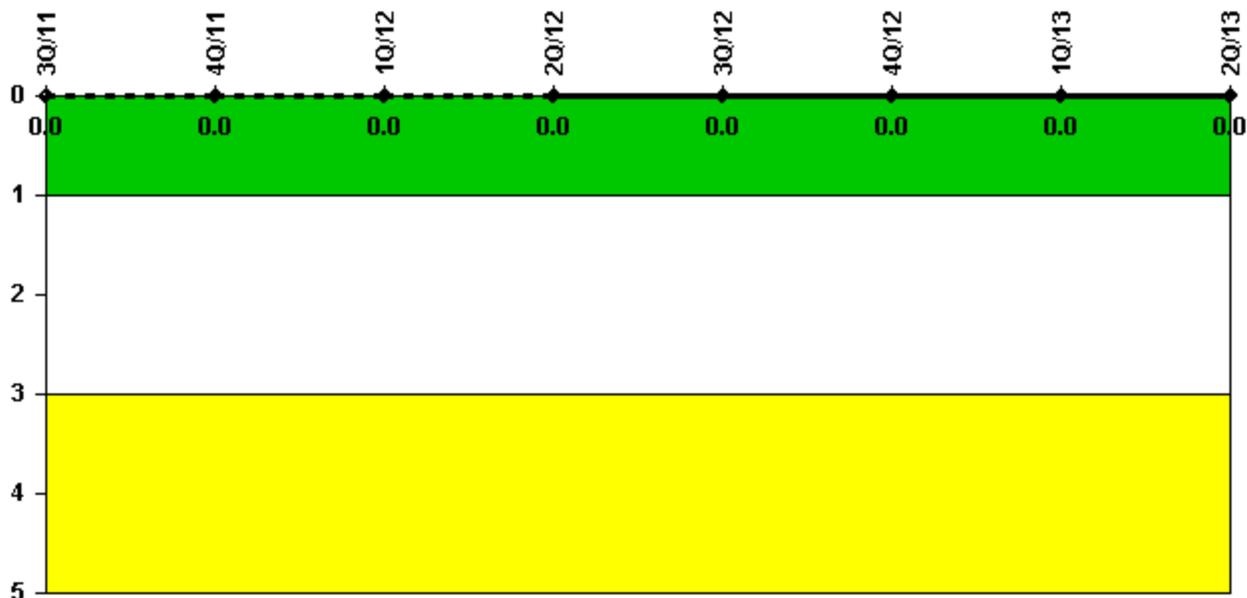
Thresholds: White > 2.0 Yellow > 5.0

Notes

Occupational Exposure Control Effectiveness	3Q/11	4Q/11	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13	2Q/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	3Q/11	4Q/11	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13	2Q/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 19, 2013