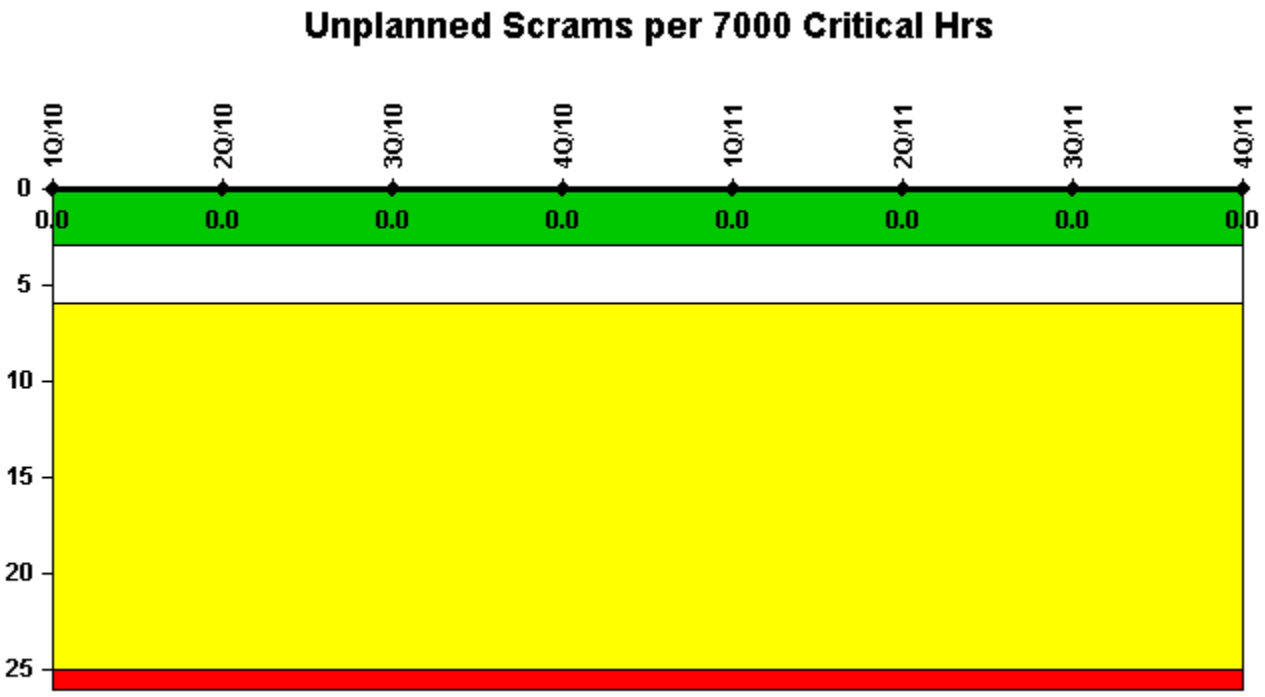
Byron 1

4Q/2011 Performance Indicators

Licensee's General Comments: 4th Quarte 2011 Byron Unit 1



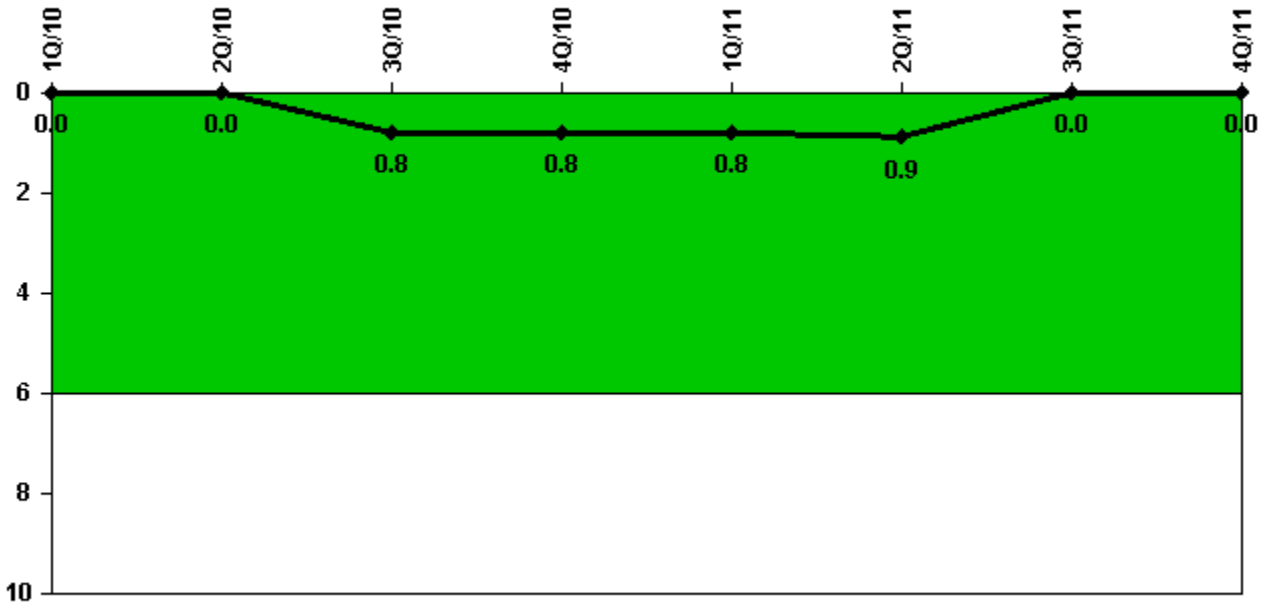
Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

Notes

Unplanned Scrams per 7000 Critical Hrs	1Q/10	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11
Unplanned scrams	0	0	0	0	0	0	0	0
Critical hours	2159.0	2184.0	2208.0	2209.0	1726.0	1642.7	2208.0	2209.0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Unplanned Power Changes per 7000 Critical Hrs



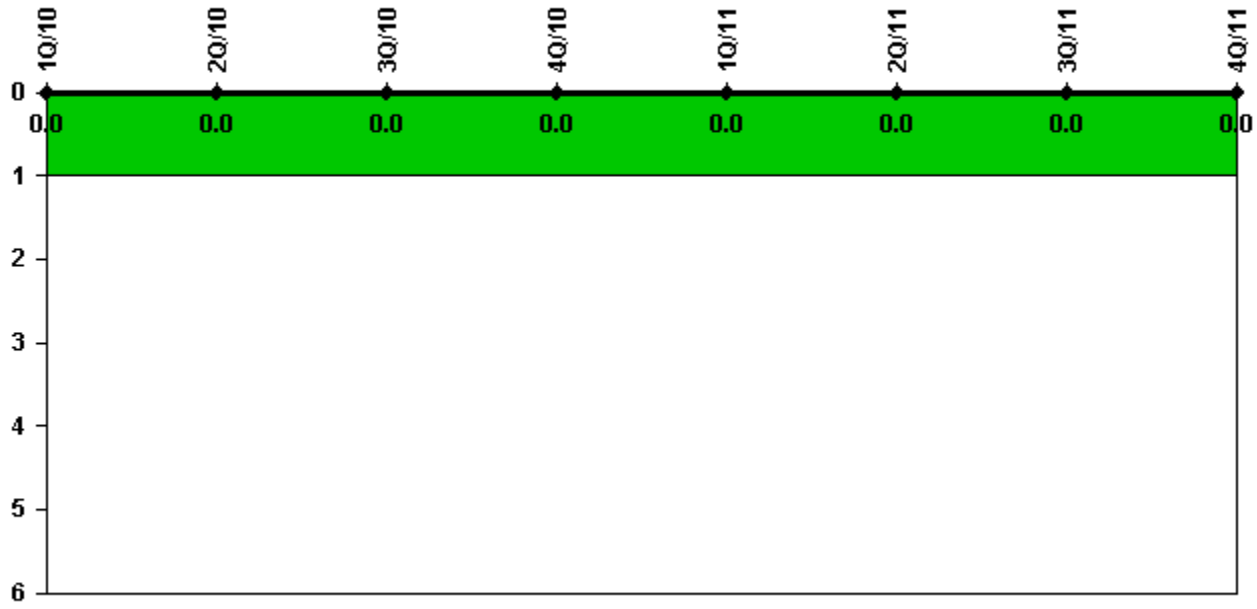
Thresholds: White > 6.0

Notes

Unplanned Power Changes per 7000 Critical Hrs	1Q/10	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11
Unplanned power changes	0	0	1.0	0	0	0	0	0
Critical hours	2159.0	2184.0	2208.0	2209.0	1726.0	1642.7	2208.0	2209.0
Indicator value	**0**	**0**	**0.8**	**0.8**	**0.8**	**0.9**	**0**	**0**

Licensee Comments: none

Unplanned Scrams with Complications



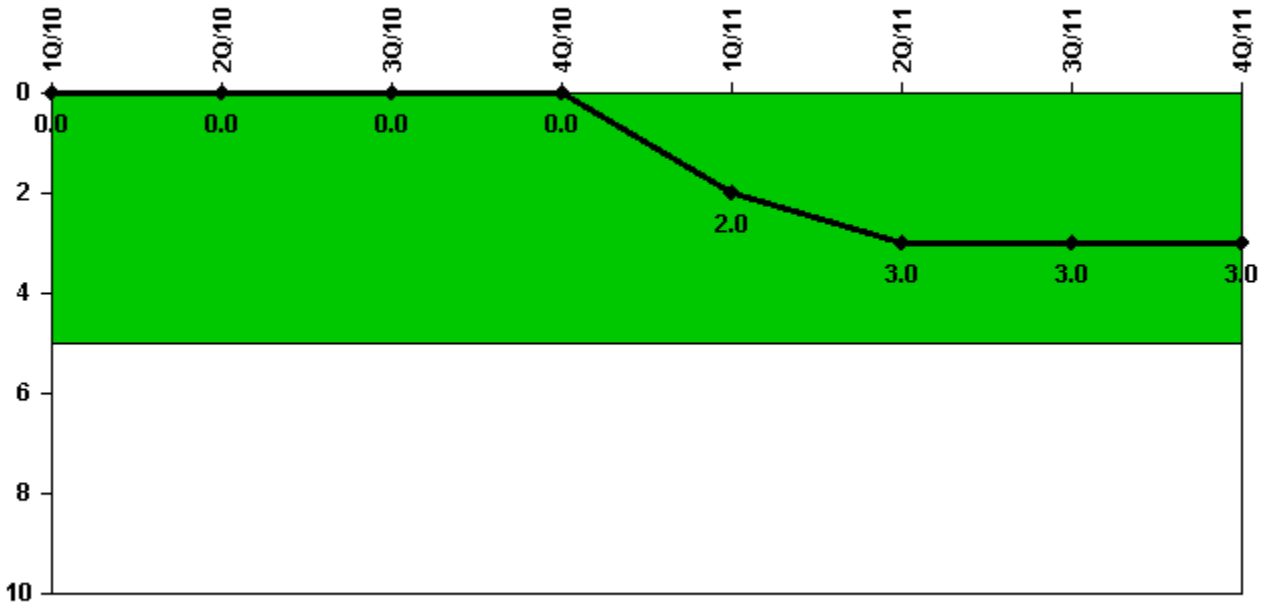
Thresholds: White > 1.0

Notes

Unplanned Scrams with Complications	1Q/10	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11
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: none

Safety System Functional Failures (PWR)



Thresholds: White > 5.0

Notes

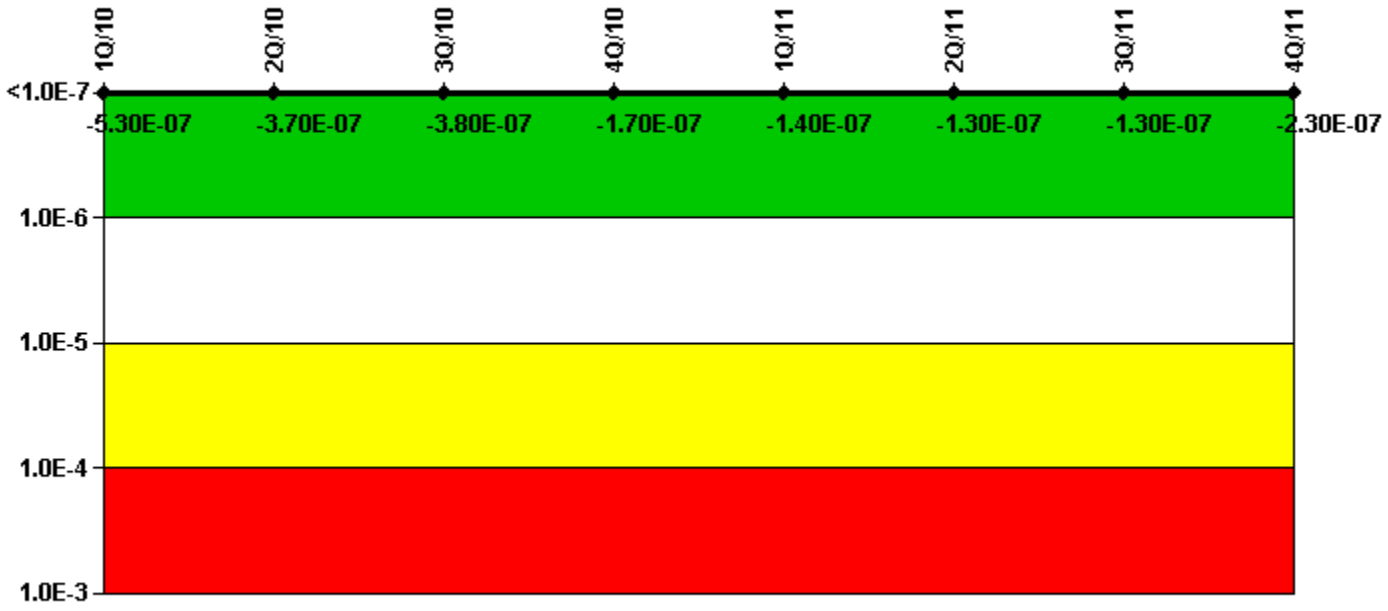
Safety System Functional Failures (PWR)	1Q/10	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11
Safety System Functional Failures	0	0	0	0	2	1	0	0
Indicator value	**0**	**0**	**0**	**0**	**2**	**3**	**3**	**3**

Licensee Comments:

4Q/11: LER 2011-002-00, "Containment Pressure Not Within Limits Longer than Allowed by Technical Specifications Due to Personnel Error"

3Q/10: LER 454-2010-001-00 UG Cable Vaults not vital - No SSFF.LER 455-2010-002-00 "Failed T.S. Ventilation Surv Rqmts During Surv Rqmt 3.0.3 Delay Period". The potential safety significance of the condition is still being evaluated and the results will be updated with the supplement to this LER.

Mitigating Systems Performance Index, Emergency AC Power System



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

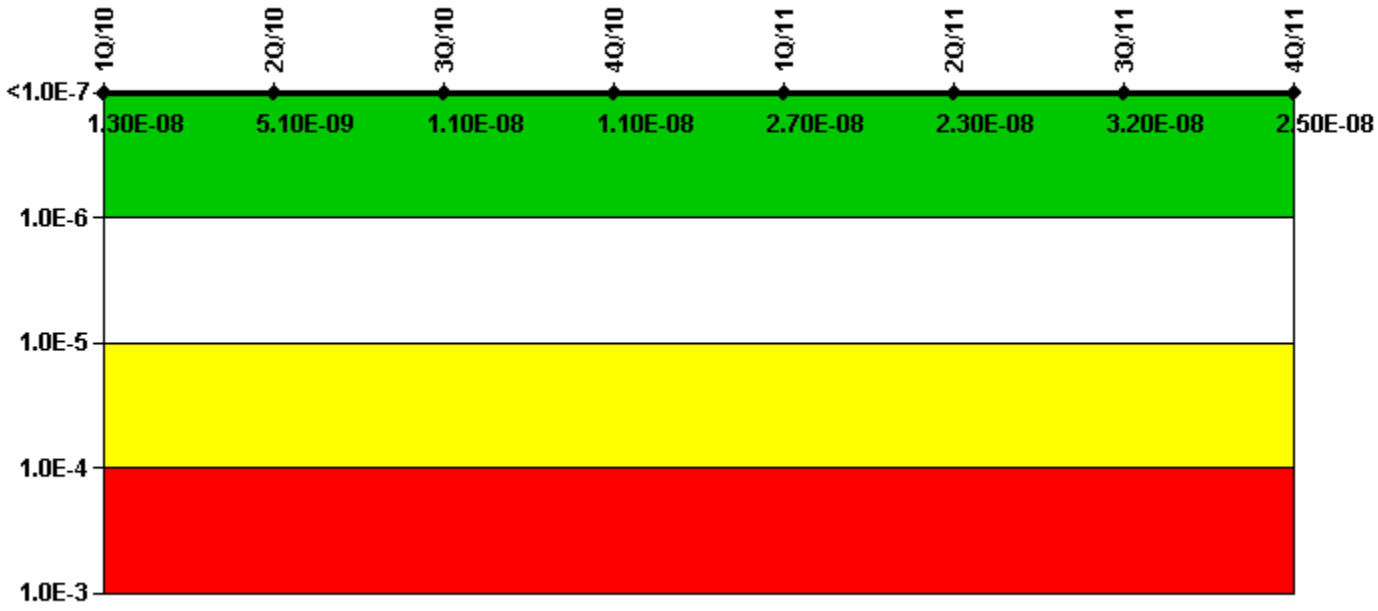
Notes

Mitigating Systems Performance Index, Emergency AC Power System	1Q/10	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11
UAI (ΔCDF)	3.41E-08	3.05E-08	2.67E-08	7.32E-08	1.01E-07	1.03E-07	1.05E-07	1.02E-07
URI (ΔCDF)	-5.66E-07	-4.05E-07	-4.04E-07	-2.39E-07	-2.43E-07	-2.28E-07	-2.39E-07	-3.34E-07
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-5.30E-07**	**-3.70E-07**	**-3.80E-07**	**-1.70E-07**	**-1.40E-07**	**-1.30E-07**	**-1.30E-07**	**-2.30E-07**

Licensee Comments:

4Q/11: Changed PRA Parameter(s). Byron PRA Model Revision No: 6F approved September 29, 2011, revised Unit 1 and Unit 2 PRA inputs due to a change in the plant operations which calls for preemptively splitting CC trains Post-LOCA and the addition of a revised internal flooding study.

Mitigating Systems Performance Index, High Pressure Injection System



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

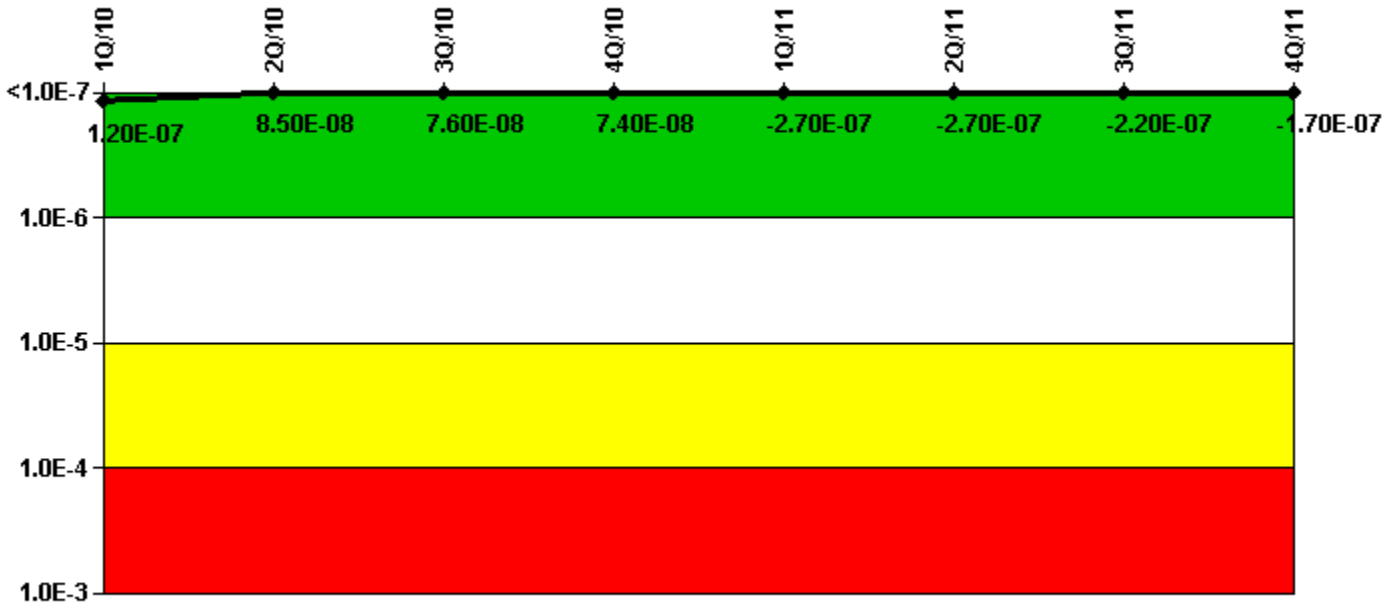
Notes

Mitigating Systems Performance Index, High Pressure Injection System	1Q/10	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11
UAI (ΔCDF)	1.54E-08	7.49E-09	1.38E-08	1.33E-08	2.99E-08	2.56E-08	3.41E-08	2.72E-08
URI (ΔCDF)	-2.40E-09	-2.41E-09	-2.42E-09	-2.42E-09	-2.44E-09	-2.38E-09	-2.39E-09	-1.88E-09
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**1.30E-08**	**5.10E-09**	**1.10E-08**	**1.10E-08**	**2.70E-08**	**2.30E-08**	**3.20E-08**	**2.50E-08**

Licensee Comments:

4Q/11: Changed PRA Parameter(s). Byron PRA Model Revision No: 6F approved September 29, 2011, revised Unit 1 and Unit 2 PRA inputs due to a change in the plant operations which calls for preemptively splitting CC trains Post-LOCA and the addition of a revised internal flooding study.

Mitigating Systems Performance Index, Heat Removal System



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

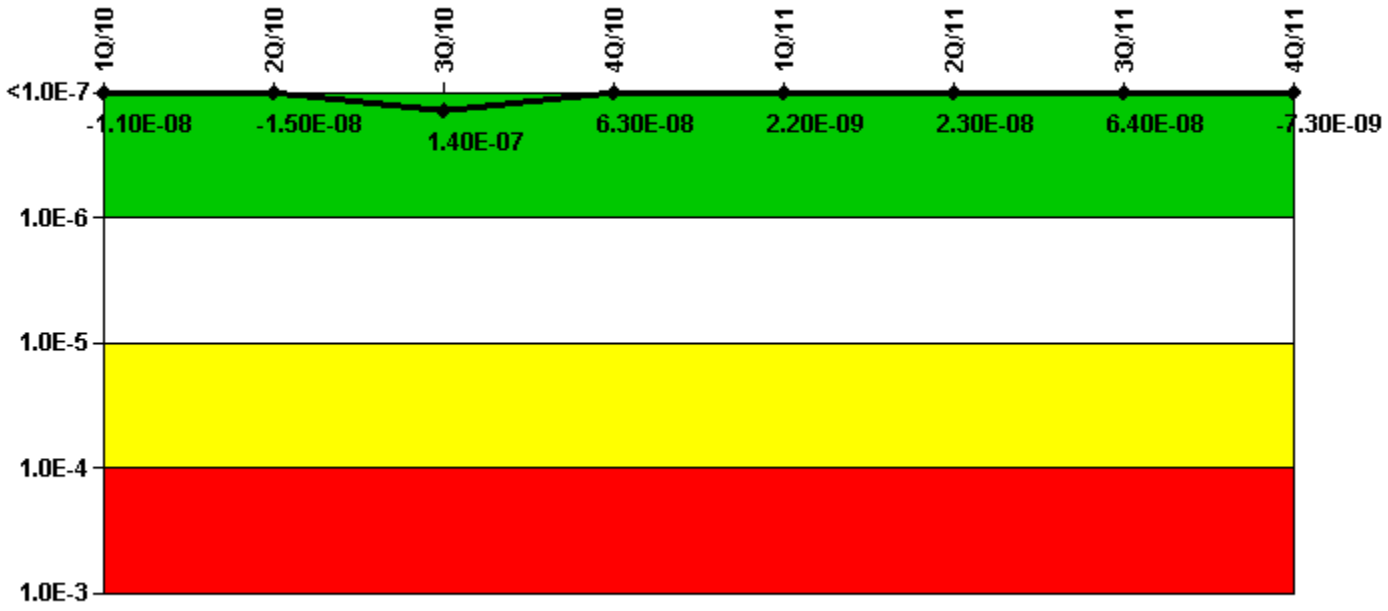
Notes

Mitigating Systems Performance Index, Heat Removal System	1Q/10	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11
UAI (ΔCDF)	1.09E-07	6.84E-08	5.84E-08	5.00E-08	-1.55E-08	-1.61E-08	2.81E-08	1.39E-07
URI (ΔCDF)	1.32E-08	1.67E-08	1.74E-08	2.40E-08	-2.53E-07	-2.50E-07	-2.50E-07	-3.14E-07
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**1.20E-07**	**8.50E-08**	**7.60E-08**	**7.40E-08**	**-2.70E-07**	**-2.70E-07**	**-2.20E-07**	**-1.70E-07**

Licensee Comments:

4Q/11: Changed PRA Parameter(s). Byron PRA Model Revision No: 6F approved September 29, 2011, revised Unit 1 and Unit 2 PRA inputs due to a change in the plant operations which calls for preemptively splitting CC trains Post-LOCA and the addition of a revised internal flooding study.

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/10	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11
UAI (ΔCDF)	7.27E-08	7.24E-08	2.29E-07	1.52E-07	9.00E-08	1.04E-07	1.49E-07	1.41E-07
URI (ΔCDF)	-8.40E-08	-8.78E-08	-9.15E-08	-8.96E-08	-8.78E-08	-8.13E-08	-8.52E-08	-1.48E-07
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-1.10E-08**	**-1.50E-08**	**1.40E-07**	**6.30E-08**	**2.20E-09**	**2.30E-08**	**6.40E-08**	**-7.30E-09**

Licensee Comments:

4Q/11: Changed PRA Parameter(s). Byron PRA Model Revision No: 6F approved September 29, 2011, revised Unit 1 and Unit 2 PRA inputs due to a change in the plant operations which calls for preemptively splitting CC trains Post-LOCA and the addition of a revised internal flooding study. 1/2RH8716A/B were removed from MSPI scoping due to Birnbaum value less than 1.0E-06.

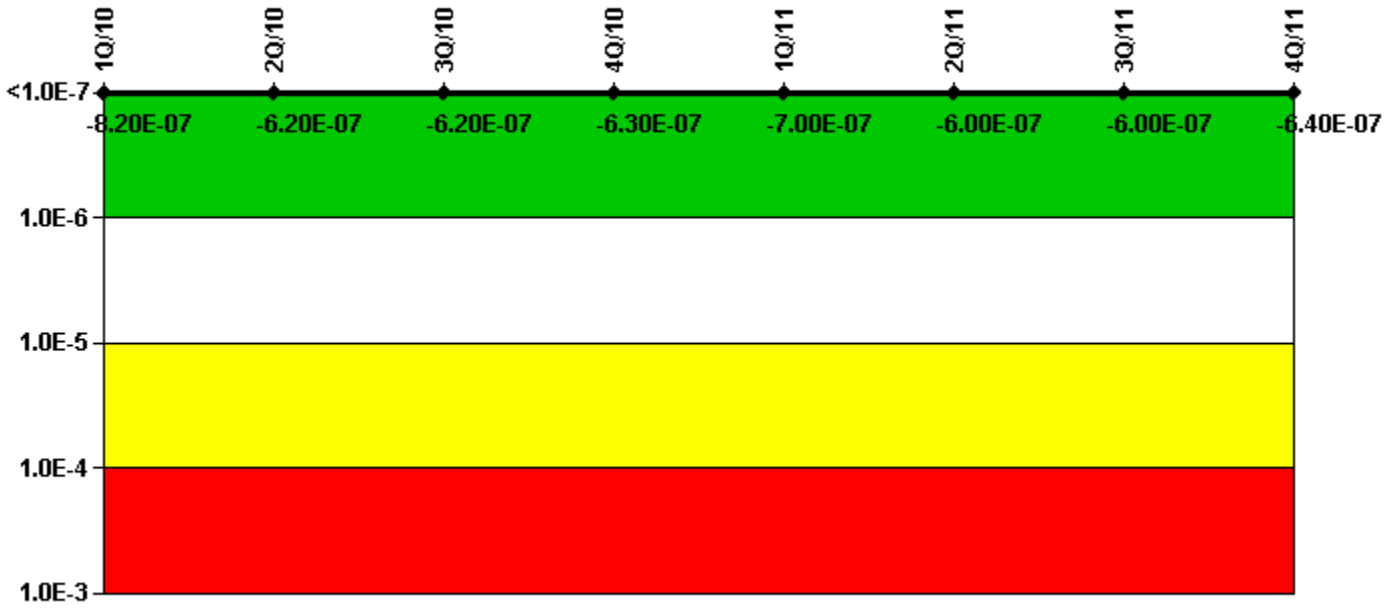
3Q/09: Incorporated Basis Doc Revision 4 changes resulting from PRA Model revsion 6e which incorporated a change to DG mission time and addition of A Train AF cross-tie.

1Q/09: Demand / Run Time reporting for Reliability changed from actuals to estimated!

4Q/06: Corrections made to historical actual UA and Baseline UA

2Q/06: Revised PRA parameters per PRA revision 6D. Changed demand and run time reporting from monthly actuals to estimated.

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	1Q/10	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11
UAI (ΔCDF)	7.36E-08	2.60E-07	2.66E-07	2.59E-07	1.85E-07	2.86E-07	2.89E-07	2.97E-07
URI (ΔCDF)	-8.96E-07	-8.84E-07	-8.89E-07	-8.89E-07	-8.85E-07	-8.86E-07	-8.92E-07	-9.33E-07
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-8.20E-07**	**-6.20E-07**	**-6.20E-07**	**-6.30E-07**	**-7.00E-07**	**-6.00E-07**	**-6.00E-07**	**-6.40E-07**

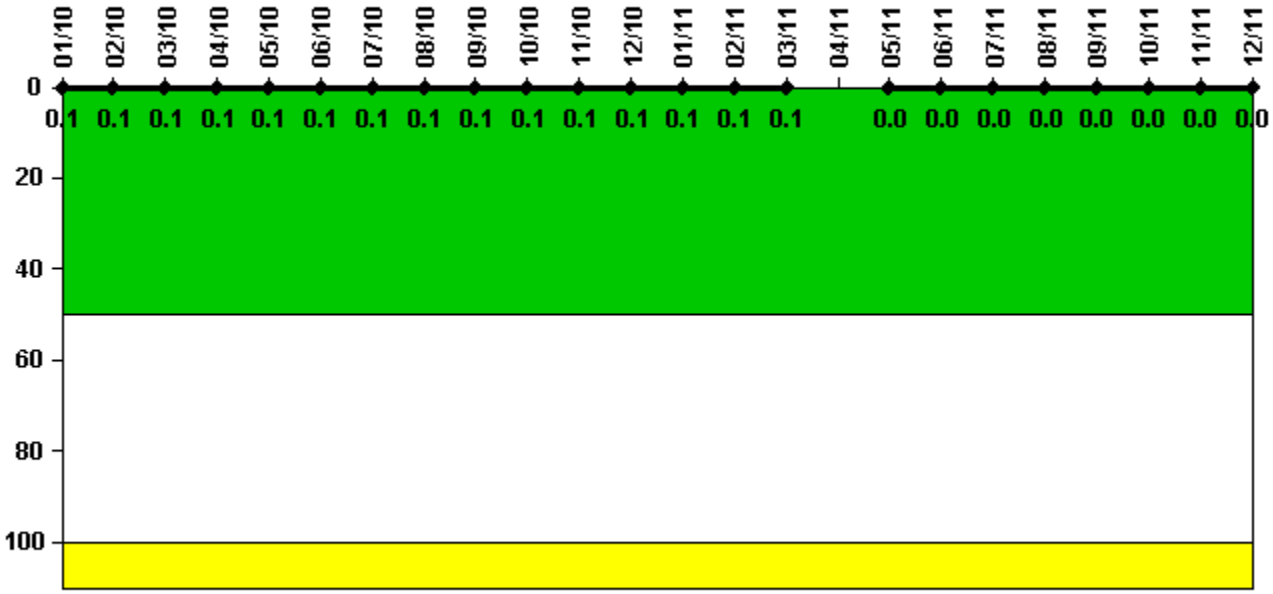
Licensee Comments:

4Q/11: Changed PRA Parameter(s). Byron PRA Model Revision No: 6F approved September 29, 2011, revised Unit 1 and Unit 2 PRA inputs due to a change in the plant operations which calls for preemptively splitting CC trains Post-LOCA and the addition of a revised internal flooding study. 1/2RH8716A/B were removed from MSPI scoping due to Birnbaum value less than 1.0E-06.

3Q/09: Incorporated Basis Doc Revision 4 changes resulting from PRA Model revsion 6e which incorporated a change to DG mission time and addition of A Train AF cross-tie.

1Q/09: Demand / Run Time reporting for Reliability changed from actuals to estimated!

Reactor Coolant System Activity



Thresholds: White > 50.0 Yellow > 100.0

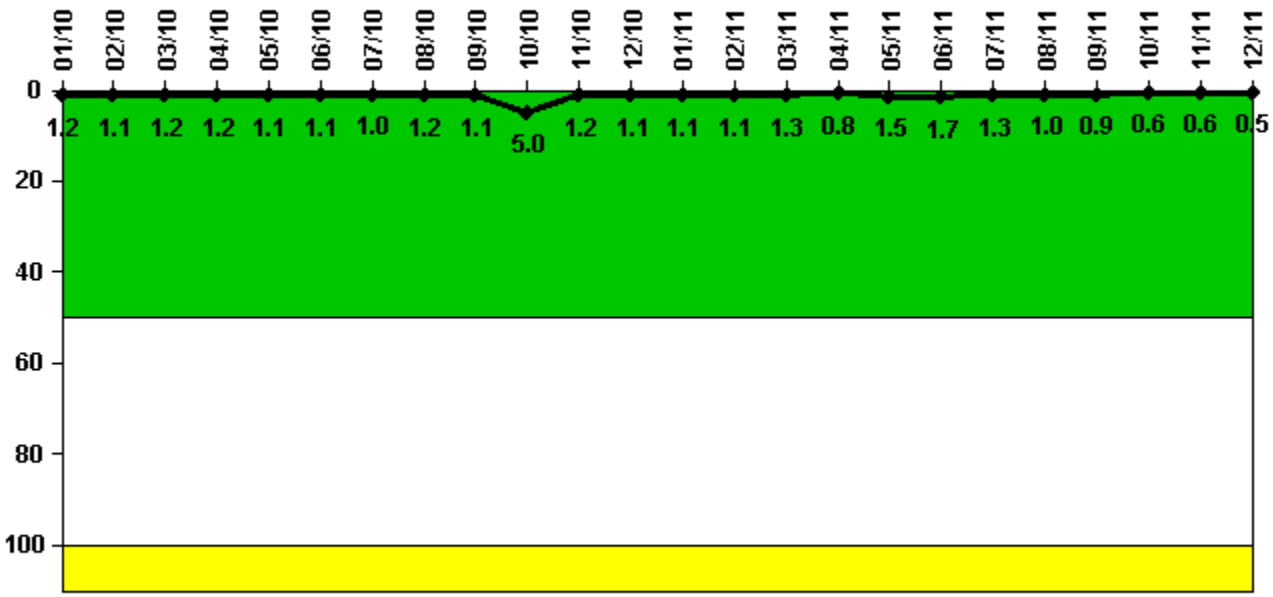
Notes

Reactor Coolant System Activity	**1 / 10**	**2 / 10**	**3 / 10**	**4 / 10**	**5 / 10**	**6 / 10**	**7 / 10**	**8 / 10**	**9 / 10**	**10 / 10**	**11 / 10**	**12 / 10**
Maximum activity	0.000978	0.001000	0.000614	0.000656	0.000920	0.000719	0.000736	0.000785	0.000804	0.000838	0.000873	0.000926
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	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**

Reactor Coolant System Activity	**1 / 11**	**2 / 11**	**3 / 11**	**4 / 11**	**5 / 11**	**6 / 11**	**7 / 11**	**8 / 11**	**9 / 11**	**10 / 11**	**11 / 11**	**12 / 11**
Maximum activity	0.000961	0.000963	0.001380	N/A	0.000301	0.000322	0.000341	0.000364	0.000389	0.000403	0.000423	0.000441
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	**0.1**	**0.1**	**0.1**	**N / A**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Reactor Coolant System Leakage



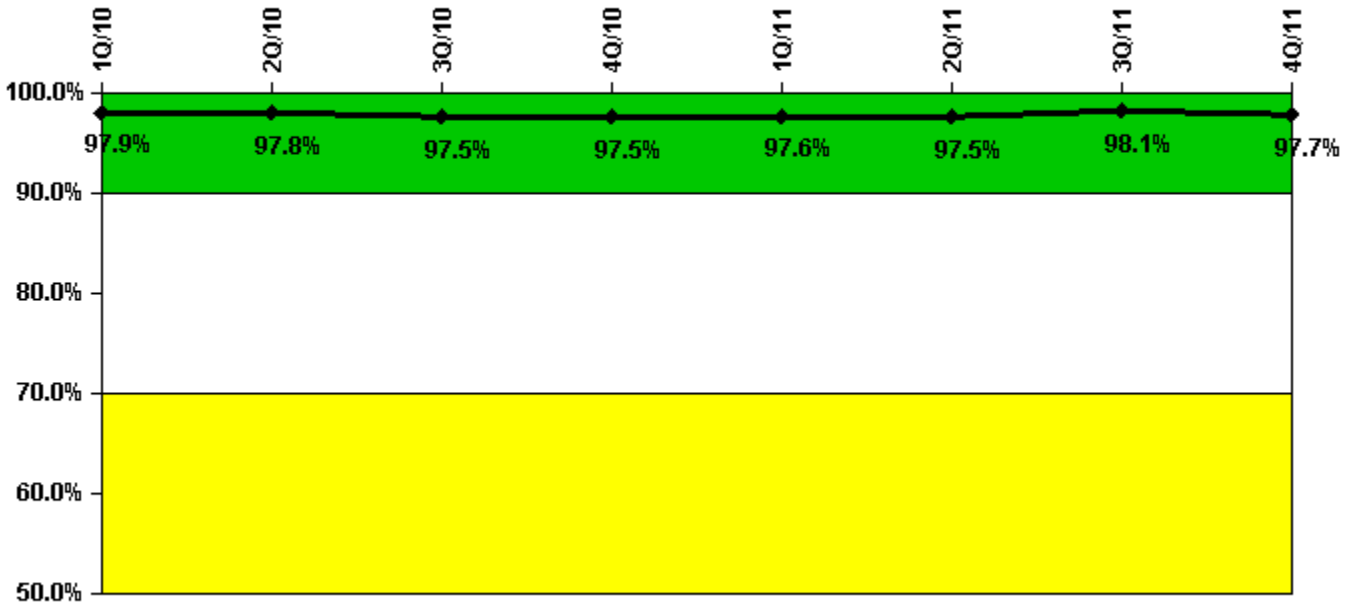
Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Leakage	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	10/10	11/10	12/10
Maximum leakage	0.120	0.110	0.120	0.120	0.110	0.110	0.100	0.120	0.110	0.500	0.120	0.110
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	**1.2**	**1.1**	**1.2**	**1.2**	**1.1**	**1.1**	**1.0**	**1.2**	**1.1**	**5.0**	**1.2**	**1.1**
Reactor Coolant System Leakage	**1/11**	**2/11**	**3/11**	**4/11**	**5/11**	**6/11**	**7/11**	**8/11**	**9/11**	**10/11**	**11/11**	**12/11**
Maximum leakage	0.110	0.110	0.130	0.080	0.150	0.170	0.130	0.100	0.090	0.060	0.060	0.050
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**	**1.1**	**1.3**	**0.8**	**1.5**	**1.7**	**1.3**	**1.0**	**0.9**	**0.6**	**0.6**	**0.5**

Licensee Comments: none

Drill/Exercise Performance



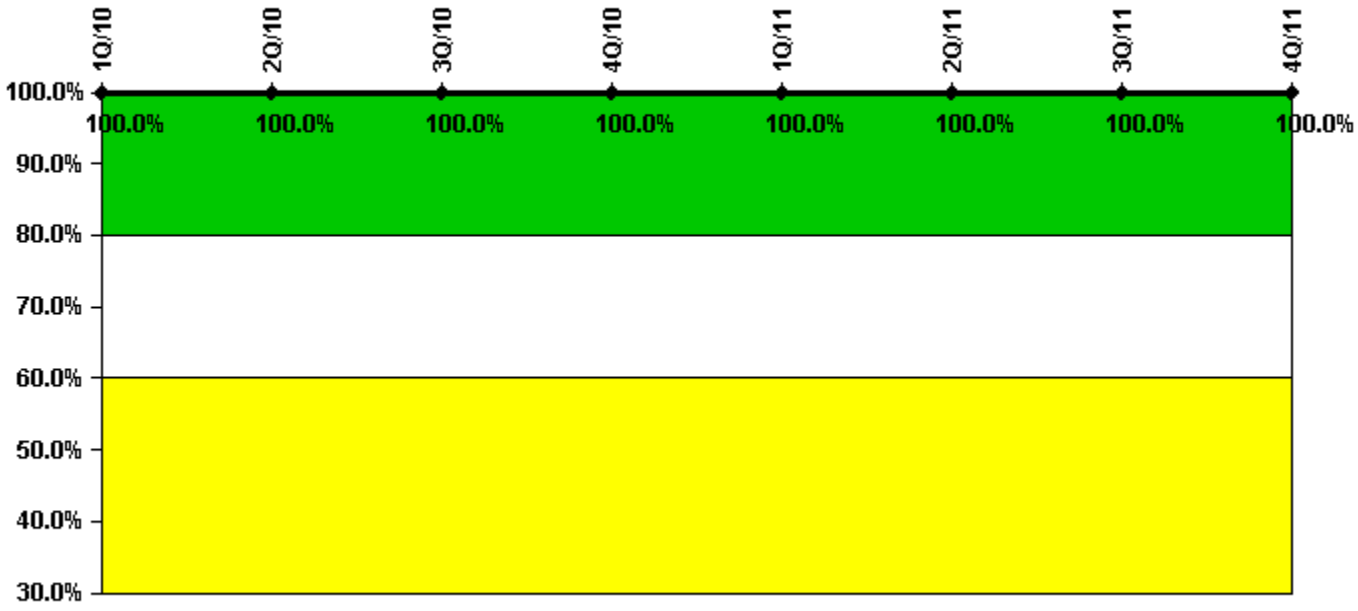
Thresholds: White < 90.0% Yellow < 70.0%

Notes

Drill/Exercise Performance	1Q/10	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11
Successful opportunities	34.0	9.0	58.0	12.0	51.0	77.0	62.0	35.0
Total opportunities	34.0	10.0	61.0	13.0	51.0	78.0	62.0	37.0
Indicator value	**97.9%**	**97.8%**	**97.5%**	**97.5%**	**97.6%**	**97.5%**	**98.1%**	**97.7%**

Licensee Comments: none

ERO Drill Participation



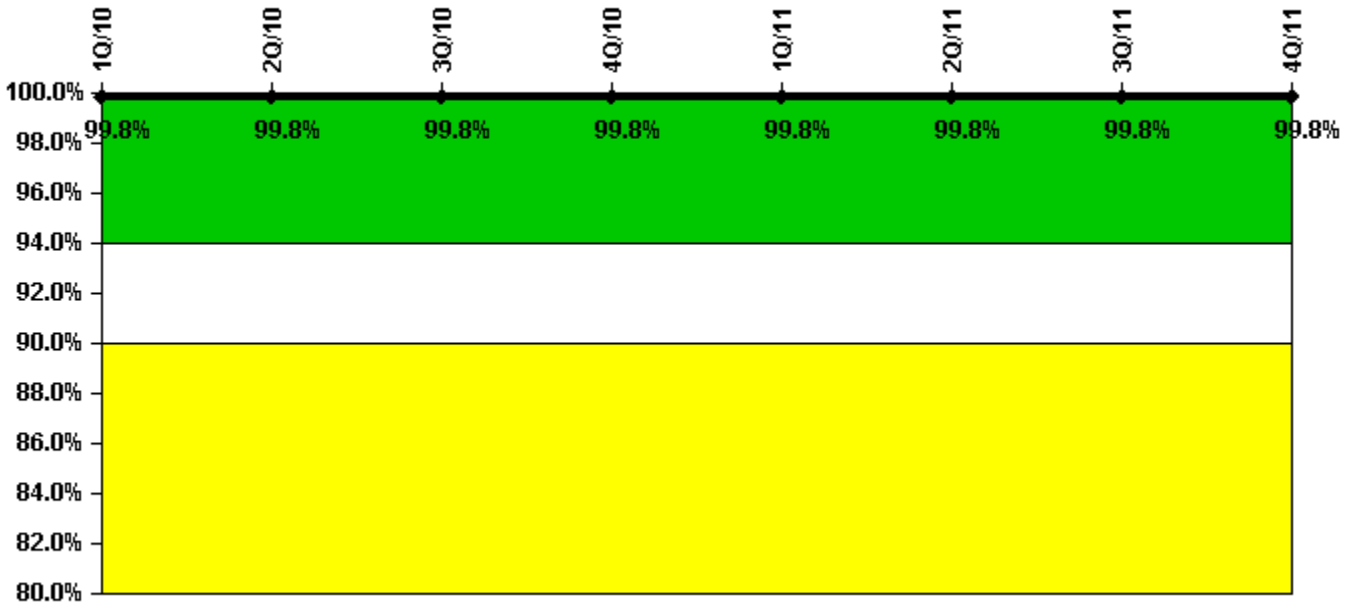
Thresholds: White < 80.0% Yellow < 60.0%

Notes

ERO Drill Participation	1Q/10	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11
Participating Key personnel	74.0	74.0	72.0	74.0	76.0	74.0	75.0	74.0
Total Key personnel	74.0	74.0	72.0	74.0	76.0	74.0	75.0	74.0
Indicator value	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Licensee Comments: none

Alert & Notification System



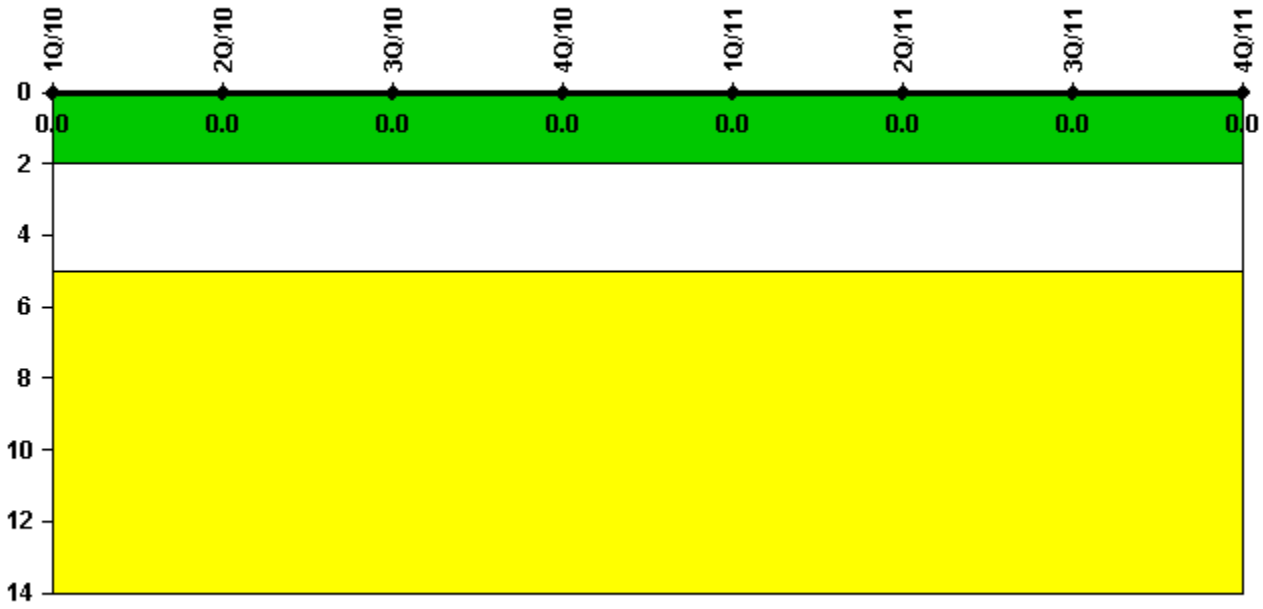
Thresholds: White < 94.0% Yellow < 90.0%

Notes

Alert & Notification System	1Q/10	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11
Successful siren-tests	3841	3890	3959	3956	3902	3893	3893	3903
Total sirens-tests	3843	3904	3965	3965	3904	3904	3904	3904
Indicator value	**99.8%**	**99.8%**	**99.8%**	**99.8%**	**99.8%**	**99.8%**	**99.8%**	**99.8%**

Licensee Comments: none

Occupational Exposure Control Effectiveness



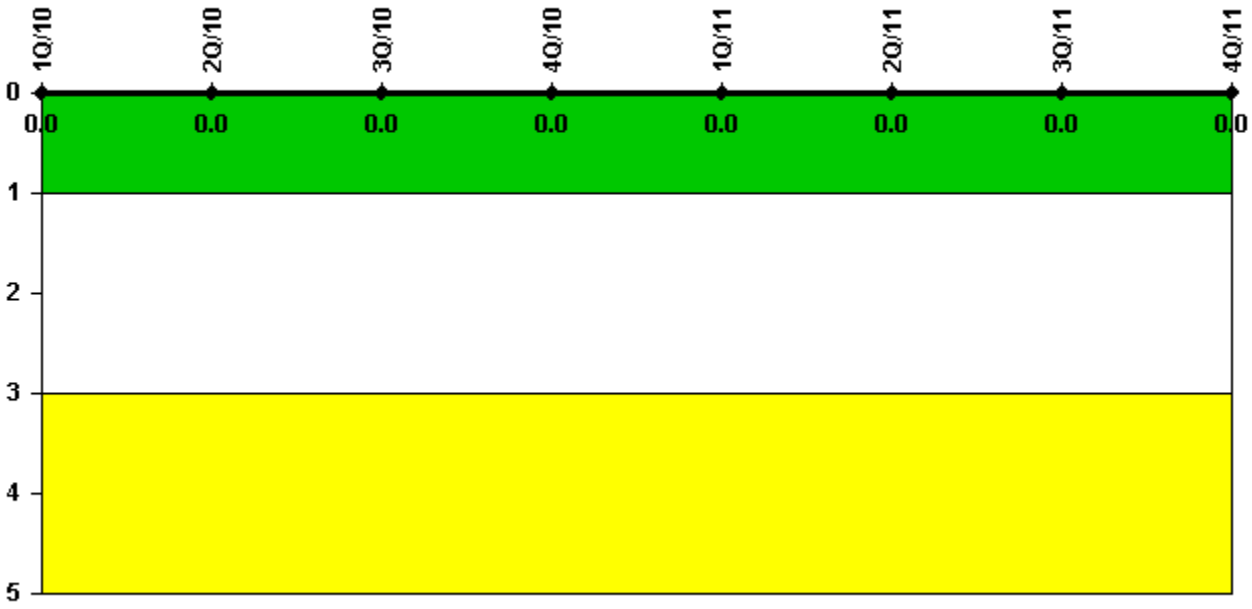
Thresholds: White > 2.0 Yellow > 5.0

Notes

Occupational Exposure Control Effectiveness	1Q/10	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11
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	1Q/10	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11
RETS/ODCM occurrences	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Security information not publicly available.

Action Matrix Summary | Inspection Findings Summary | PI Summary | Reactor Oversight Process

Last Modified: February 2, 2012