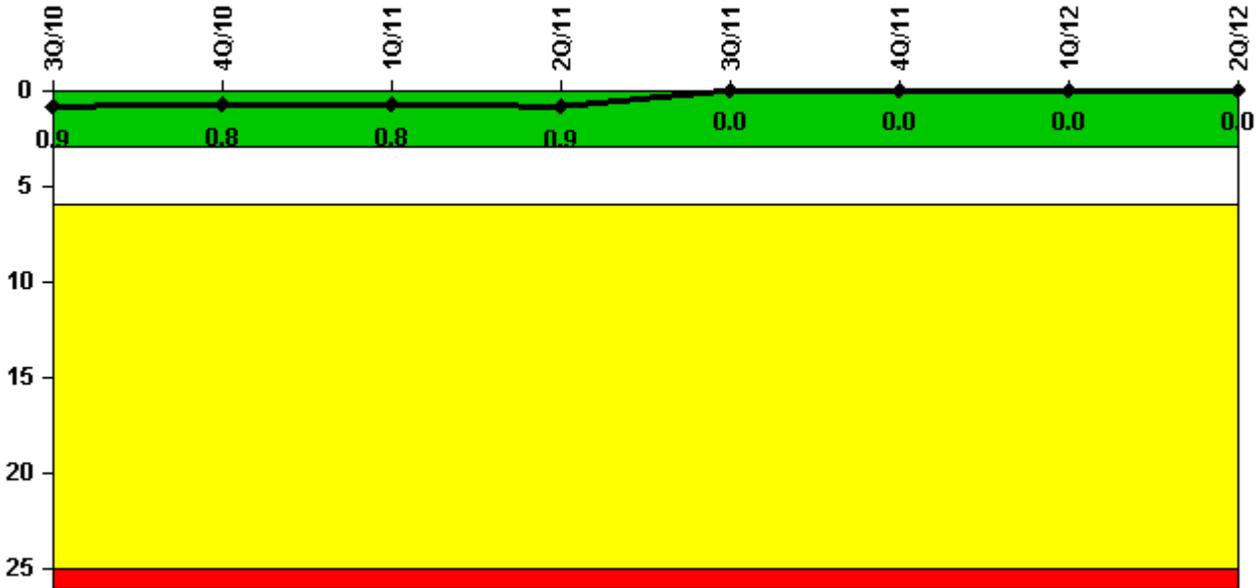


# Braidwood 2

## 2Q/2012 Performance Indicators

Licensee's General Comments: none

### Unplanned Scrams per 7000 Critical Hrs



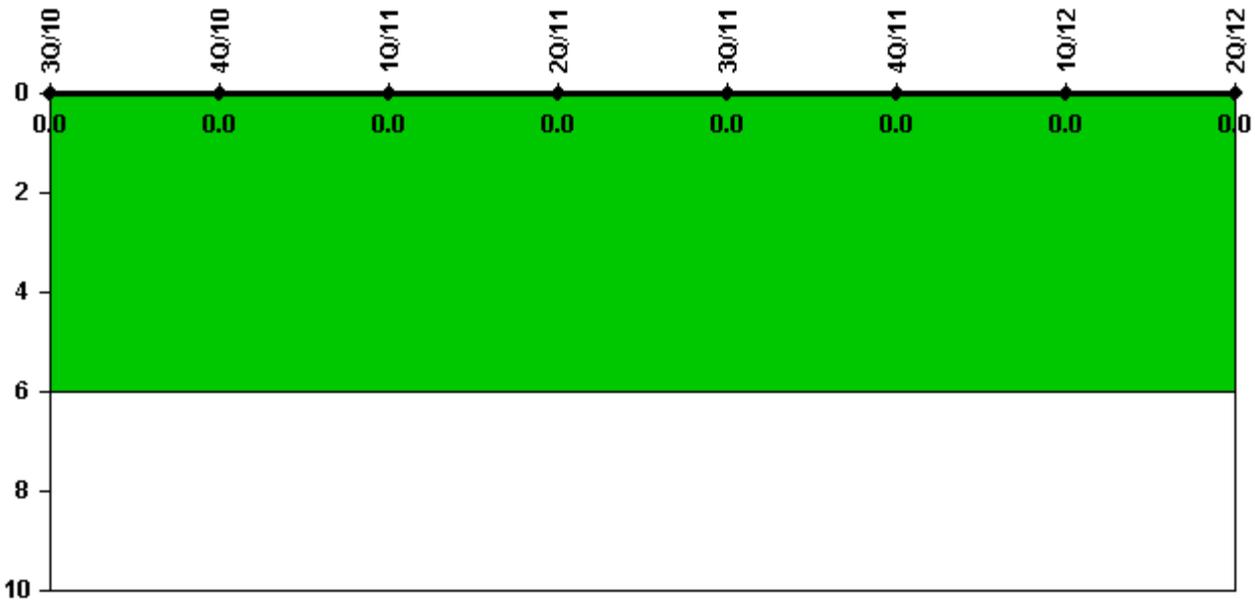
Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

### Notes

Unplanned Scrams per 7000 Critical Hrs	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11	1Q/12	2Q/12
Unplanned scrams	1.0	0	0	0	0	0	0	0
Critical hours	2064.6	2209.0	2159.0	1616.5	2208.0	2209.0	2183.0	2184.0
Indicator value	0.9	0.8	0.8	0.9	0	0	0	0

Licensee Comments: none

## Unplanned Power Changes per 7000 Critical Hrs



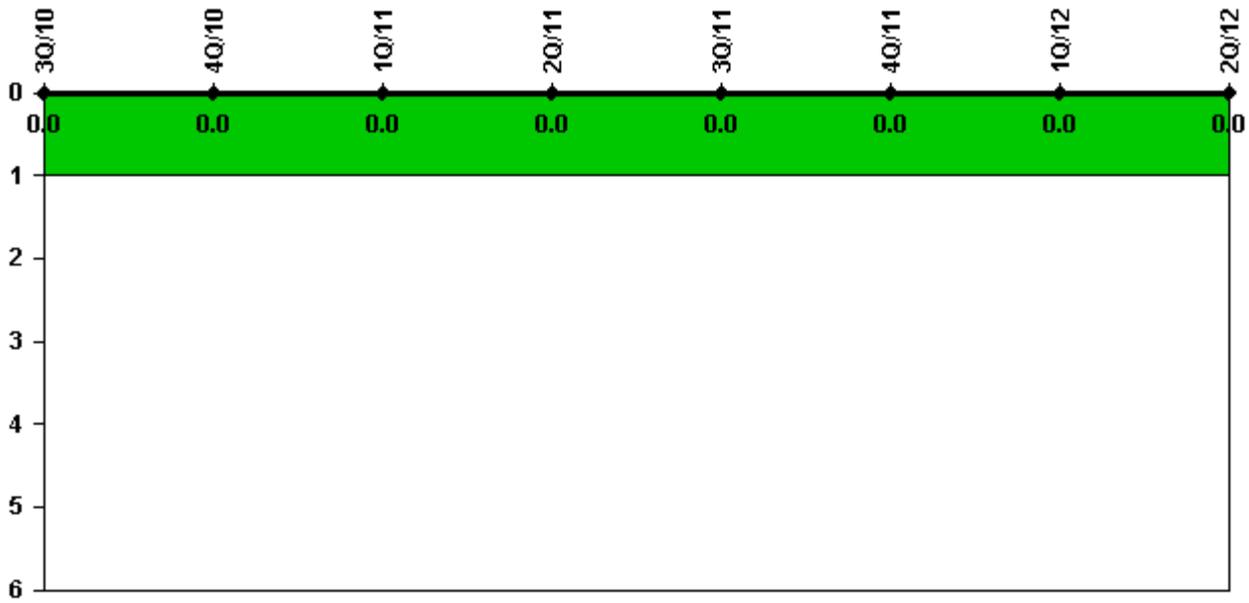
Thresholds: White > 6.0

### Notes

Unplanned Power Changes per 7000 Critical Hrs	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11	1Q/12	2Q/12
Unplanned power changes	0	0	0	0	0	0	0	0
Critical hours	2064.6	2209.0	2159.0	1616.5	2208.0	2209.0	2183.0	2184.0
Indicator value	0	0	0	0	0	0	0	0

Licensee Comments: none

## Unplanned Scrams with Complications



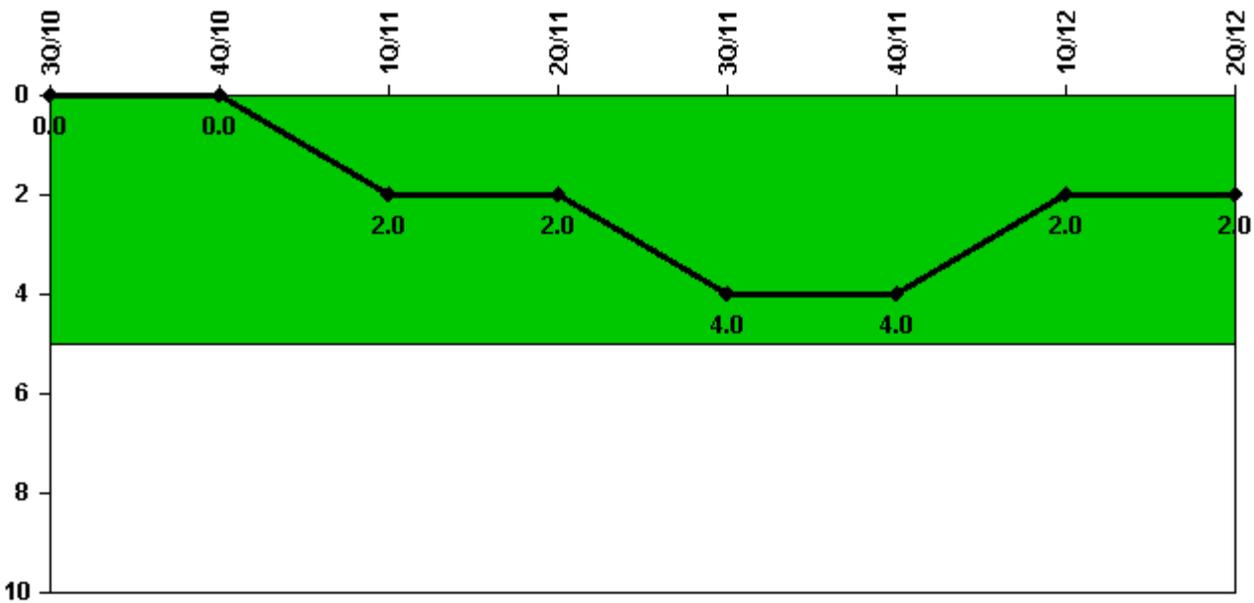
Thresholds: White > 1.0

### Notes

Unplanned Scrams with Complications	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11	1Q/12	2Q/12
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)	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11	1Q/12	2Q/12
Safety System Functional Failures	0	0	2	0	2	0	0	0
Indicator value	0	0	2	2	4	4	2	2

### Licensee Comments:

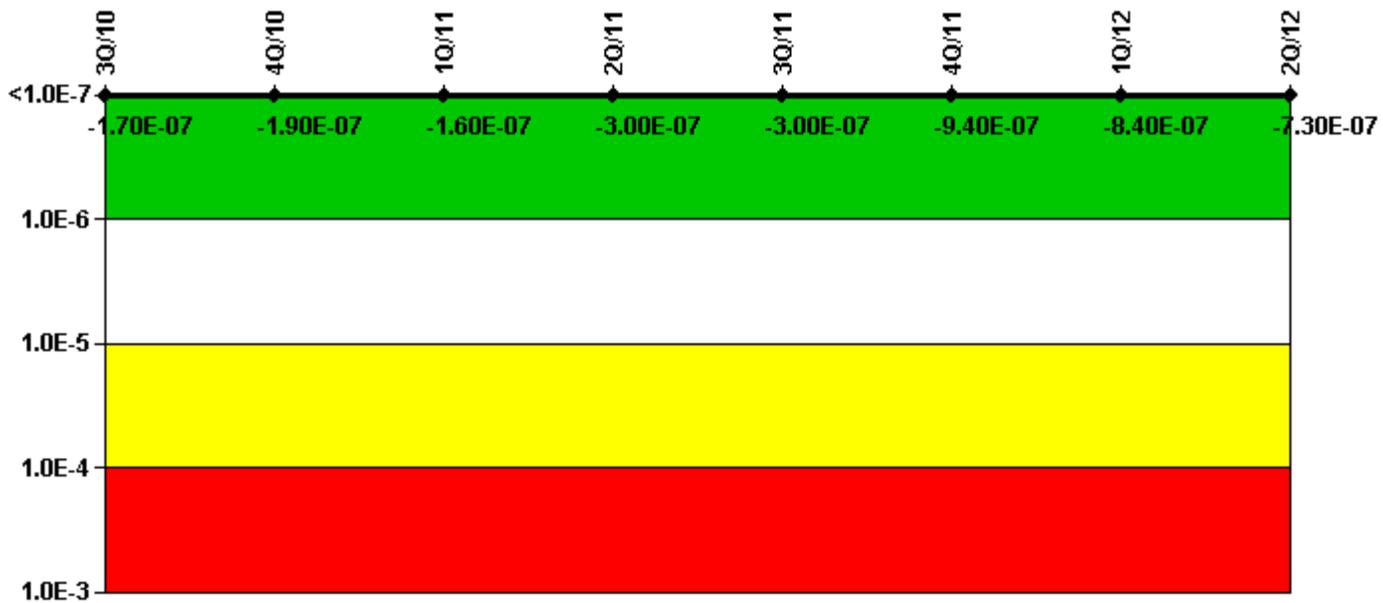
3Q/11: 2 SSFFs - 1) LER 2011-001-00, Asiatic Clam Shells in Essential Service Water Supply Piping to the 2A Auxiliary Feedwater Pump Resulted in Auxiliary Feedwater System Inoperability; and 2) LER 2011-002-00, Auxiliary Feedwater System Inoperability Due to Additional Asiatic Clam Shells in Essential Service Water Supply Piping

2Q/11: Update: 10/7/11 LER 2011-003-00 withdrawn - no SSFF.

2Q/11: 1 SSFF - LER 2011-003-00, Drained Sections of Piping in Auxiliary Feedwater Suction Lines Result in system Inoperability Due to Inadequate Technical Evaluation.

1Q/11: 2 SSFFs - 1) LER 2010-006-00, Technical Specifications Allowed Outage Time Extension Request for Component Cooling System Contained Inaccurate Design Information that Significantly Impacted the Technical Justification; and 2) LER 2010-007-00, Potential Loss of Residual Heat Removal System Safety Function in Mode 4 When aligned for Shutdown Cooling due to Potential for Flashing or Voiding of Coolant During a Shutdown Loss of Coolant Accident.

## 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/10	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11	1Q/12	2Q/12
UAI ( $\Delta$ CDF)	1.06E-08	-2.84E-09	2.25E-08	3.29E-09	-1.56E-09	1.12E-08	1.07E-07	5.26E-08
URI ( $\Delta$ CDF)	-1.83E-07	-1.84E-07	-1.80E-07	-3.03E-07	-3.00E-07	-9.47E-07	-9.46E-07	-7.78E-07
PLE	NO							
Indicator value	-1.70E-07	-1.90E-07	-1.60E-07	-3.00E-07	-3.00E-07	-9.40E-07	-8.40E-07	-7.30E-07

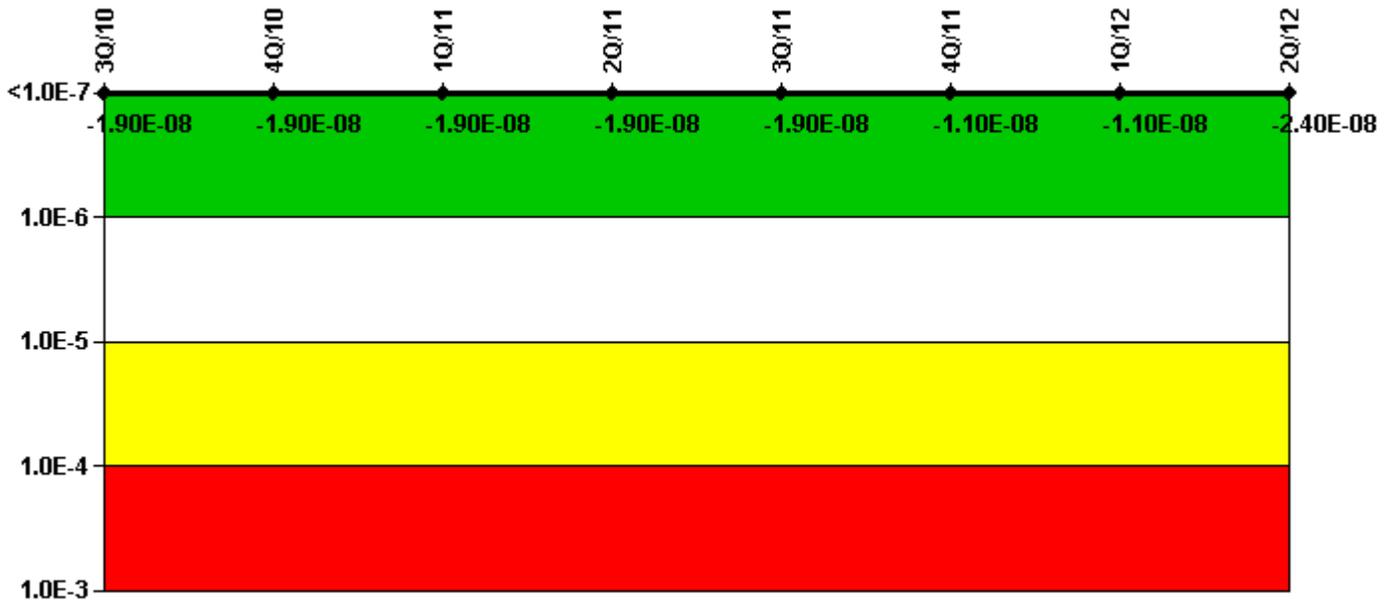
### Licensee Comments:

2Q/12: Changed PRA Parameter(s). 7/20/12 - 1) Braidwood PRA Model Revision No: BB011a approved March 29, 2012, revised Unit 1 and Unit 2 PRA inputs due to a periodic PRA model update. This included new data analysis, new HRA dependency analysis, and new pre-initiator HRA. This update also removed credit for operator action to crosstie AFW. 2) During an investigation of the why the Unit 2 CWS MSPI became White, it was identified that the model change made for the fourth quarter 2011 reporting period eliminated credit for opposite unit components/trains for the shared Component Cooling Water System. It was not recognized at the time that this required re-scoping of the CWS and EAC indexes. An evaluation of this oversight for the fourth quarter 2011 and 1st quarter 2012 was performed and determined there was no impact on the reported colors for EAC and CWS. CDE inputs to properly reflect this scope change were made for the second quarter 2012.

1Q/12: Changed PRA Parameter(s).

4Q/11: Changed PRA Parameter(s). Braidwood 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. Additionally, the RH8716 valves were removed from MSPI scope due to a sufficiently low Birnbaum value.

## 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/10	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11	1Q/12	2Q/12
UAI ( $\Delta$ CDF)	-1.46E-08	-1.46E-08	-1.46E-08	-1.46E-08	-1.46E-08	-8.05E-09	-8.05E-09	-1.58E-08
URI ( $\Delta$ CDF)	-4.09E-09	-4.09E-09	-4.07E-09	-4.07E-09	-4.07E-09	-3.13E-09	-3.13E-09	-8.18E-09
PLE	NO							
Indicator value	-1.90E-08	-1.90E-08	-1.90E-08	-1.90E-08	-1.90E-08	-1.10E-08	-1.10E-08	-2.40E-08

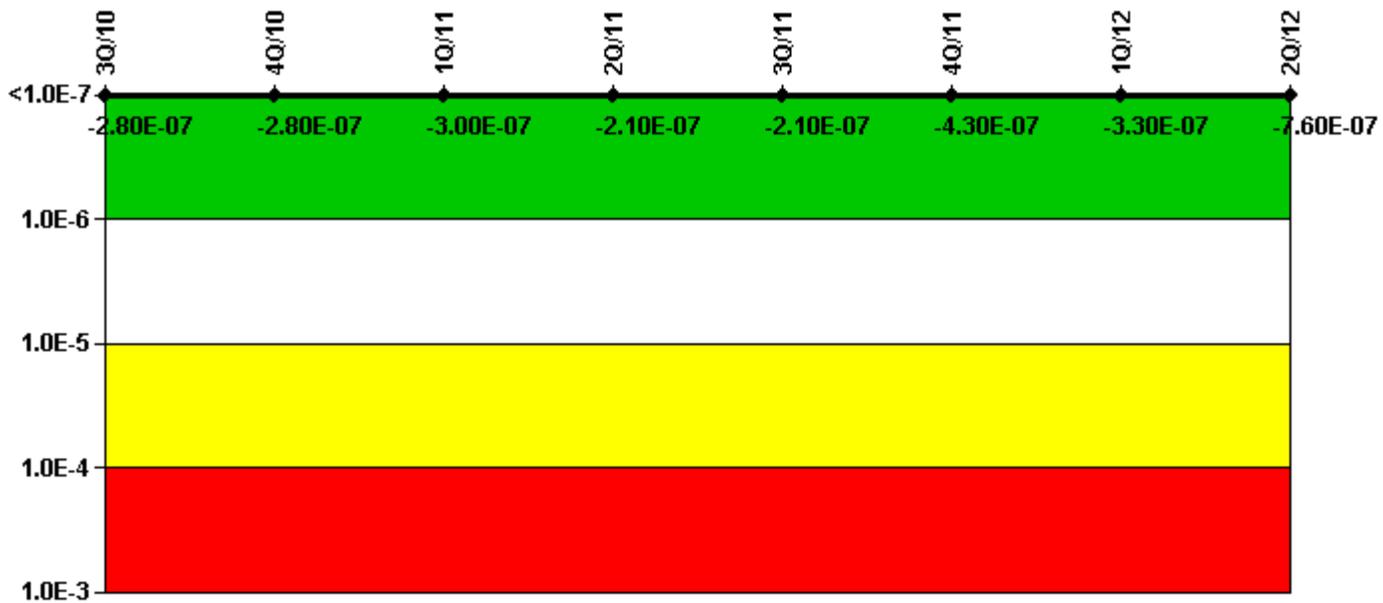
### Licensee Comments:

2Q/12: Changed PRA Parameter(s). 7/20/12 - Braidwood PRA Model Revision No: BB011a approved March 29, 2012, revised Unit 1 and Unit 2 PRA inputs due to a periodic PRA model update. This included new data analysis, new HRA dependency analysis, and new pre-initiator HRA. This update also removed credit for operator action to crosstie AFW.

1Q/12: Changed PRA Parameter(s).

4Q/11: Changed PRA Parameter(s). Braidwood 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. Additionally, the RH8716 valves were removed from MSPi scope due to a sufficiently low Birnbaum value.

## 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/10	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11	1Q/12	2Q/12
UAI ( $\Delta$ CDF)	1.16E-08	6.70E-09	-1.46E-08	8.32E-08	7.82E-08	1.10E-07	2.11E-07	-3.42E-08
URI ( $\Delta$ CDF)	-2.92E-07	-2.89E-07	-2.89E-07	-2.92E-07	-2.92E-07	-5.44E-07	-5.36E-07	-7.25E-07
PLE	NO							
Indicator value	-2.80E-07	-2.80E-07	-3.00E-07	-2.10E-07	-2.10E-07	-4.30E-07	-3.30E-07	-7.60E-07

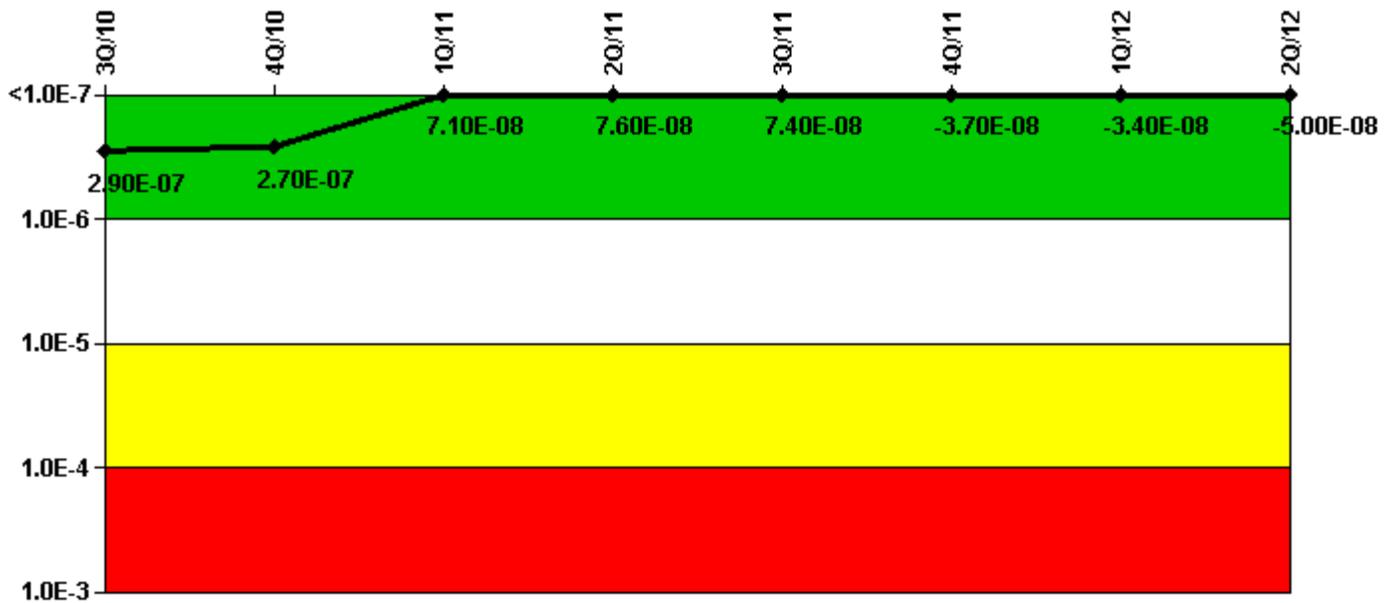
### Licensee Comments:

2Q/12: Changed PRA Parameter(s). 7/20/12 - Braidwood PRA Model Revision No: BB011a approved March 29, 2012, revised Unit 1 and Unit 2 PRA inputs due to a periodic PRA model update. This included new data analysis, new HRA dependency analysis, and new pre-initiator HRA. This update also removed credit for operator action to crosstie AFW.

1Q/12: Changed PRA Parameter(s).

4Q/11: Changed PRA Parameter(s). Braidwood 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. Additionally, the RH8716 valves were removed from MSPi scope due to a sufficiently low Birnbaum value.

# 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/10	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11	1Q/12	2Q/12
UAI (ΔCDF)	3.94E-07	3.72E-07	1.73E-07	1.79E-07	1.78E-07	9.98E-08	1.02E-07	5.19E-08
URI (ΔCDF)	-1.04E-07	-1.04E-07	-1.02E-07	-1.03E-07	-1.03E-07	-1.37E-07	-1.37E-07	-1.02E-07
PLE	NO							
Indicator value	2.90E-07	2.70E-07	7.10E-08	7.60E-08	7.40E-08	-3.70E-08	-3.40E-08	-5.00E-08

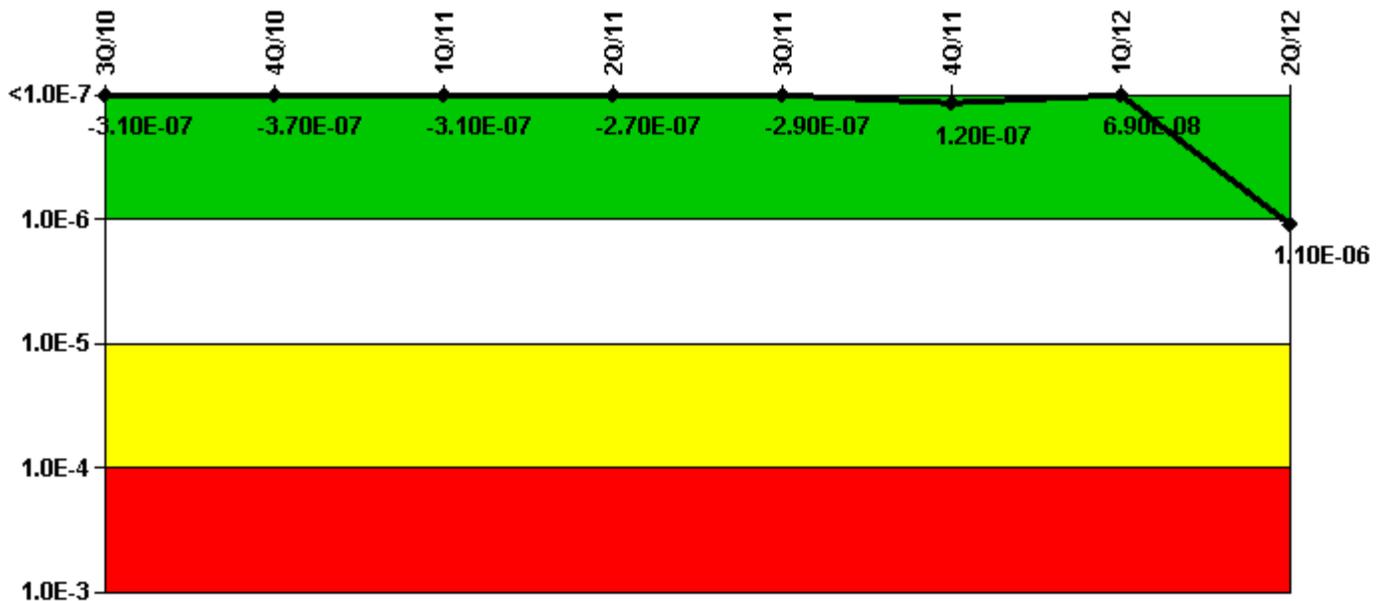
## Licensee Comments:

2Q/12: Changed PRA Parameter(s). 7/20/12 - Braidwood PRA Model Revision No: BB011a approved March 29, 2012, revised Unit 1 and Unit 2 PRA inputs due to a periodic PRA model update. This included new data analysis, new HRA dependency analysis, and new pre-initiator HRA. This update also removed credit for operator action to crosstie AFW.

1Q/12: Changed PRA Parameter(s).

4Q/11: Changed PRA Parameter(s). Braidwood 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. Additionally, the RH8716 valves were removed from MSPi scope due to a sufficiently low Birnbaum value.

## 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/10	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11	1Q/12	2Q/12
UAI (ΔCDF)	2.66E-07	2.11E-07	2.70E-07	3.18E-07	2.94E-07	6.54E-07	6.00E-07	3.75E-07
URI (ΔCDF)	-5.79E-07	-5.81E-07	-5.81E-07	-5.84E-07	-5.86E-07	-5.36E-07	-5.31E-07	7.64E-07
PLE	NO	NO						
Indicator value	-3.10E-07	-3.70E-07	-3.10E-07	-2.70E-07	-2.90E-07	1.20E-07	6.90E-08	1.10E-06

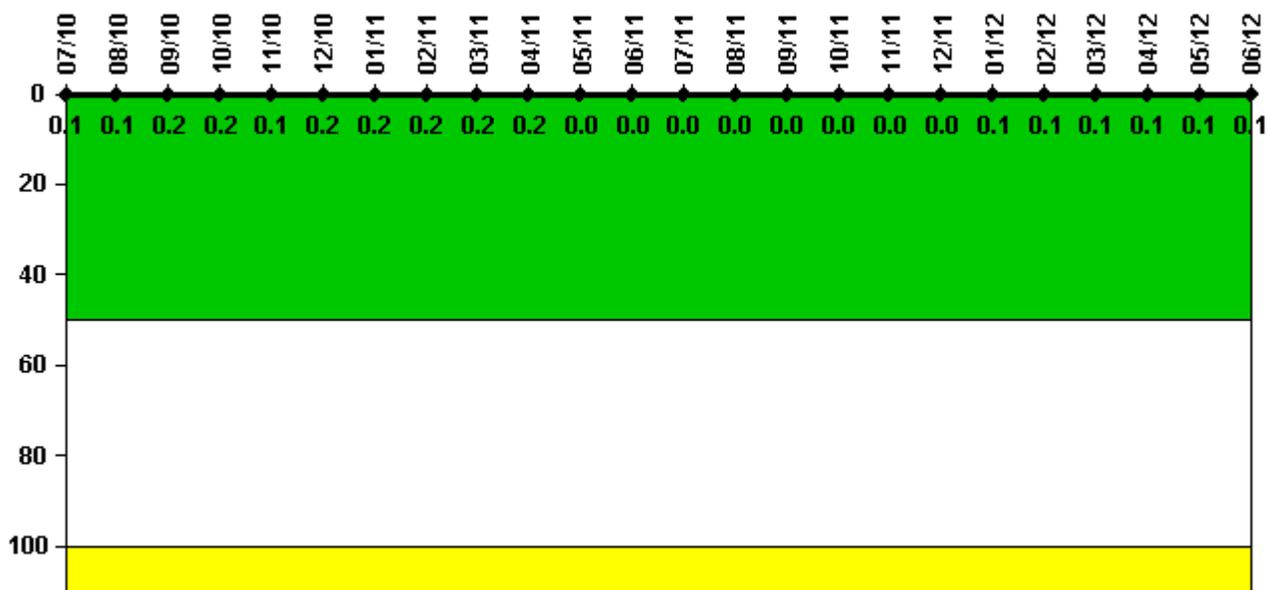
### Licensee Comments:

2Q/12: Risk Cap Invoked. Changed PRA Parameter(s). 7/20/12 - 1) Braidwood PRA Model Revision No: BB011a approved March 29, 2012, revised Unit 1 and Unit 2 PRA inputs due to a periodic PRA model update. This included new data analysis, new HRA dependency analysis, and new pre-initiator HRA. This update also removed credit for operator action to crosstie AFW. 2) The Unit 2 Cooling Water System (CWS) MSPI turned White for the second quarter 2012 following a PRA model revision. It should be noted that there was no degradation of system performance during the second quarter. Preliminary evaluation of the White condition identified that the model update inadvertently eliminated credit for starting the swing component cooling water (CC) pump. Elimination of this credit resulted in a significant increase in the risk impact of 2 previous CC pump failures. With proper credit for the swing pump, it is expected that the CWS MSPI would have remained Green. It should also be noted that both of the CC pump failures are due to failure of a low discharge pressure switch which has subsequently been classified as a low risk significant function. As such, failures of the low discharge pressure switch are no longer considered an MSPI failure. Finally, one of the CC pump failures will roll out of the monitoring period during the third quarter 2012 restoring the CWS MSPI to Green. 3) During an investigation of the why the Unit 2 CWS MSPI became White, it was identified that the model change made for the fourth quarter 2011 reporting period eliminated credit for opposite unit components/trains for the shared Component Cooling Water System. It was not recognized at the time that this required re-scoping of the CWS and EAC indexes. An evaluation of this oversight for the fourth quarter 2011 and 1st quarter 2012 was performed and determined there was no impact on the reported colors for EAC and CWS. CDE inputs to properly reflect this scope change were made for the second quarter 2012.

1Q/12: Changed PRA Parameter(s).

4Q/11: Changed PRA Parameter(s). Braidwood 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. Additionally, the RH8716 valves were removed from MSPI scope due to a sufficiently low Birnbaum value.

### Reactor Coolant System Activity



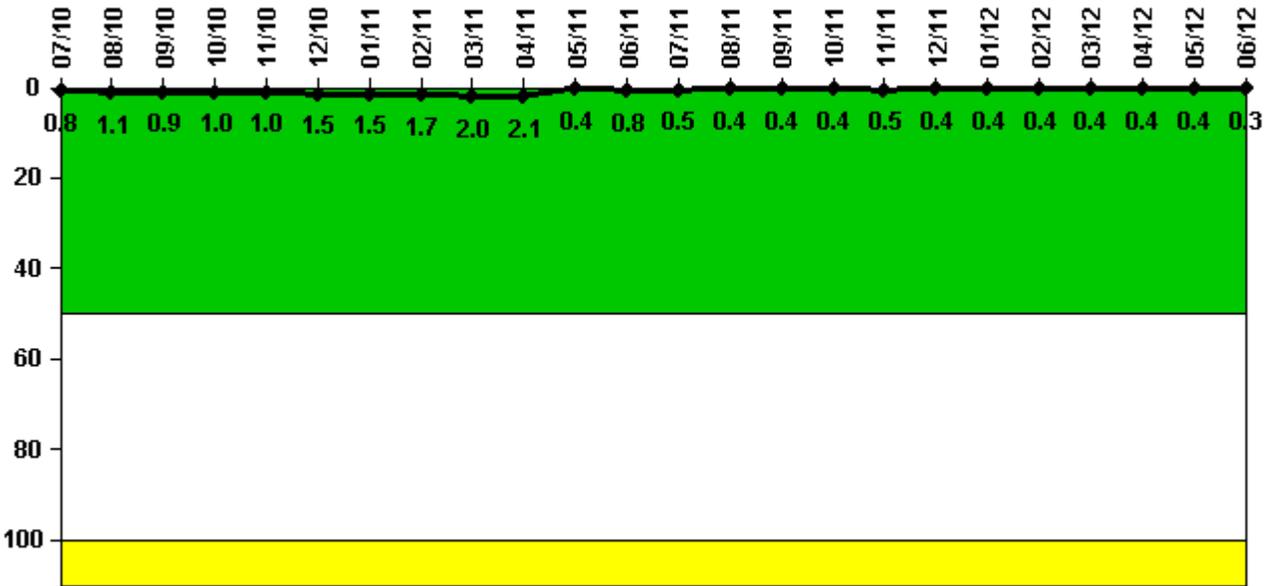
Thresholds: White > 50.0 Yellow > 100.0

### Notes

Reactor Coolant System Activity	7/10	8/10	9/10	10/10	11/10	12/10	1/11	2/11	3/11	4/11	5/11	6/11
Maximum activity	0.001310	0.001340	0.001570	0.001580	0.001490	0.001580	0.001640	0.001690	0.001680	0.001680	0.000332	0.000348
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	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0	0
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	0.000363	0.000383	0.000392	0.000436	0.000441	0.000479	0.000531	0.000503	0.000542	0.000543	0.000545	0.000584
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	0.1	0.1	0.1	0.1	0.1	0.1

Licensee Comments: none

## Reactor Coolant System Leakage



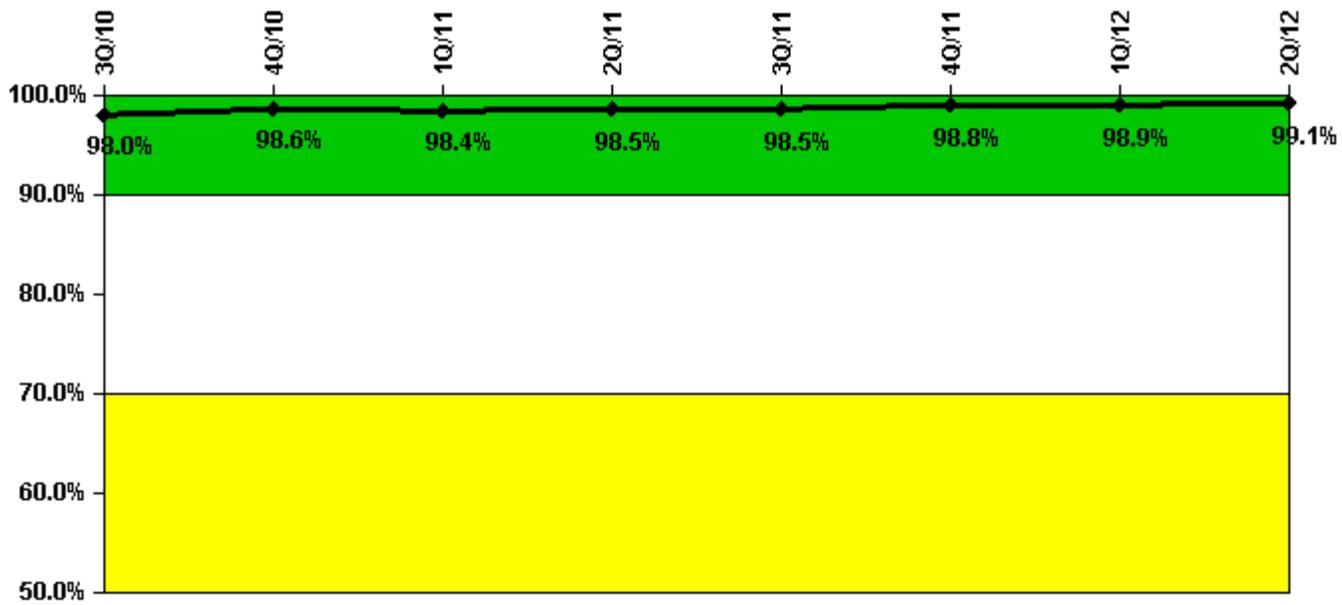
Thresholds: White > 50.0 Yellow > 100.0

### Notes

<b>Reactor Coolant System Leakage</b>	<b>7/10</b>	<b>8/10</b>	<b>9/10</b>	<b>10/10</b>	<b>11/10</b>	<b>12/10</b>	<b>1/11</b>	<b>2/11</b>	<b>3/11</b>	<b>4/11</b>	<b>5/11</b>	<b>6/11</b>
Maximum leakage	0.080	0.107	0.092	0.098	0.103	0.150	0.147	0.171	0.199	0.205	0.038	0.076
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	0.8	1.1	0.9	1.0	1.0	1.5	1.5	1.7	2.0	2.1	0.4	0.8
<b>Reactor Coolant System Leakage</b>	<b>7/11</b>	<b>8/11</b>	<b>9/11</b>	<b>10/11</b>	<b>11/11</b>	<b>12/11</b>	<b>1/12</b>	<b>2/12</b>	<b>3/12</b>	<b>4/12</b>	<b>5/12</b>	<b>6/12</b>
Maximum leakage	0.045	0.041	0.038	0.039	0.050	0.035	0.036	0.038	0.039	0.040	0.036	0.032
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	0.5	0.4	0.4	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.3

Licensee Comments: none

## Drill/Exercise Performance



Thresholds: White < 90.0% Yellow < 70.0%

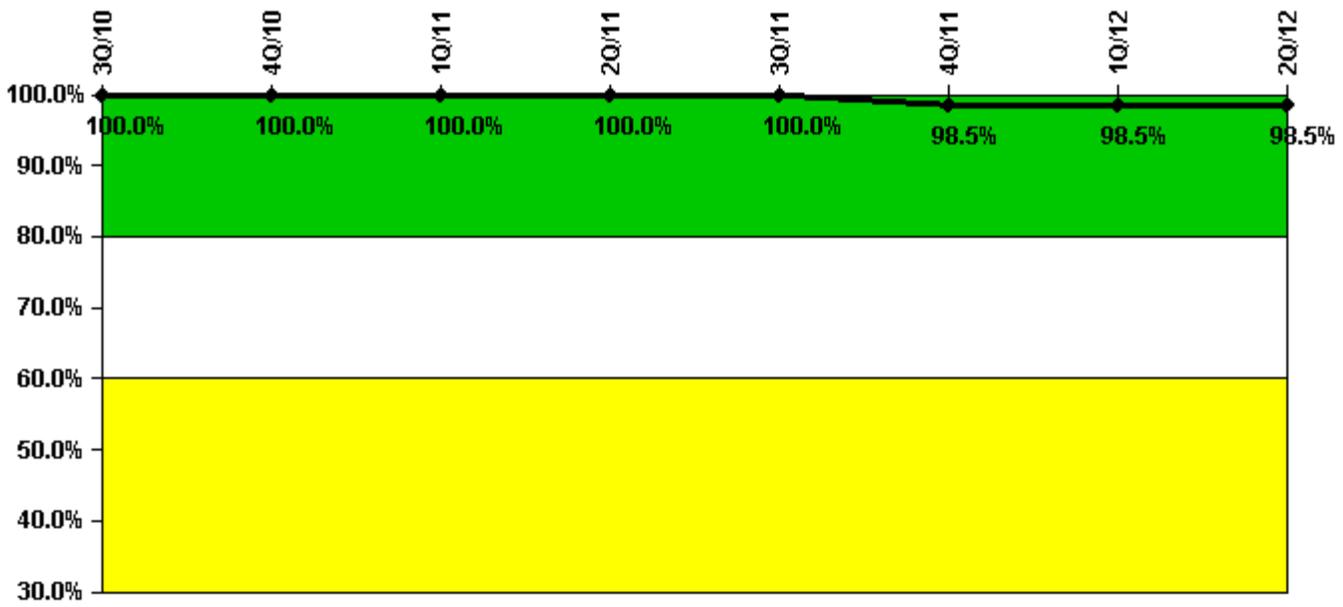
### Notes

Drill/Exercise Performance	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11	1Q/12	2Q/12
Successful opportunities	55.0	114.0	39.0	16.0	56.0	78.0	67.0	22.0
Total opportunities	56.0	114.0	40.0	16.0	56.0	78.0	69.0	22.0
Indicator value	98.0%	98.6%	98.4%	98.5%	98.5%	98.8%	98.9%	99.1%

Licensee Comments:

1Q/11: March data revised to reflect a failed DEP for an actual event for late declaraton.

## ERO Drill Participation



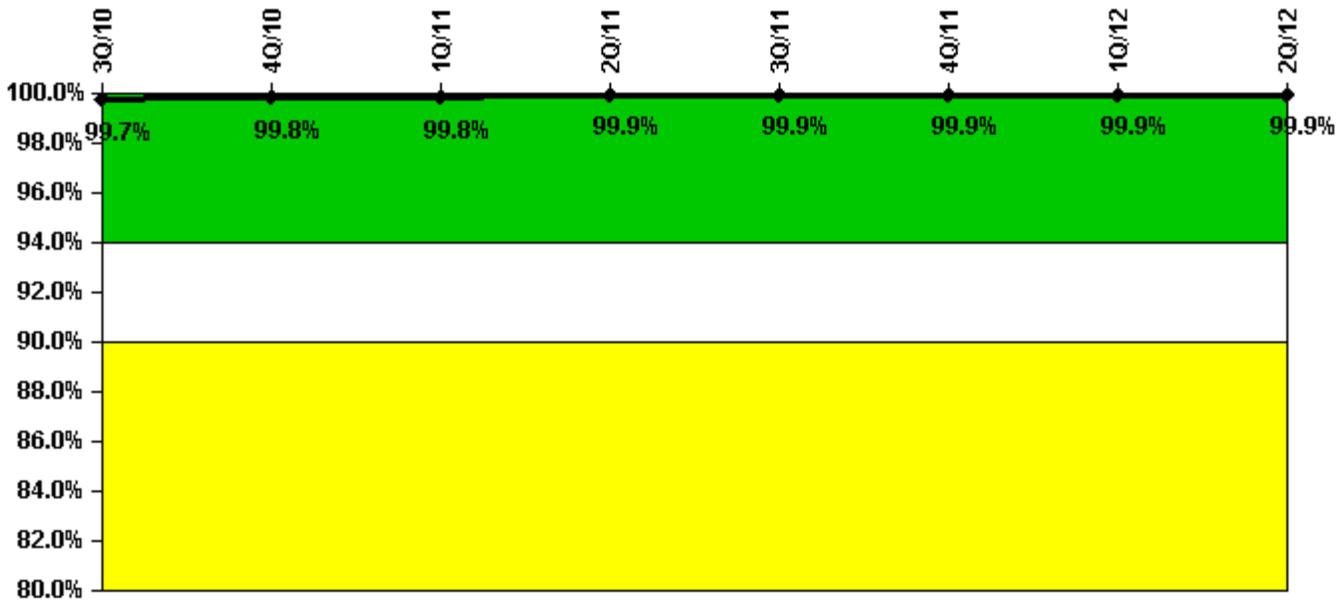
Thresholds: White < 80.0% Yellow < 60.0%

### Notes

ERO Drill Participation	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11	1Q/12	2Q/12
Participating Key personnel	72.0	67.0	64.0	62.0	65.0	65.0	67.0	66.0
Total Key personnel	72.0	67.0	64.0	62.0	65.0	66.0	68.0	67.0
Indicator value	100.0%	100.0%	100.0%	100.0%	100.0%	98.5%	98.5%	98.5%

Licensee Comments: none

## Alert & Notification System



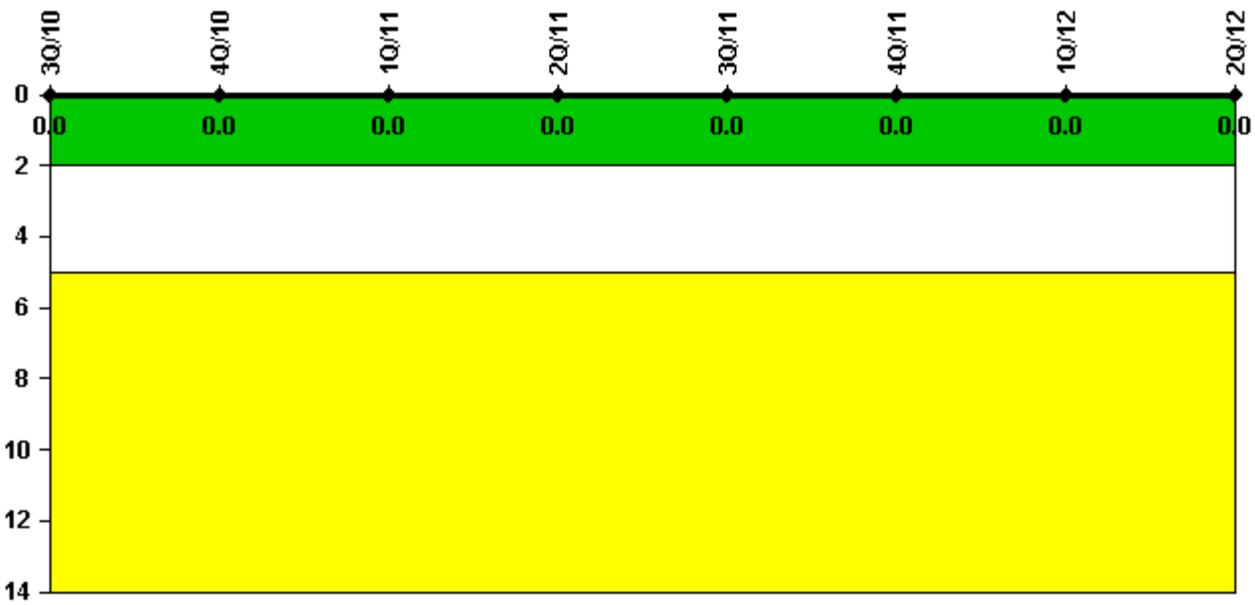
Thresholds: White < 94.0% Yellow < 90.0%

### Notes

Alert & Notification System	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11	1Q/12	2Q/12
Successful siren-tests	3116	3119	3068	3065	3070	3071	3117	3063
Total sirens-tests	3120	3120	3072	3072	3072	3072	3120	3072
Indicator value	99.7%	99.8%	99.8%	99.9%	99.9%	99.9%	99.9%	99.9%

Licensee Comments: none

## Occupational Exposure Control Effectiveness



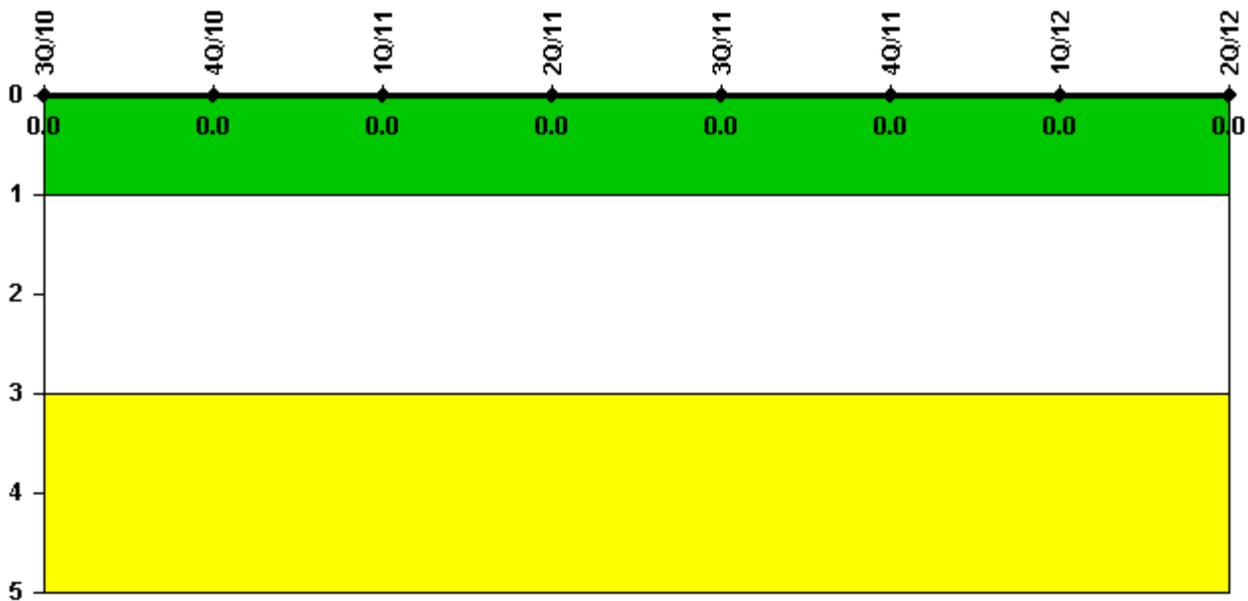
Thresholds: White > 2.0 Yellow > 5.0

### Notes

Occupational Exposure Control Effectiveness	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11	1Q/12	2Q/12
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	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11	1Q/12	2Q/12
RETS/ODCM occurrences	0	0	0	0	0	0	0	0
Indicator value	0	0	0	0	0	0	0	0

Licensee Comments: none

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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.

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