

Crystal River 3

4Q/2011 Performance Indicators

Crystal River 3 has been shutdown since September 2009. Because the Unplanned Scrams with Complications (USwC) and Mitigating Systems Performance Index (MSPI) performance indicators (PIs) are heavily influenced by the operational status of the reactor, NRC staff has evaluated the validity of these PIs. The NRC also discussed the question of PI validity with NEI and other external stakeholders during the July 13, 2011, ROP working group meeting. Because the reactor has not been critical for two years, there have been no opportunities for a scram that would count in the USwC indicator. Similarly, the MSPI values are skewed because of the very low number of critical hours in three years. For these reasons, the staff has determined that these PIs no longer provide valid indications of performance.

[Licensee's General Comments: none](#)

Unplanned Scrams per 7000 Critical Hrs



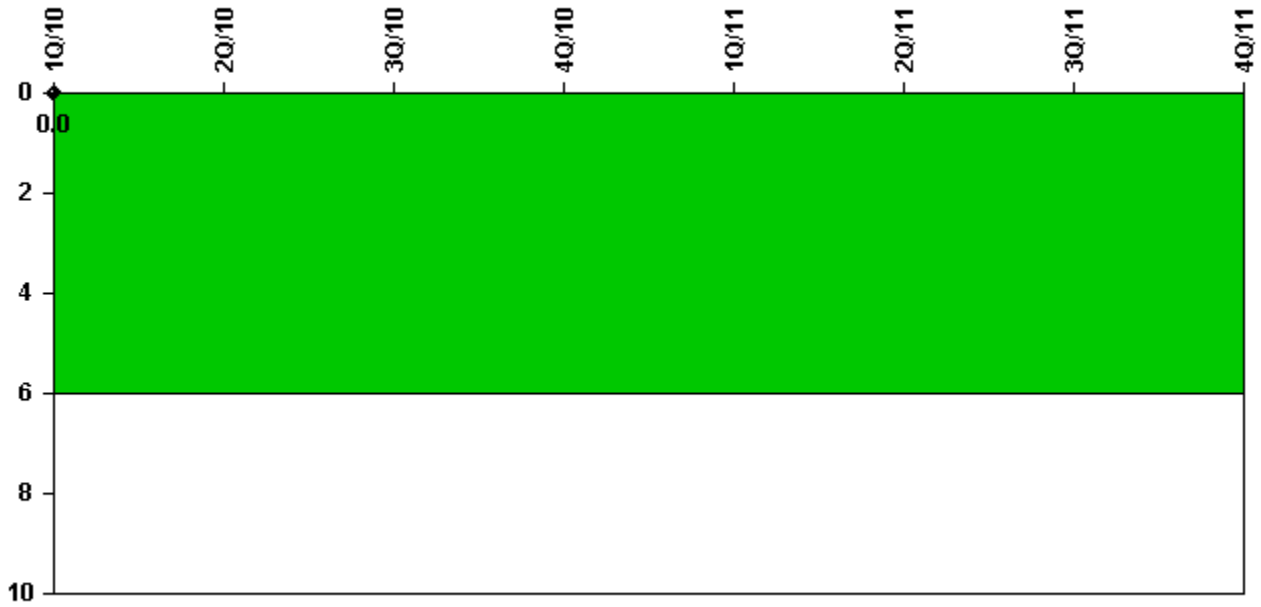
Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

Notes

Unplanned Scrams per 7000 Critical Hrs	1Q/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	0	0	0	0	0	0	0	0
Indicator value	1.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Licensee Comments: none

Unplanned Power Changes per 7000 Critical Hrs



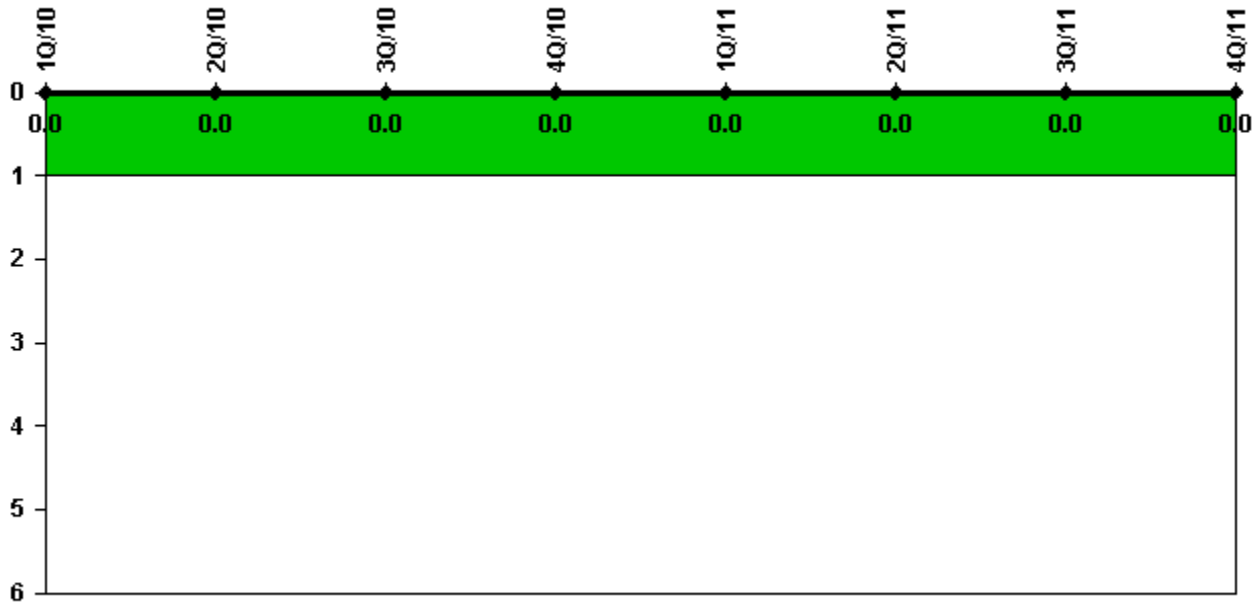
Thresholds: White > 6.0

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	0	0	0	0	0	0
Critical hours	0	0	0	0	0	0	0	0
Indicator value	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Licensee Comments: none

Unplanned Scrams with Complications



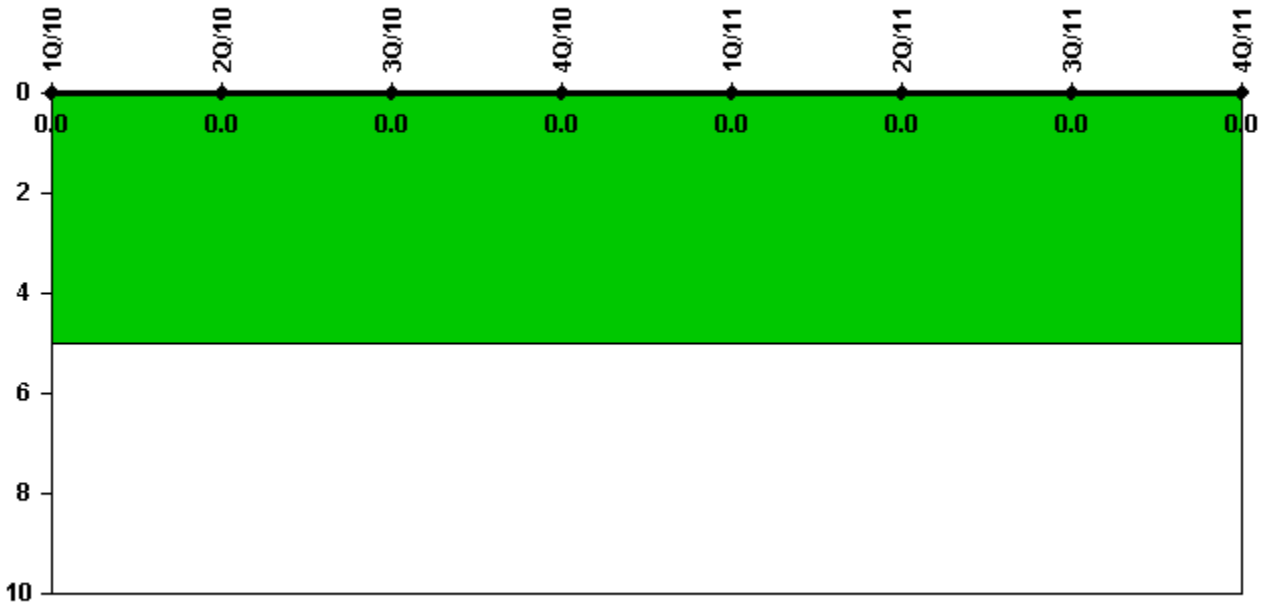
Thresholds: White > 1.0

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)



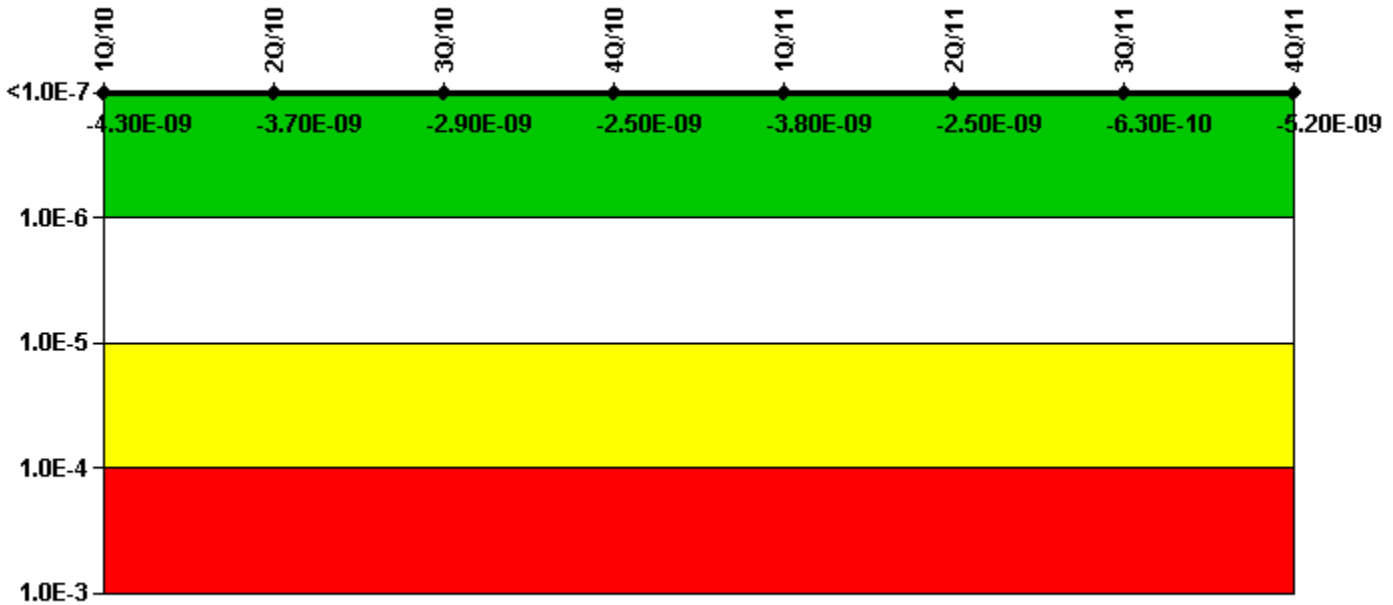
Thresholds: White > 5.0

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	0	0	0	0
Indicator value	0	0	0	0	0	0	0	0

Licensee Comments: none

Mitigating Systems Performance Index, Emergency AC Power System



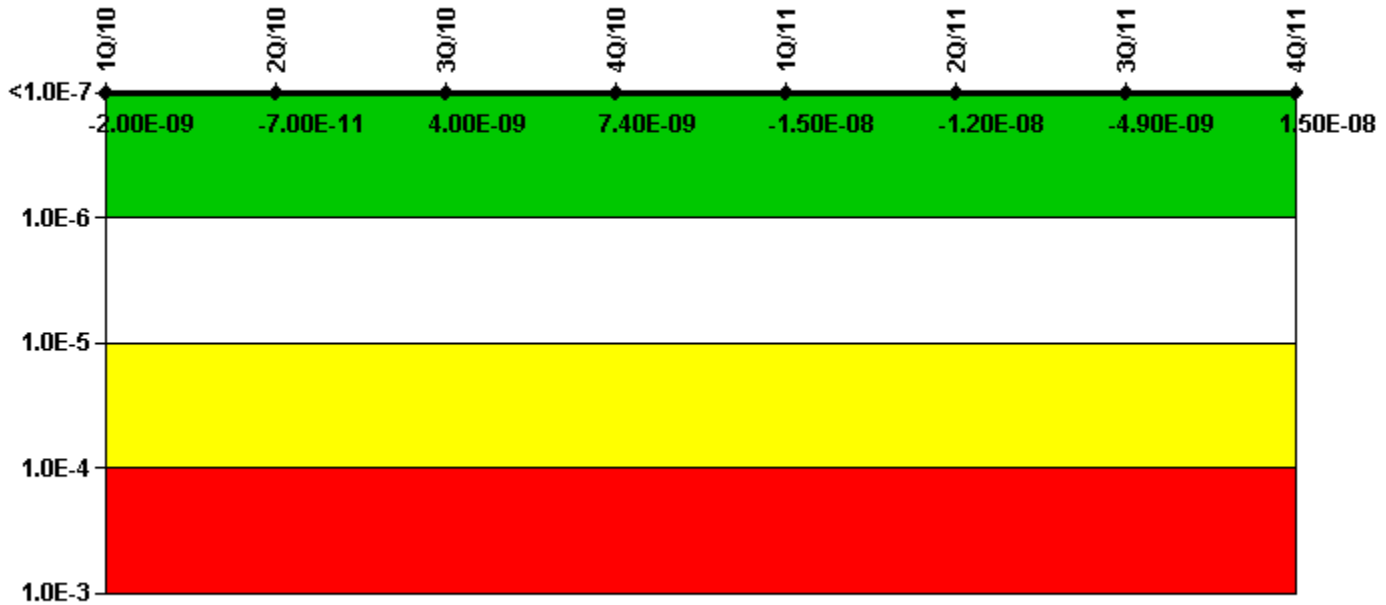
Thresholds: White > 1.00E-6 Yellow > 1.00E-5 Red > 1.00E-4

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 (Δ CDF)	-3.03E-09	-2.38E-09	-1.55E-09	-8.71E-10	-2.14E-09	-8.44E-10	1.04E-09	-3.56E-09
URI (Δ CDF)	-1.31E-09	-1.31E-09	-1.31E-09	-1.68E-09	-1.68E-09	-1.68E-09	-1.68E-09	-1.68E-09
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-4.30E-09	-3.70E-09	-2.90E-09	-2.50E-09	-3.80E-09	-2.50E-09	-6.30E-10	-5.20E-09

Licensee Comments: none

Mitigating Systems Performance Index, High Pressure Injection System



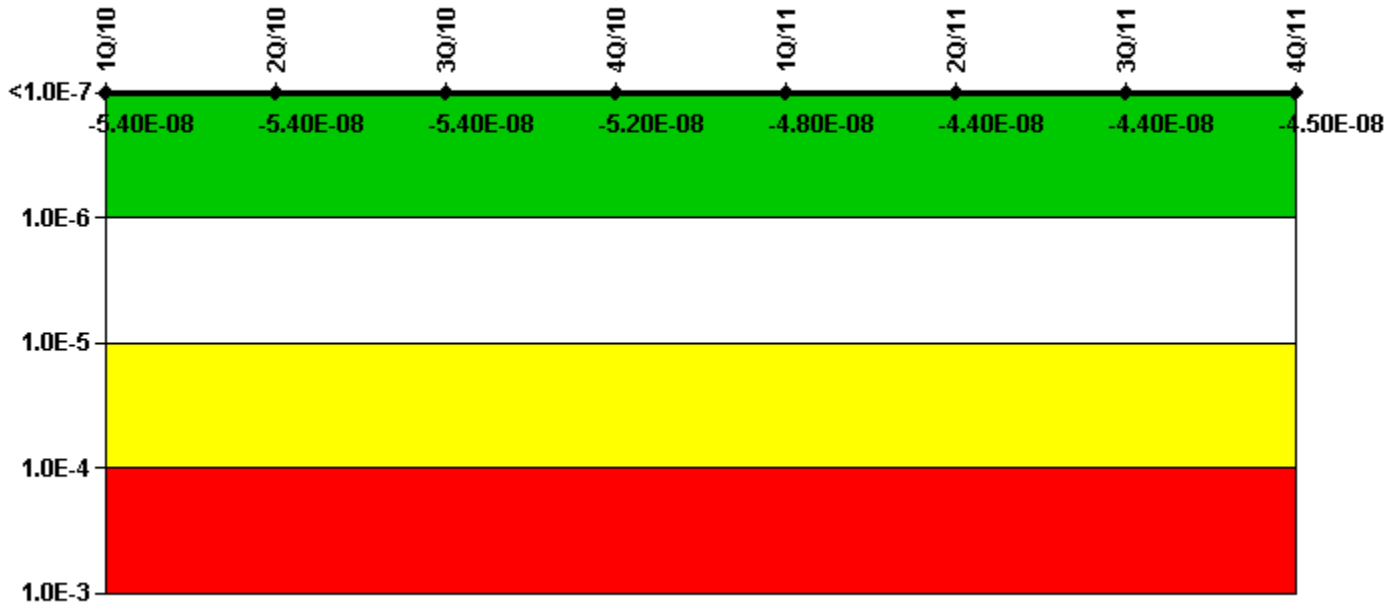
Thresholds: White > 1.00E-6 Yellow > 1.00E-5 Red > 1.00E-4

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 (Δ CDF)	8.05E-09	9.98E-09	1.41E-08	1.74E-08	-4.88E-09	-1.86E-09	5.00E-09	2.48E-08
URI (Δ CDF)	-1.01E-08	-1.01E-08	-1.00E-08	-1.00E-08	-9.96E-09	-9.91E-09	-9.87E-09	-9.83E-09
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-2.00E-09	-7.00E-11	4.00E-09	7.40E-09	-1.50E-08	-1.20E-08	-4.90E-09	1.50E-08

Licensee Comments: none

Mitigating Systems Performance Index, Heat Removal System



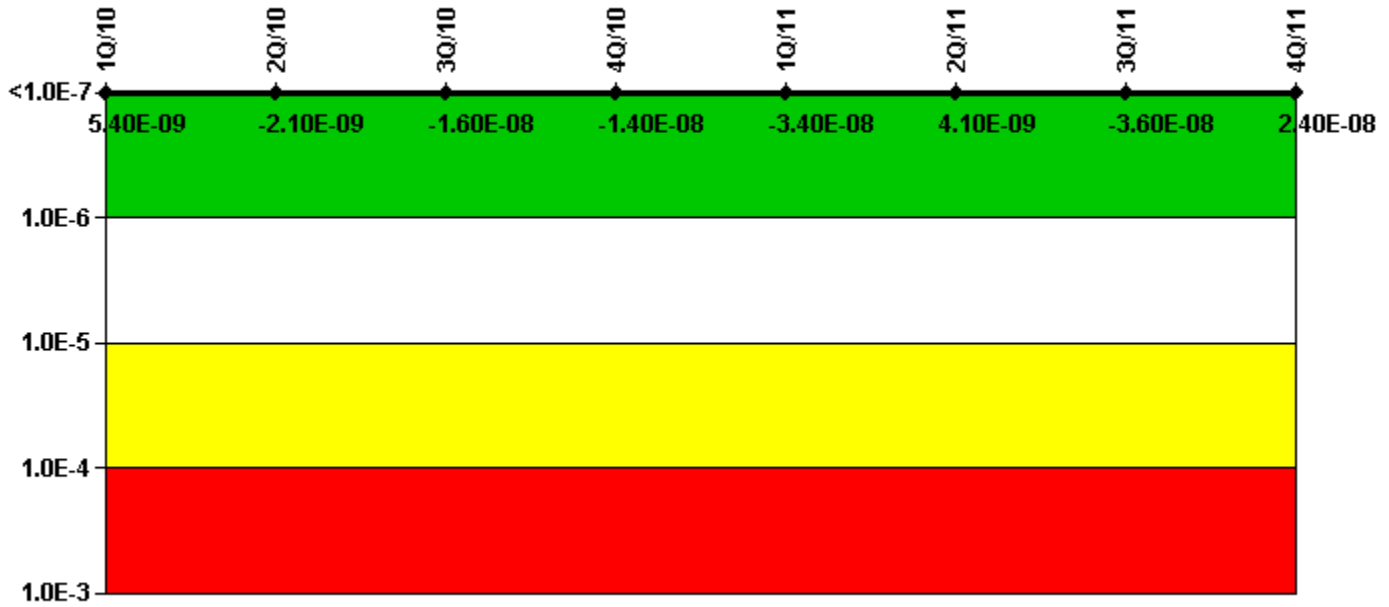
Thresholds: White > 1.00E-6 Yellow > 1.00E-5 Red > 1.00E-4

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 (Δ CDF)	-6.82E-09	-6.54E-09	-6.54E-09	-6.28E-09	-4.90E-09	-2.37E-09	-3.52E-09	-5.87E-09
URI (Δ CDF)	-4.76E-08	-4.76E-08	-4.72E-08	-4.59E-08	-4.30E-08	-4.17E-08	-4.02E-08	-3.88E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-5.40E-08	-5.40E-08	-5.40E-08	-5.20E-08	-4.80E-08	-4.40E-08	-4.40E-08	-4.50E-08

Licensee Comments: none

Mitigating Systems Performance Index, Residual Heat Removal System



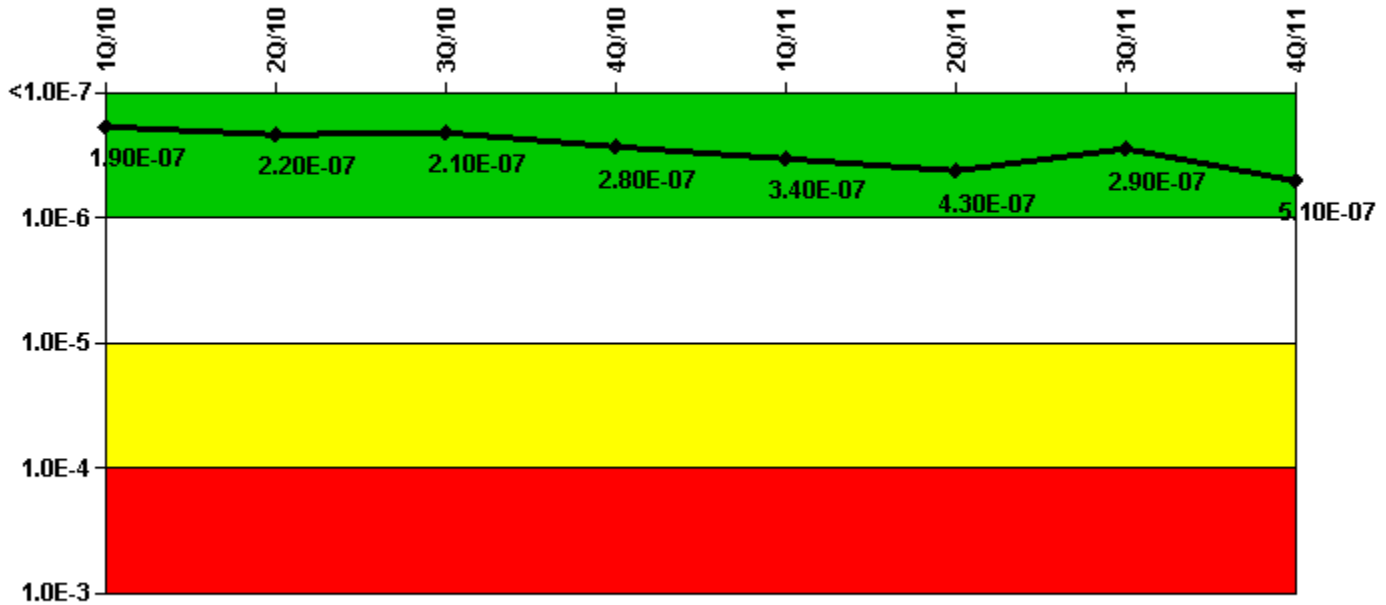
Thresholds: White > 1.00E-6 Yellow > 1.00E-5 Red > 1.00E-4

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 (Δ CDF)	3.50E-08	2.75E-08	1.36E-08	1.73E-08	-6.36E-10	3.87E-08	-5.17E-10	6.19E-08
URI (Δ CDF)	-2.95E-08	-2.95E-08	-3.01E-08	-3.16E-08	-3.31E-08	-3.45E-08	-3.60E-08	-3.74E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	5.40E-09	-2.10E-09	-1.60E-08	-1.40E-08	-3.40E-08	4.10E-09	-3.60E-08	2.40E-08

Licensee Comments: none

Mitigating Systems Performance Index, Cooling Water Systems



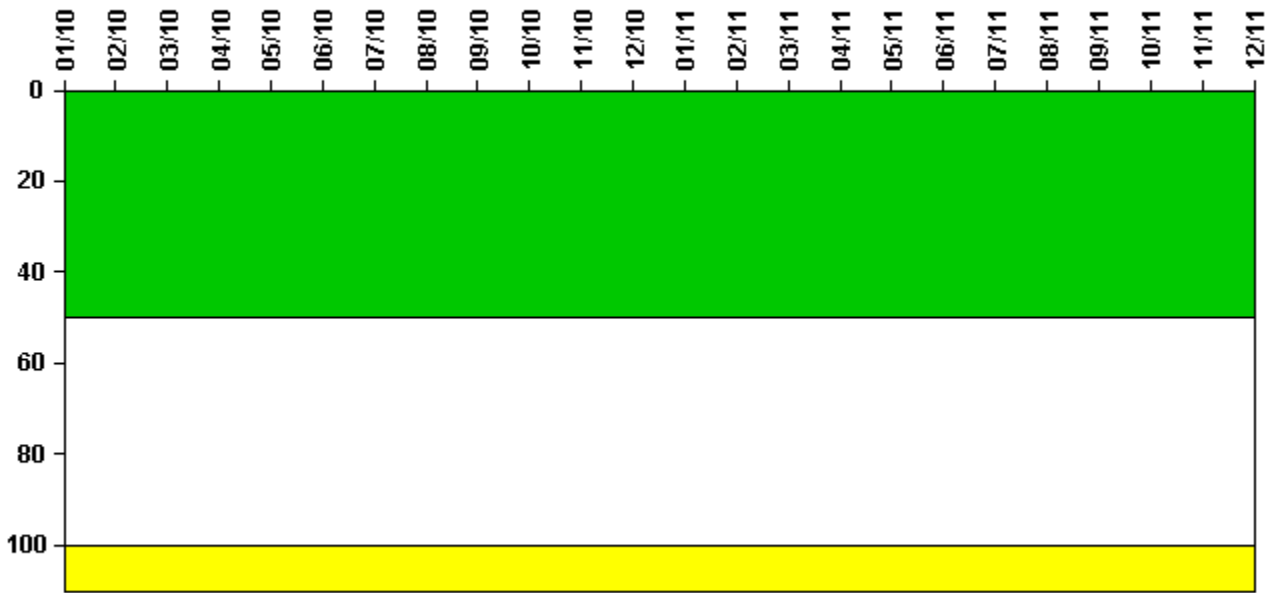
Thresholds: White > 1.00E-6 Yellow > 1.00E-5 Red > 1.00E-4

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)	2.11E-07	2.33E-07	2.21E-07	2.80E-07	3.34E-07	4.24E-07	2.81E-07	4.98E-07
URI (ΔCDF)	-1.58E-08	-1.34E-08	-1.09E-08	4.49E-09	7.23E-09	1.01E-08	1.31E-08	1.62E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	1.90E-07	2.20E-07	2.10E-07	2.80E-07	3.40E-07	4.30E-07	2.90E-07	5.10E-07

Licensee Comments: none

Reactor Coolant System Activity



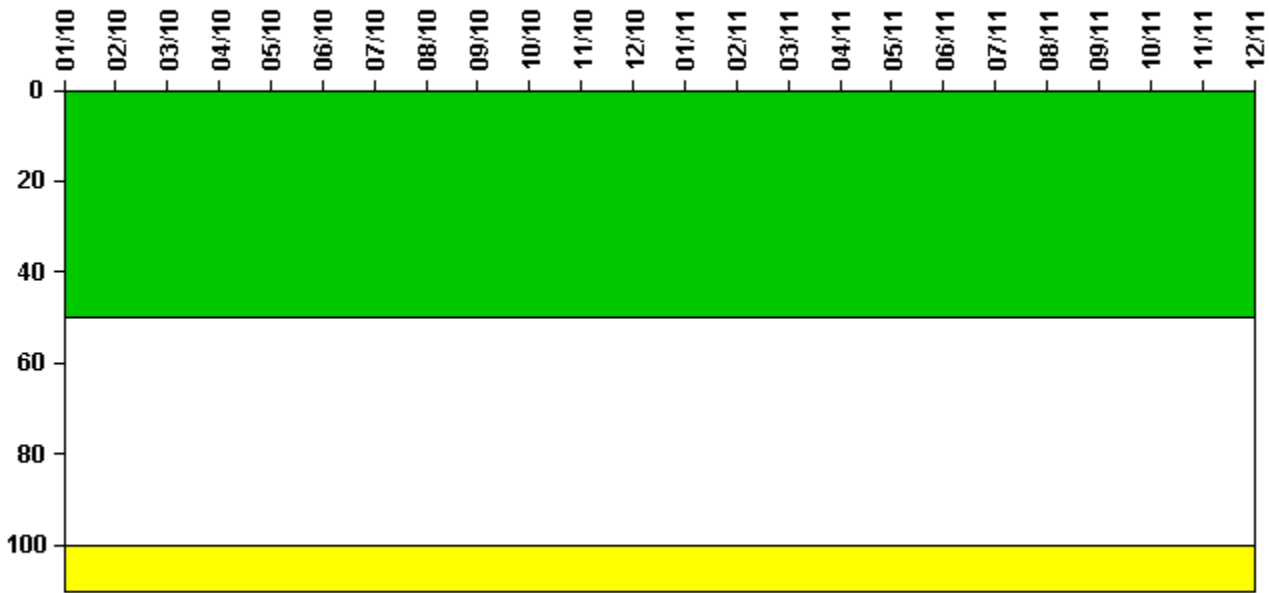
Thresholds: White > 50.0 Yellow > 100.0

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	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
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	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
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	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
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	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Licensee Comments: none

Reactor Coolant System Leakage



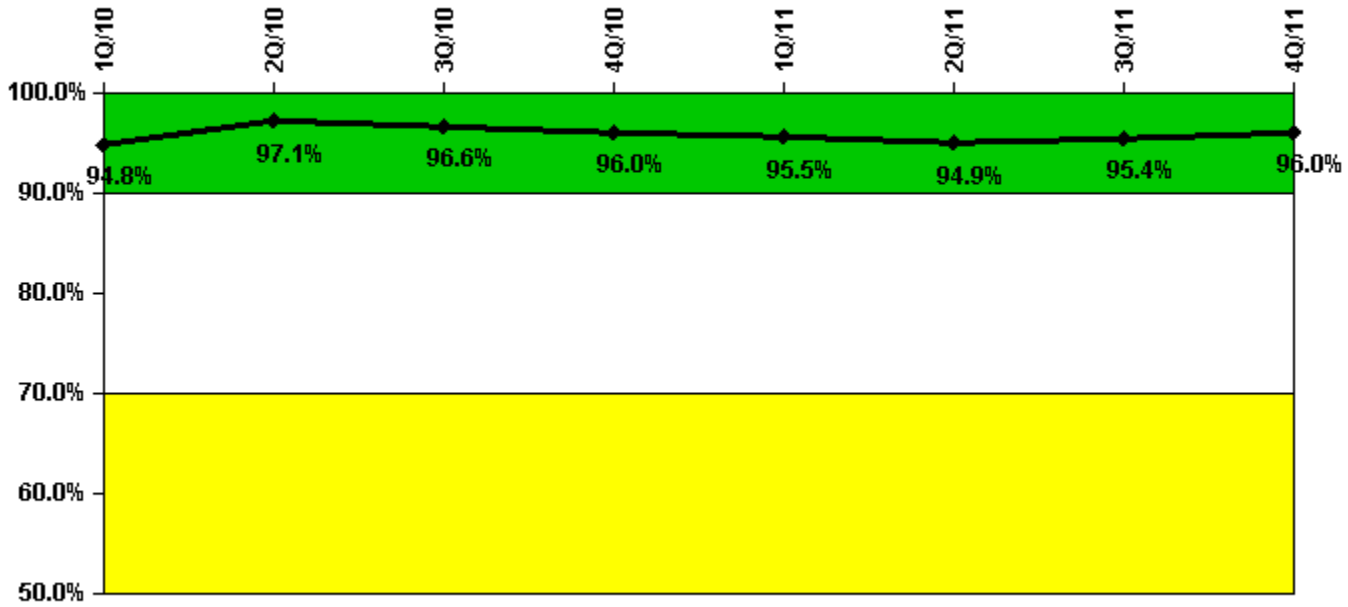
Thresholds: White > 50.0 Yellow > 100.0

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	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
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	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
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	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
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	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Licensee Comments: none

Drill/Exercise Performance



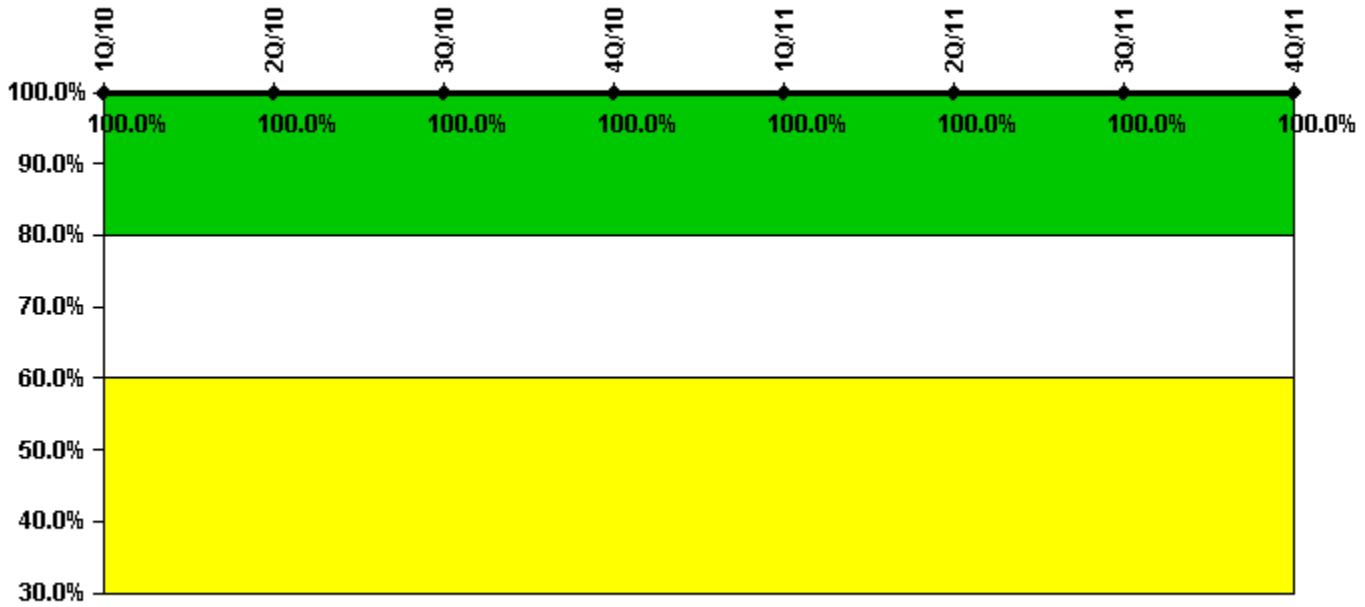
Thresholds: White < 90.0% Yellow < 70.0%

Notes

Drill/Exercise Performance	1Q/10	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11
Successful opportunities	32.0	50.0	32.0	32.0	28.0	11.0	24.0	30.0
Total opportunities	34.0	52.0	33.0	34.0	30.0	12.0	24.0	30.0
Indicator value	94.8%	97.1%	96.6%	96.0%	95.5%	94.9%	95.4%	96.0%

Licensee Comments: none

ERO Drill Participation



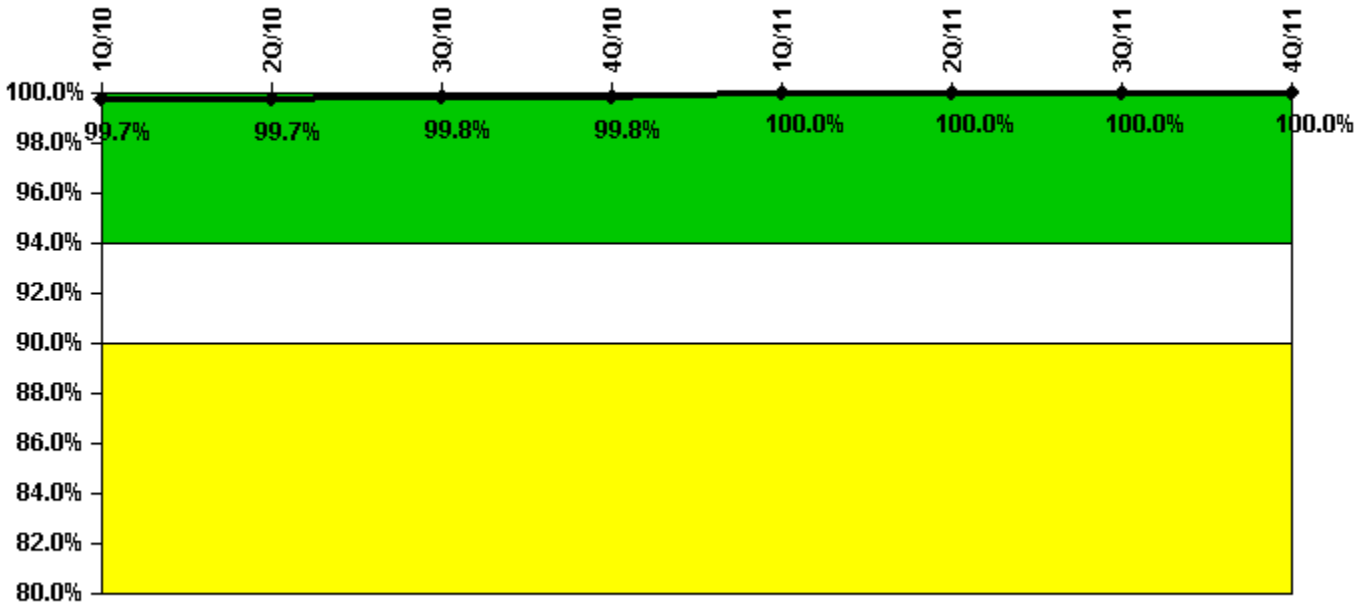
Thresholds: White < 80.0% Yellow < 60.0%

Notes

ERO Drill Participation	1Q/10	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11
Participating Key personnel	79.0	76.0	75.0	69.0	71.0	69.0	69.0	70.0
Total Key personnel	79.0	76.0	75.0	69.0	71.0	69.0	69.0	70.0
Indicator value	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Licensee Comments: none

Alert & Notification System



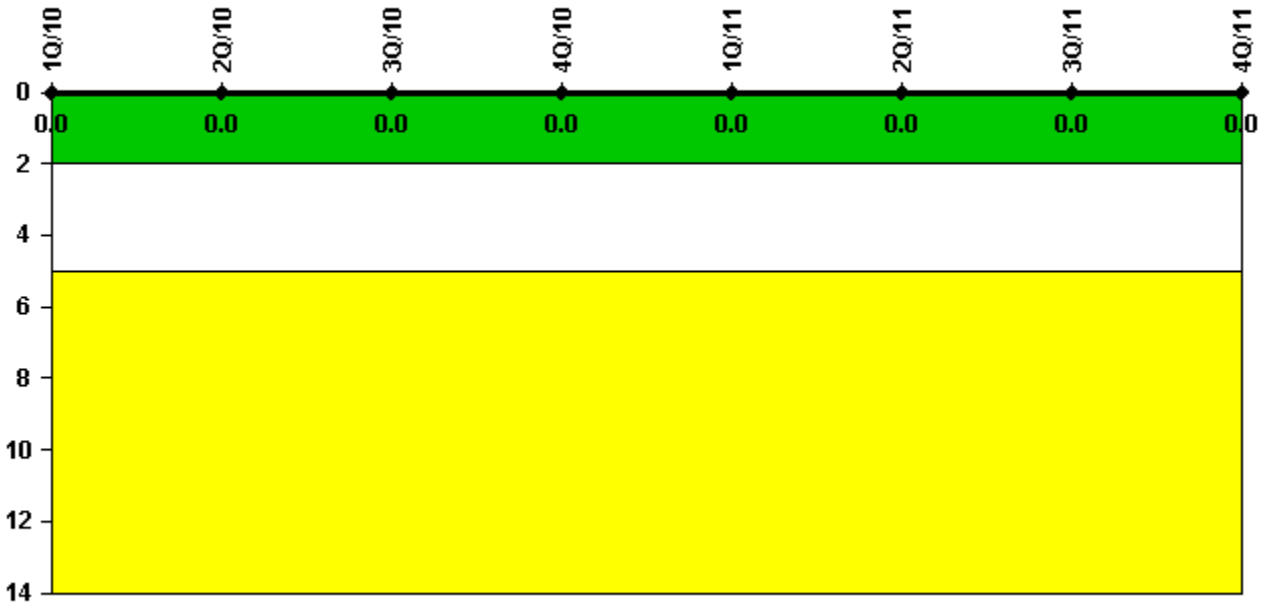
Thresholds: White < 94.0% Yellow < 90.0%

Notes

Alert & Notification System	1Q/10	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11
Successful siren-tests	992	1040	1040	1080	1000	1039	1080	1028
Total sirens-tests	1000	1040	1040	1080	1000	1040	1080	1028
Indicator value	99.7%	99.7%	99.8%	99.8%	100.0%	100.0%	100.0%	100.0%

Licensee Comments: none

Occupational Exposure Control Effectiveness



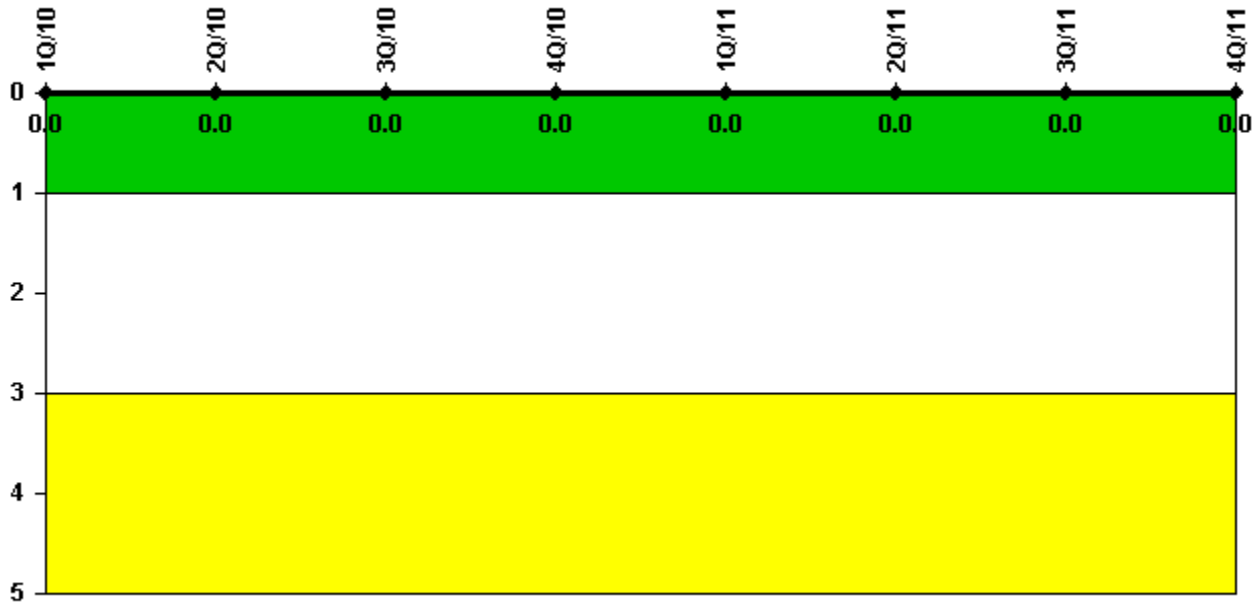
Thresholds: White > 2.0 Yellow > 5.0

Notes

Occupational Exposure Control Effectiveness	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.