

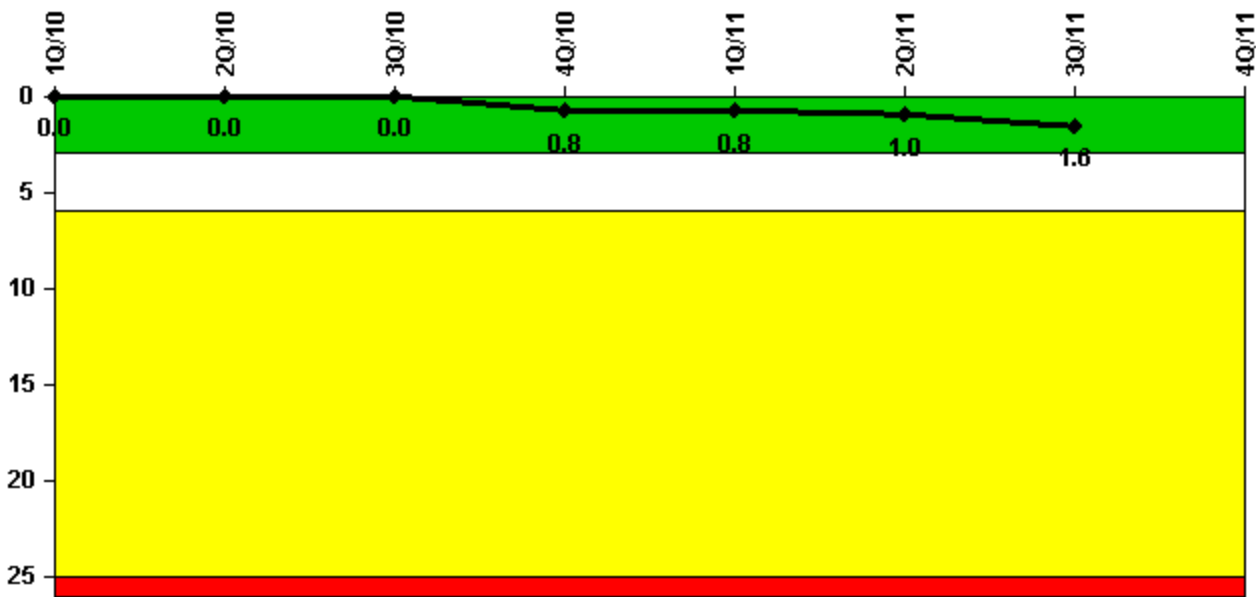
Fort Calhoun

4Q/2011 Performance Indicators

Fort Calhoun has been shutdown since April 2011. 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. Because the reactor has not been critical, there have been no recent opportunities for a scram that would count in the USwC indicator. Similarly, the MSPI values can become skewed because of a lack of critical hours. 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



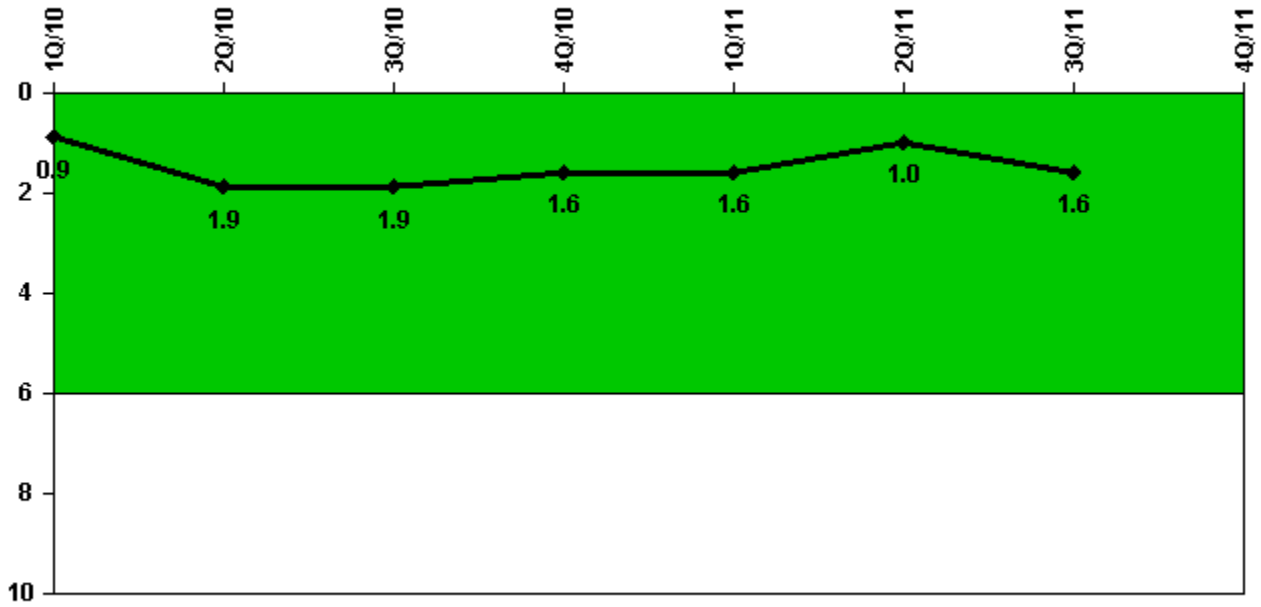
Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

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	1.0	0	0	0	0
Critical hours	2159.0	2105.6	2208.0	2160.0	2135.4	215.8	0	0
Indicator value	0	0	0	0.8	0.8	1.0	1.6	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	1.0	0	1.0	0	0	0	0
Critical hours	2159.0	2105.6	2208.0	2160.0	2135.4	215.8	0	0
Indicator value	0.9	1.9	1.9	1.6	1.6	1.0	1.6	N/A

Licensee Comments: none

Unplanned Scrams with Complications



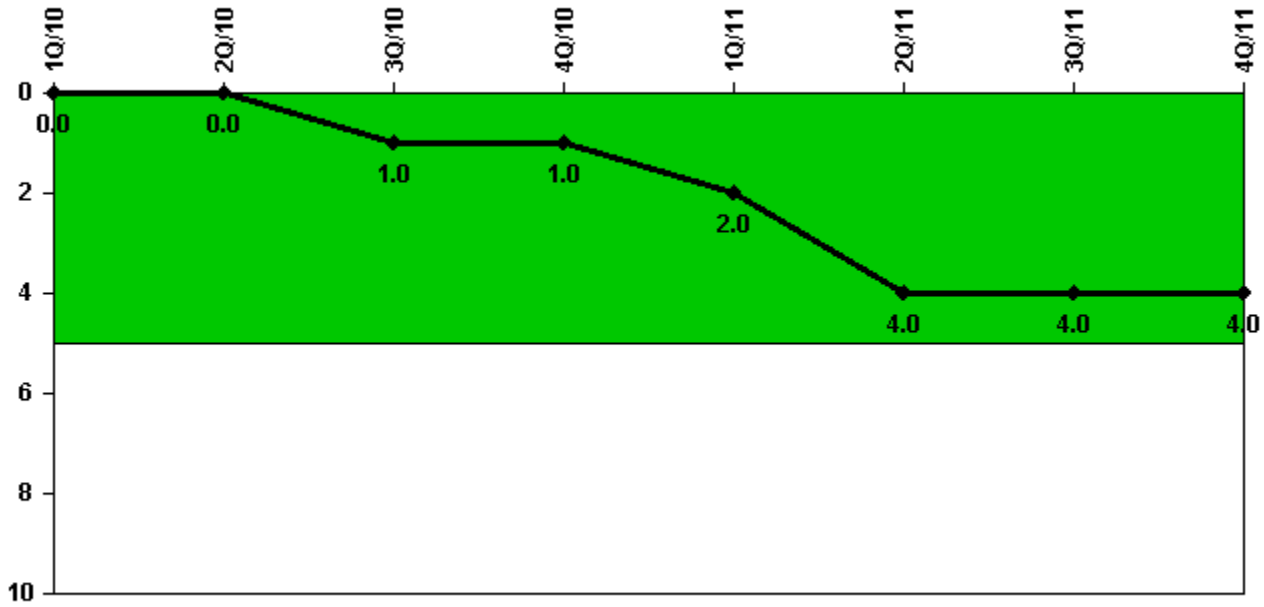
Thresholds: White > 1.0

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)



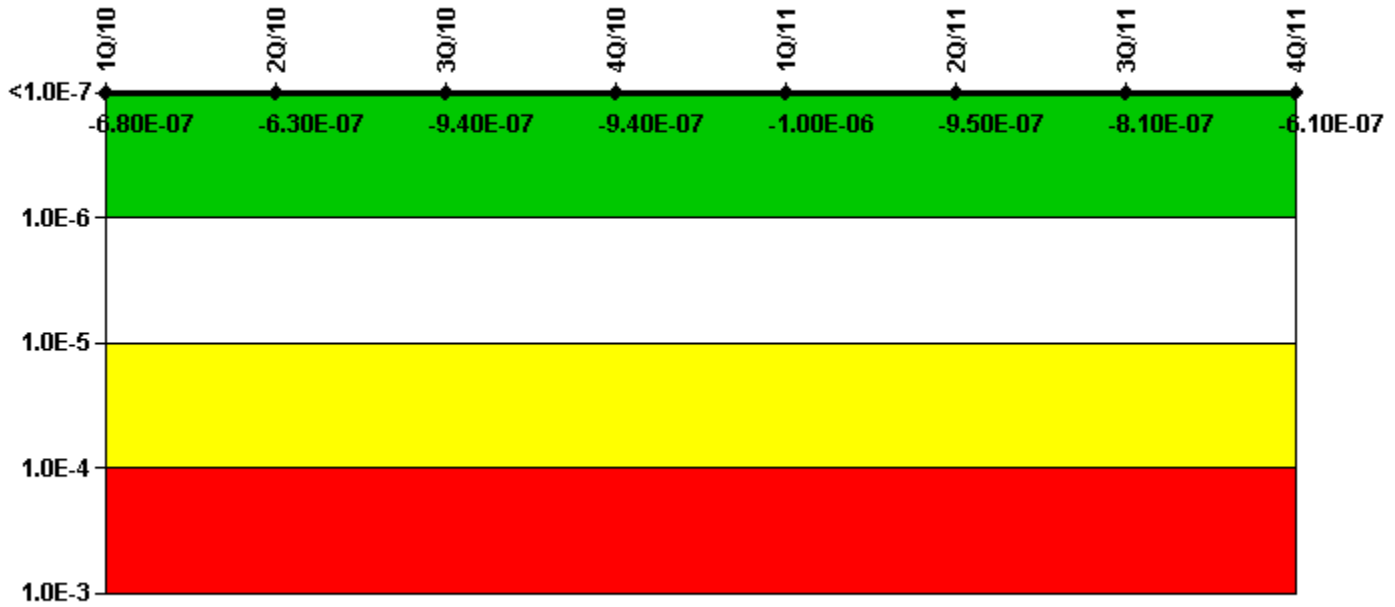
Thresholds: White > 5.0

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	1	0	1	2	1	0
Indicator value	0	0	1	1	2	4	4	4

Licensee Comments: none

Mitigating Systems Performance Index, Emergency AC Power System



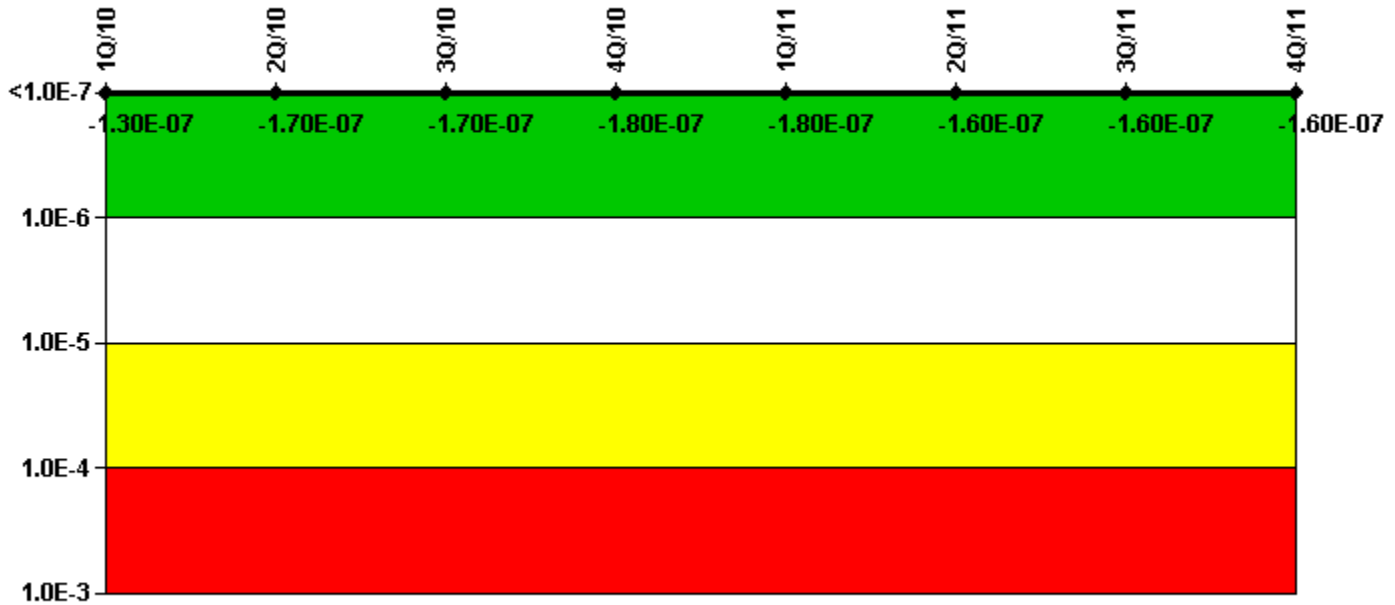
Thresholds: White > 1.00E-6 Yellow > 1.00E-5 Red > 1.00E-4

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)	3.69E-07	5.46E-07	1.93E-07	1.76E-07	1.89E-08	4.38E-08	1.14E-07	2.86E-07
URI (Δ CDF)	-1.05E-06	-1.18E-06	-1.13E-06	-1.11E-06	-1.01E-06	-9.90E-07	-9.27E-07	-8.99E-07
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-6.80E-07	-6.30E-07	-9.40E-07	-9.40E-07	-1.00E-06	-9.50E-07	-8.10E-07	-6.10E-07

Licensee Comments: none

Mitigating Systems Performance Index, High Pressure Injection System



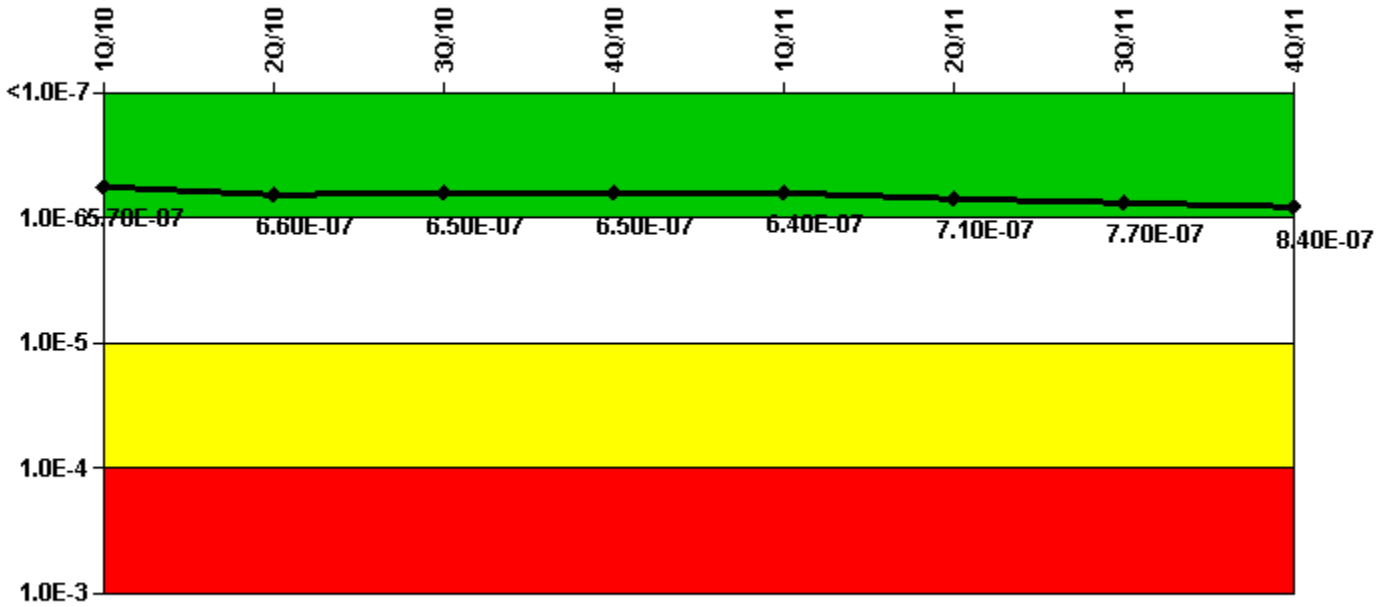
Thresholds: White > 1.00E-6 Yellow > 1.00E-5 Red > 1.00E-4

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)	-6.19E-08	-8.98E-08	-8.92E-08	-8.90E-08	-8.65E-08	-6.91E-08	-7.33E-08	-7.07E-08
URI (Δ CDF)	-7.23E-08	-8.21E-08	-8.46E-08	-9.21E-08	-9.22E-08	-9.10E-08	-9.02E-08	-8.96E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-1.30E-07	-1.70E-07	-1.70E-07	-1.80E-07	-1.80E-07	-1.60E-07	-1.60E-07	-1.60E-07

Licensee Comments: none

Mitigating Systems Performance Index, Heat Removal System



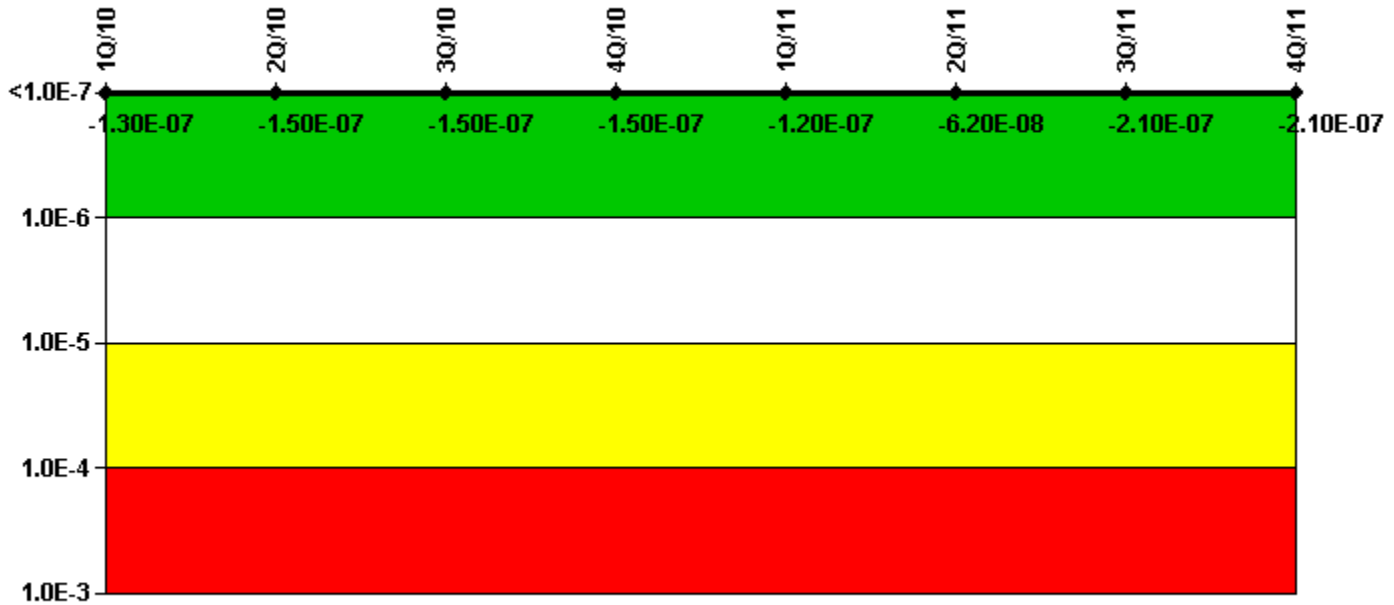
Thresholds: White > 1.00E-6 Yellow > 1.00E-5 Red > 1.00E-4

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)	1.04E-08	4.54E-09	-1.38E-09	-6.39E-09	-3.49E-08	-3.47E-08	-2.78E-08	-1.58E-08
URI (Δ CDF)	5.62E-07	6.54E-07	6.47E-07	6.57E-07	6.77E-07	7.49E-07	7.95E-07	8.54E-07
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	5.70E-07	6.60E-07	6.50E-07	6.50E-07	6.40E-07	7.10E-07	7.70E-07	8.40E-07

Licensee Comments: none

Mitigating Systems Performance Index, Residual Heat Removal System



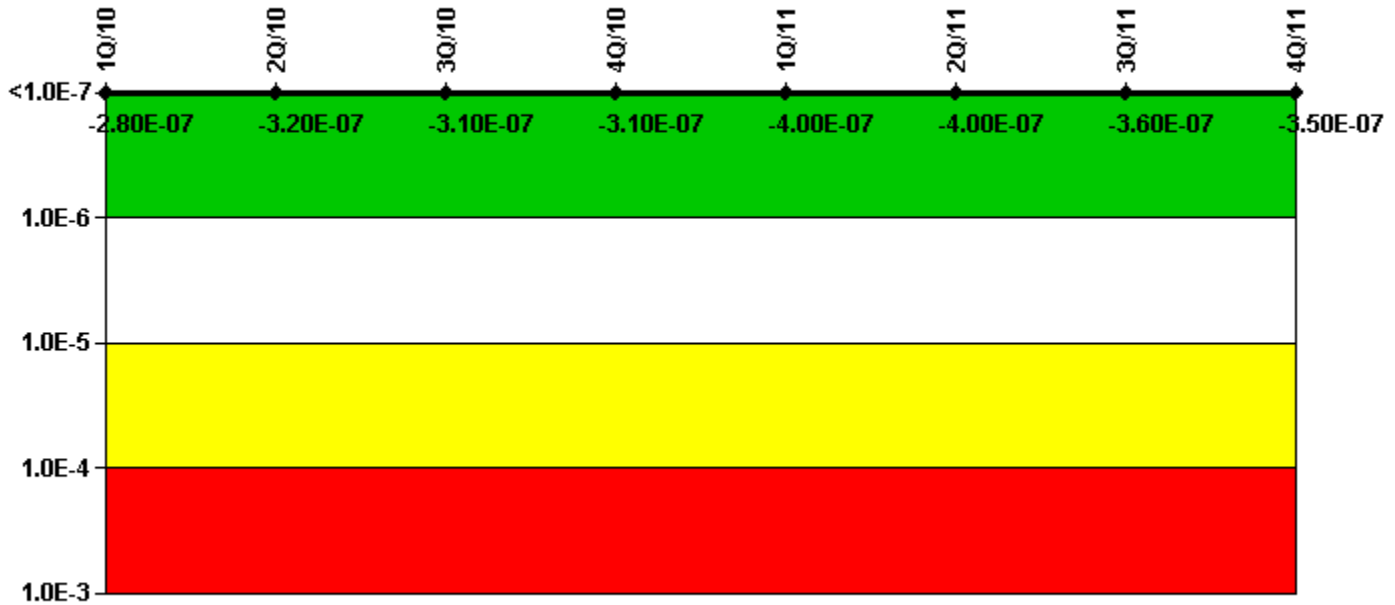
Thresholds: White > 1.00E-6 Yellow > 1.00E-5 Red > 1.00E-4

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)	-7.77E-08	-8.67E-08	-8.67E-08	-8.65E-08	-5.36E-08	3.84E-09	-1.48E-07	-1.45E-07
URI (Δ CDF)	-5.08E-08	-6.53E-08	-6.45E-08	-6.48E-08	-6.51E-08	-6.62E-08	-6.70E-08	-6.95E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-1.30E-07	-1.50E-07	-1.50E-07	-1.50E-07	-1.20E-07	-6.20E-08	-2.10E-07	-2.10E-07

Licensee Comments: none

Mitigating Systems Performance Index, Cooling Water Systems



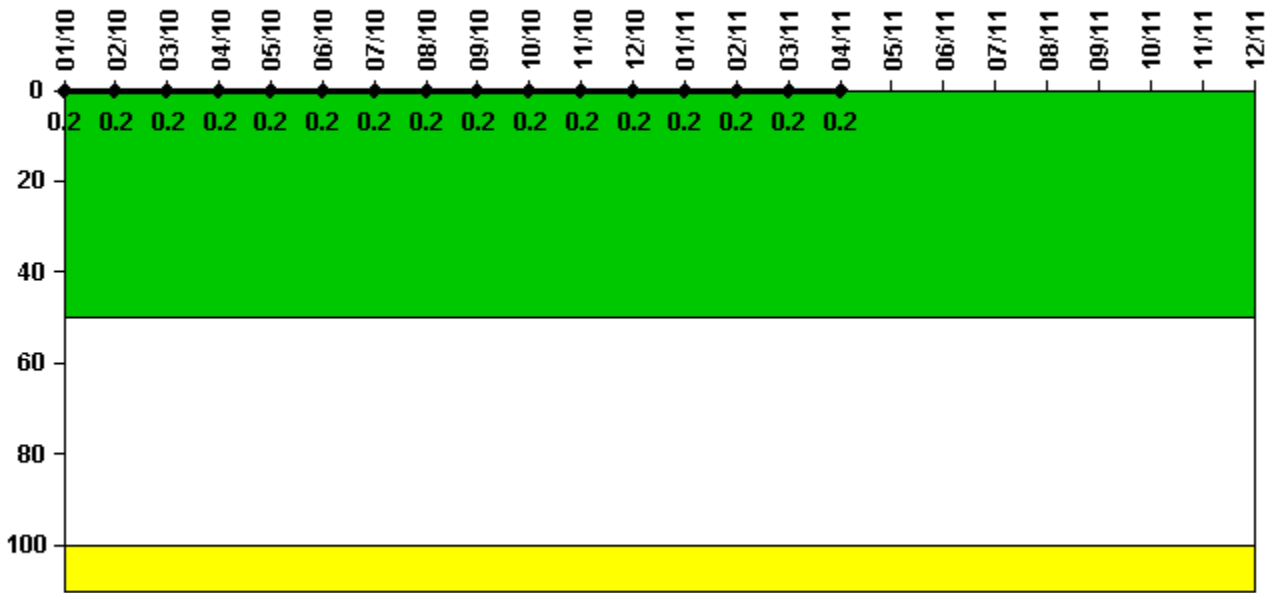
Thresholds: White > 1.00E-6 Yellow > 1.00E-5 Red > 1.00E-4

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 (Δ CDF)	-2.84E-07	-3.22E-07	-3.14E-07	-2.95E-07	-3.52E-07	-3.53E-07	-3.17E-07	-3.09E-07
URI (Δ CDF)	4.07E-09	4.58E-09	4.96E-09	-1.98E-08	-4.71E-08	-4.64E-08	-4.60E-08	-4.55E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-2.80E-07	-3.20E-07	-3.10E-07	-3.10E-07	-4.00E-07	-4.00E-07	-3.60E-07	-3.50E-07

Licensee Comments: none

Reactor Coolant System Activity



Thresholds: White > 50.0 Yellow > 100.0

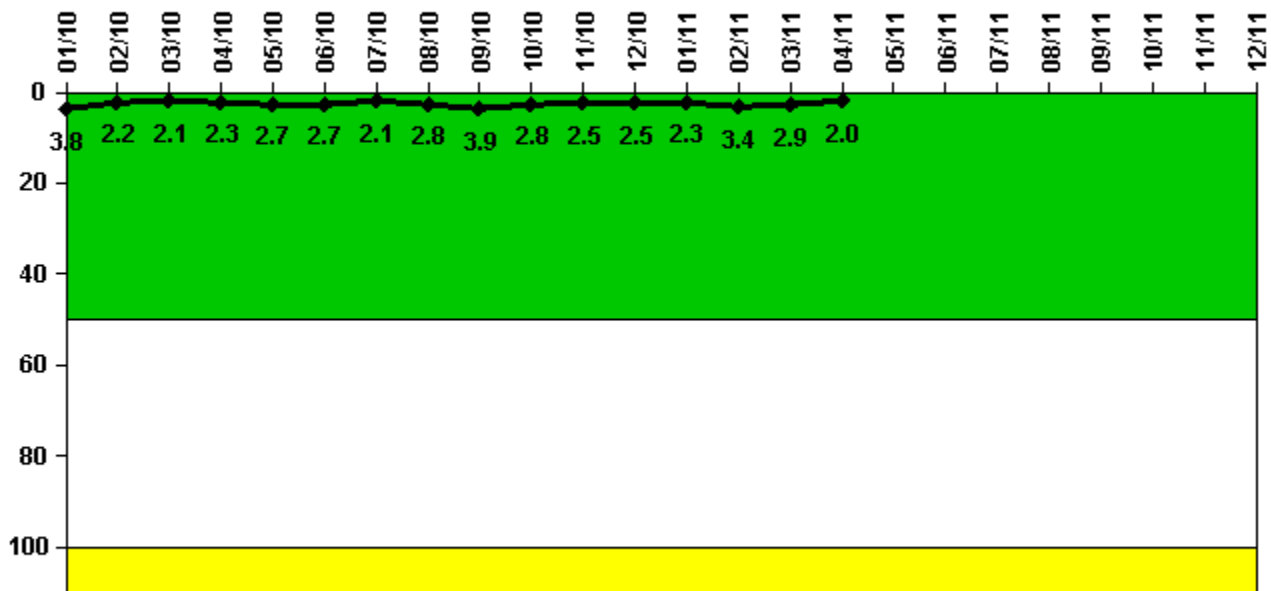
Notes

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	0.001530	0.001590	0.001640	0.001710	0.001760	0.002170	0.001780	0.001950	0.001990	0.001960	0.002010	0.002140
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	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2

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	0.002140	0.002110	0.002290	0.002090	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	0.2	0.2	0.2	0.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Licensee Comments: none

Reactor Coolant System Leakage



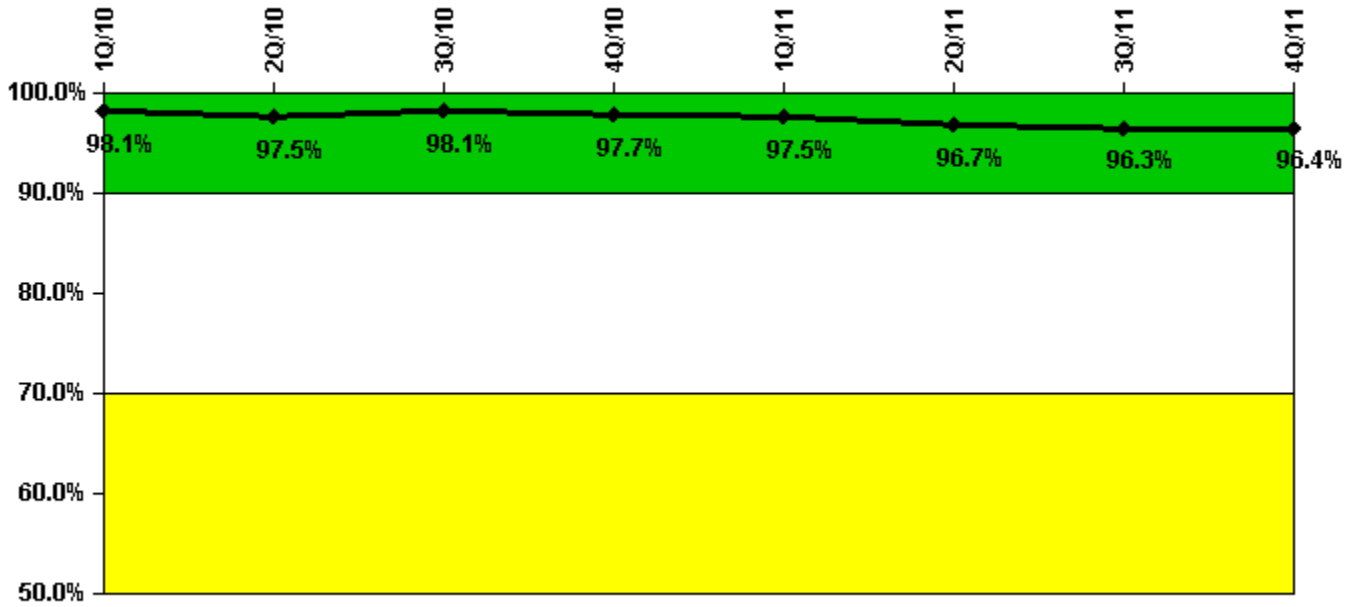
Thresholds: White > 50.0 Yellow > 100.0

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	0.380	0.224	0.207	0.231	0.269	0.273	0.213	0.277	0.386	0.284	0.248	0.245
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	3.8	2.2	2.1	2.3	2.7	2.7	2.1	2.8	3.9	2.8	2.5	2.5
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	0.231	0.336	0.286	0.196	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	2.3	3.4	2.9	2.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Licensee Comments: none

Drill/Exercise Performance



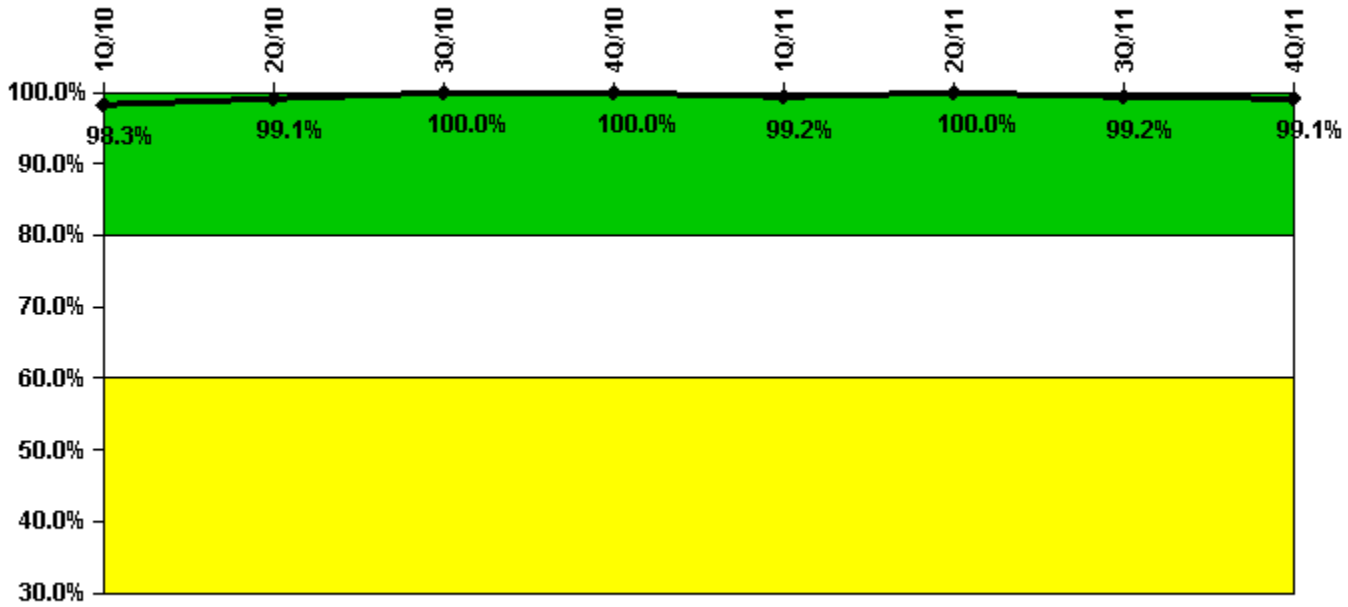
Thresholds: White < 90.0% Yellow < 70.0%

Notes

Drill/Exercise Performance	1Q/10	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11
Successful opportunities	23.0	58.0	73.0	49.0	61.0	11.0	33.0	12.0
Total opportunities	25.0	61.0	73.0	50.0	62.0	13.0	36.0	12.0
Indicator value	98.1%	97.5%	98.1%	97.7%	97.5%	96.7%	96.3%	96.4%

Licensee Comments: none

ERO Drill Participation



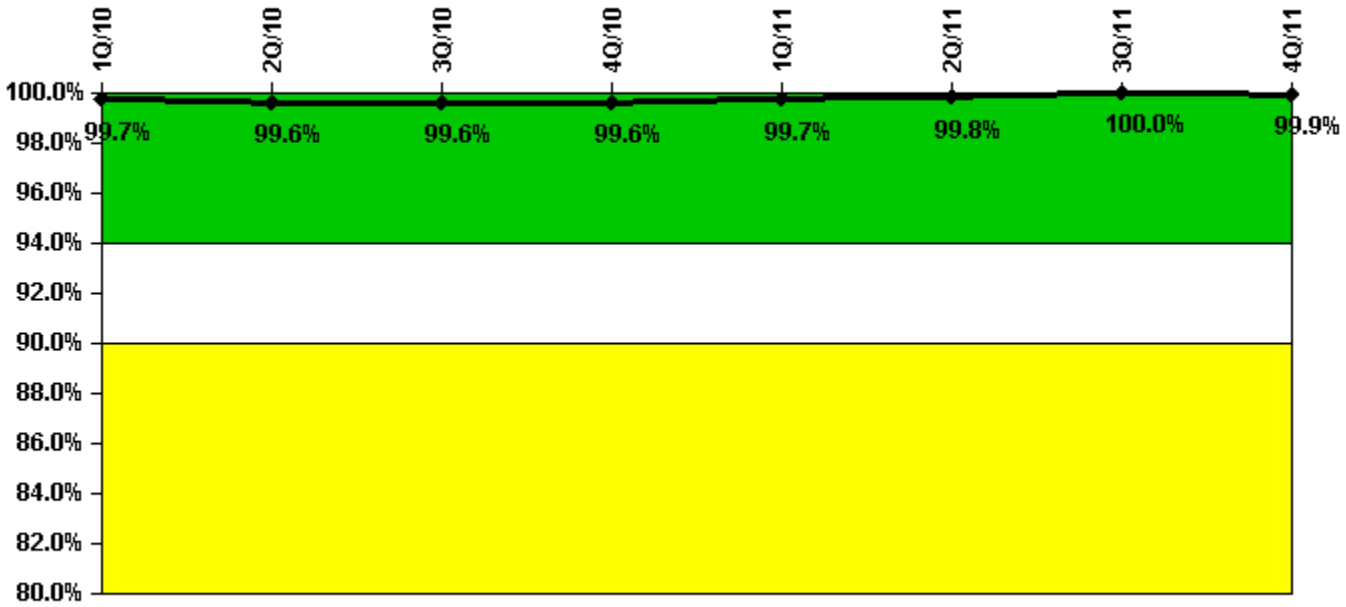
Thresholds: White < 80.0% Yellow < 60.0%

Notes

ERO Drill Participation	1Q/10	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11
Participating Key personnel	116.0	116.0	122.0	118.0	123.0	124.0	118.0	107.0
Total Key personnel	118.0	117.0	122.0	118.0	124.0	124.0	119.0	108.0
Indicator value	98.3%	99.1%	100.0%	100.0%	99.2%	100.0%	99.2%	99.1%

Licensee Comments: none

Alert & Notification System



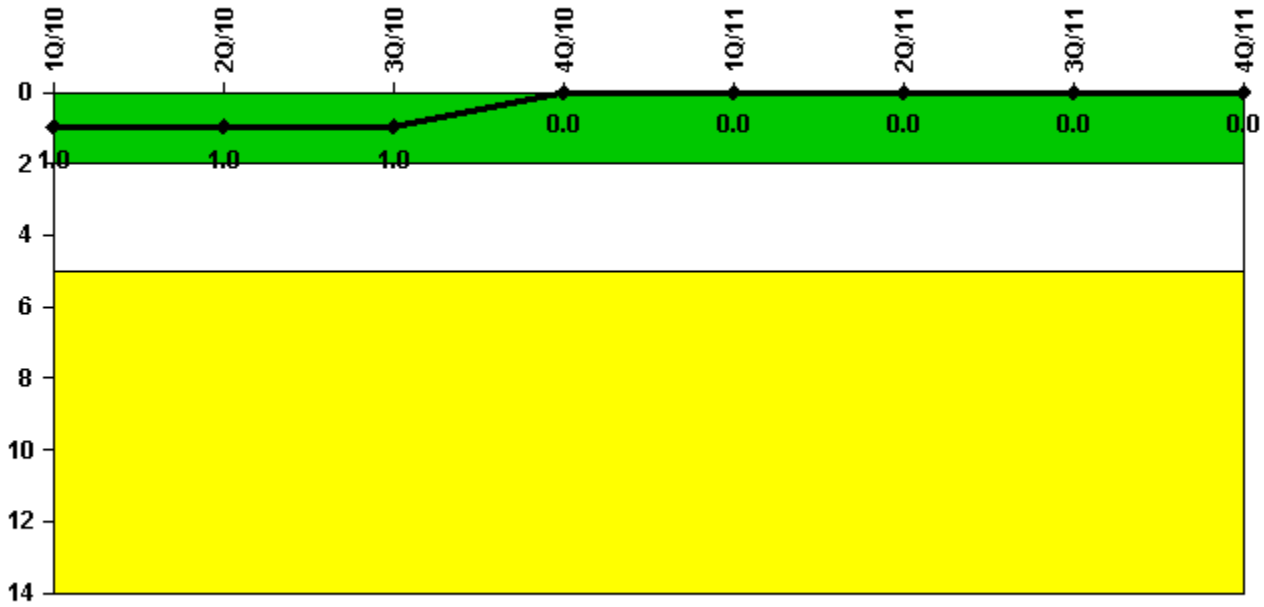
Thresholds: White < 94.0% Yellow < 90.0%

Notes

Alert & Notification System	1Q/10	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11
Successful siren-tests	703	803	804	808	707	801	737	876
Total sirens-tests	707	808	808	808	707	802	737	878
Indicator value	99.7%	99.6%	99.6%	99.6%	99.7%	99.8%	100.0%	99.9%

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	1	1	1	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.