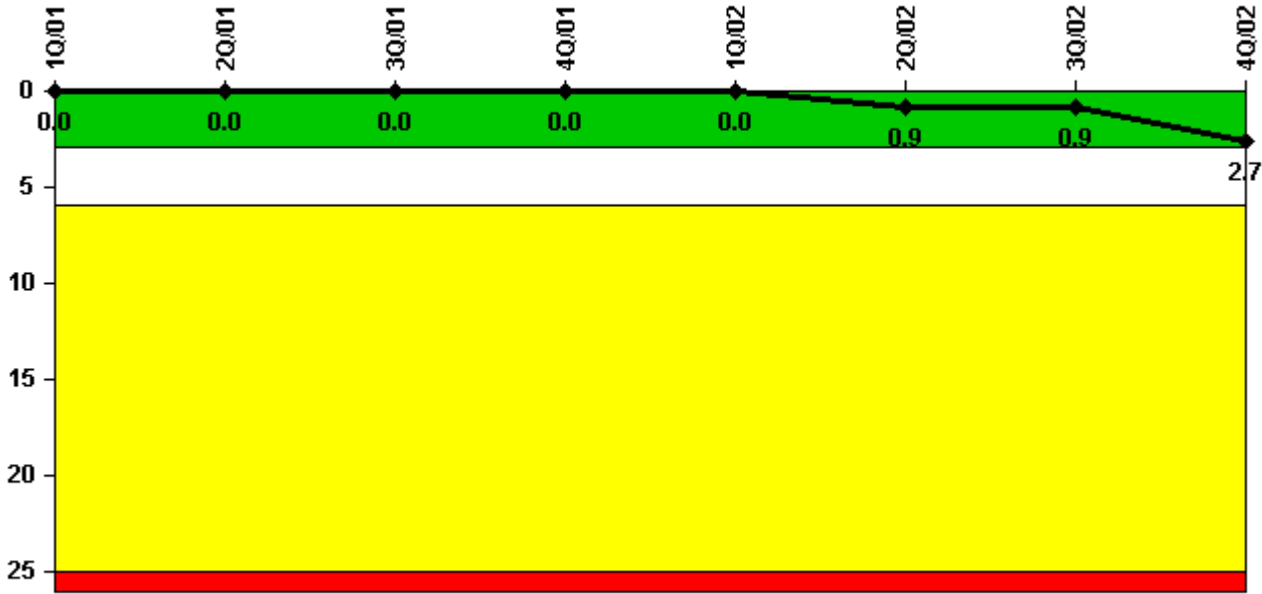


San Onofre 2

4Q/2002 Performance Indicators

Licensee's General Comments: none

Unplanned Scrams per 7000 Critical Hrs



Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

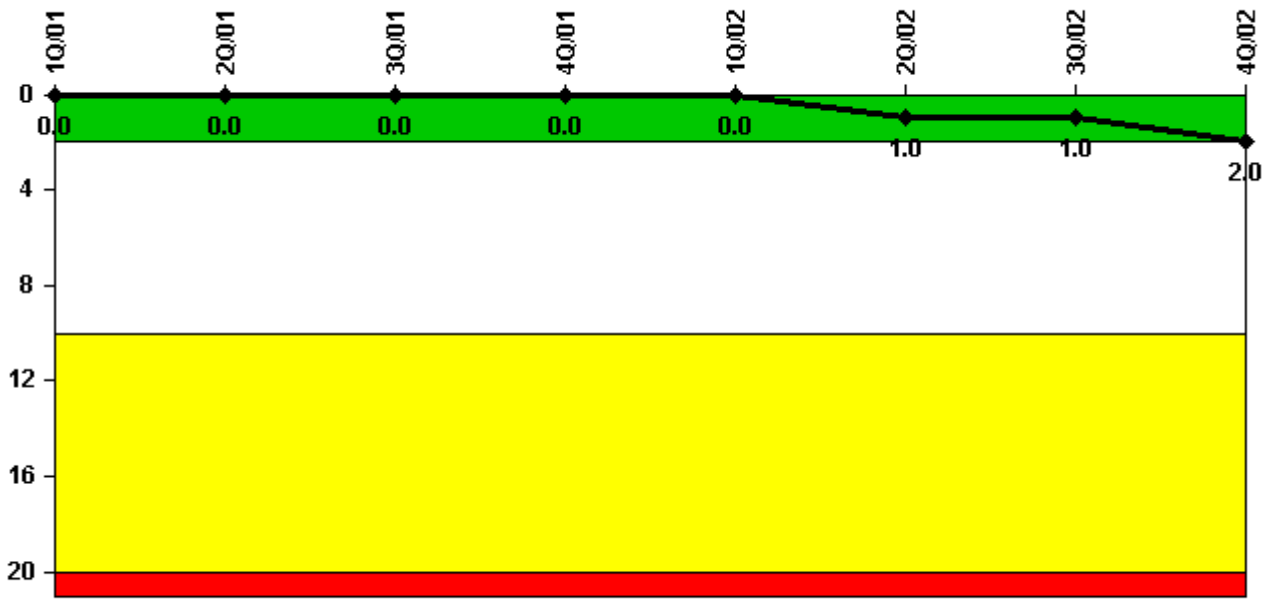
Notes

Unplanned Scrams per 7000 Critical Hrs	1Q/01	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02	3Q/02	4Q/02
Unplanned scrams	0	0	0	0	0	1.0	0	2.0
Critical hours	2160.0	2183.0	2208.0	2004.9	2160.0	1206.2	2190.4	2124.1
Indicator value	0	0	0	0	0	0.9	0.9	2.7

Licensee Comments:

4Q/02: 4Q02 - 11/02/02 @ 0317, Unit 2: Reactor trip following Turbine trip; both feedwater pumps tripped on high discharge pressure following the failure of a feedwater control valve. 4Q02 - 11/04/02 @ 1644 Unit 2: Reactor manually tripped due to low RCS pressure with a stuck open spray valve.

Scrams with Loss of Normal Heat Removal



Thresholds: White > 2.0 Yellow > 10.0 Red > 20.0

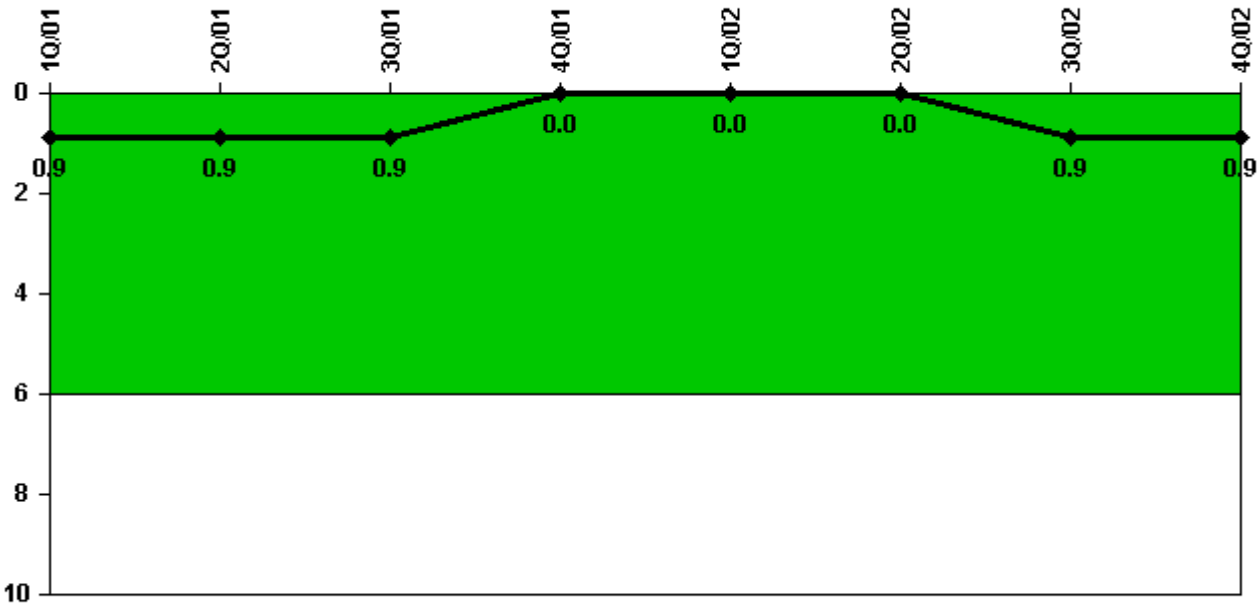
Notes

Scrams with Loss of Normal Heat Removal	1Q/01	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02	3Q/02	4Q/02
Scrams	0	0	0	0	0	1.0	0	1.0
Indicator value	0	0	0	0	0	1.0	1.0	2.0

Licensee Comments:

4Q/02: 4Q02 - 11/02/02 @ 0317, Unit 2: Reactor trip following Turbine trip; both feedwater pumps tripped on high discharge pressure following failure of a feedwater control valve.

Unplanned Power Changes per 7000 Critical Hrs



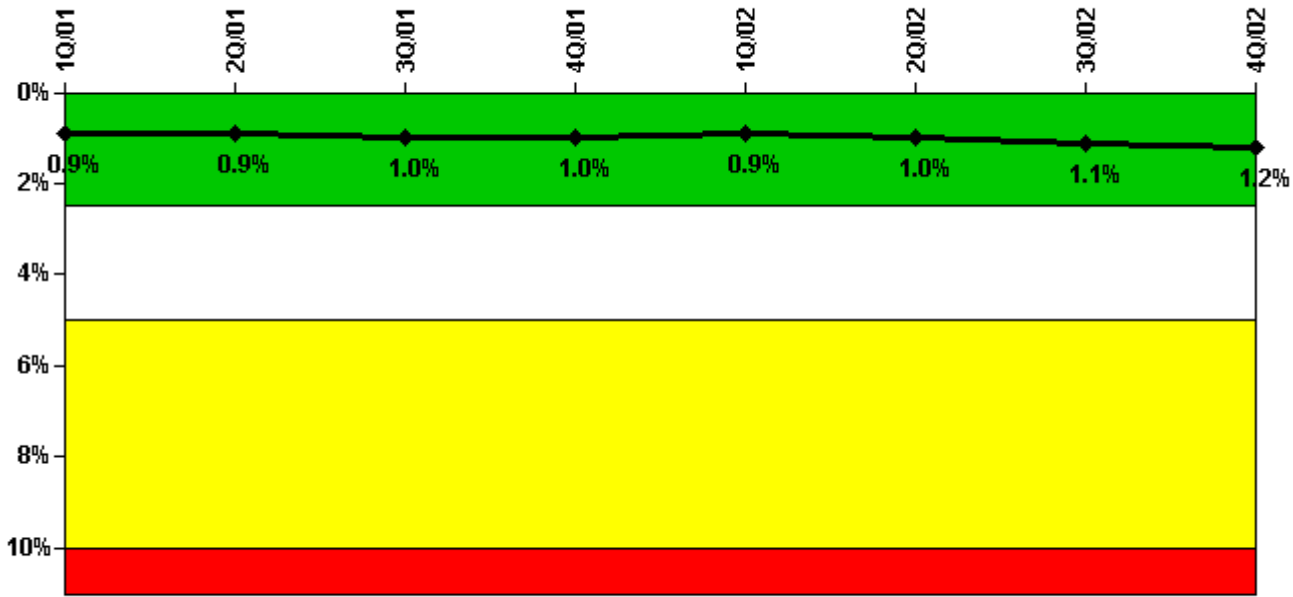
Thresholds: White > 6.0

Notes

Unplanned Power Changes per 7000 Critical Hrs	1Q/01	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02	3Q/02	4Q/02
Unplanned power changes	0	0	0	0	0	0	1.0	0
Critical hours	2160.0	2183.0	2208.0	2004.9	2160.0	1206.2	2190.4	2124.1
Indicator value	0.9	0.9	0.9	0	0	0	0.9	0.9

Licensee Comments: none

Safety System Unavailability, Emergency AC Power



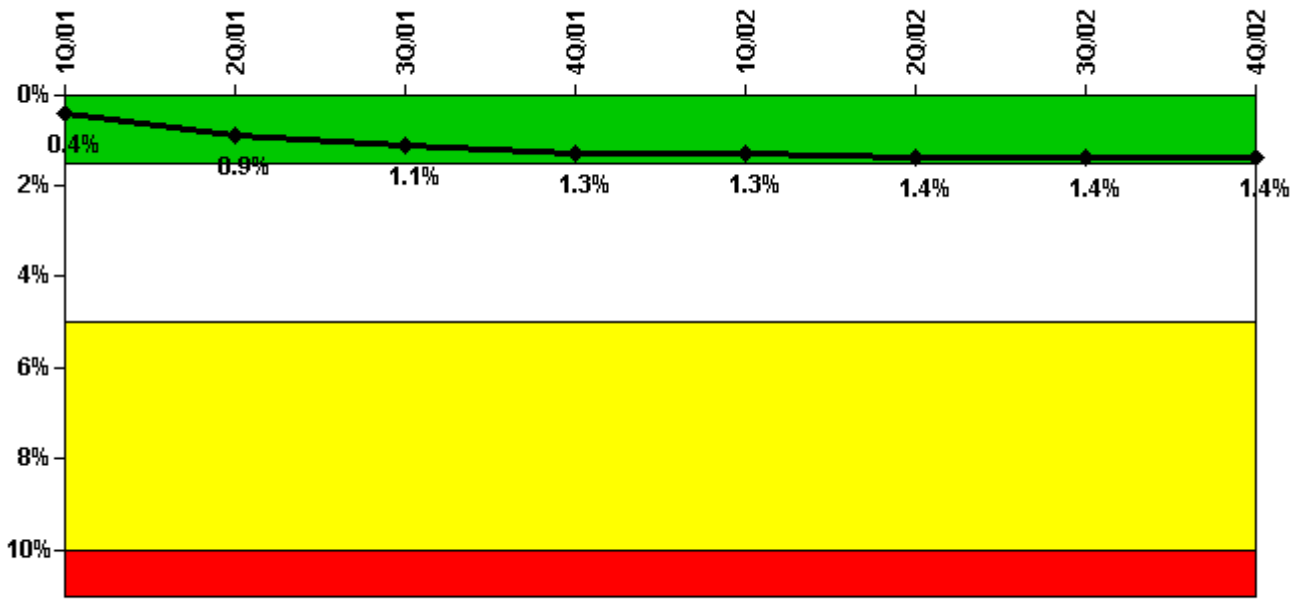
Thresholds: White > 2.5% Yellow > 5.0% Red > 10.0%

Notes

Safety System Unavailability, Emergency AC Power	1Q/01	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02	3Q/02	4Q/02
Train 1								
Planned unavailable hours	2.30	4.60	22.00	5.03	62.90	1.28	79.08	27.82
Unplanned unavailable hours	0	0	0	0	0	3.75	0	0
Fault exposure hours	0	0	0	0	0	0	0	0
Effective Reset hours	0	0	0	0	0	0	0	0
Required hours	2160.00	2183.00	2208.00	2209.00	2160.00	2183.00	2208.00	2209.00
Train 2								
Planned unavailable hours	4.80	9.20	1.50	2.37	2.30	40.85	1.32	51.80
Unplanned unavailable hours	0	2.30	0	0	0	0	0	0
Fault exposure hours	0	0	0	0	0	0	0	0
Effective Reset hours	0	0	0	0	0	0	0	0
Required hours	2160.00	2183.00	2208.00	2209.00	2160.00	2183.00	2208.00	2209.00
Indicator value	0.9%	0.9%	1.0%	1.0%	0.9%	1.0%	1.1%	1.2%

Licensee Comments: none

Safety System Unavailability, High Pressure Injection System (HPSI)



Thresholds: White > 1.5% Yellow > 5.0% Red > 10.0%

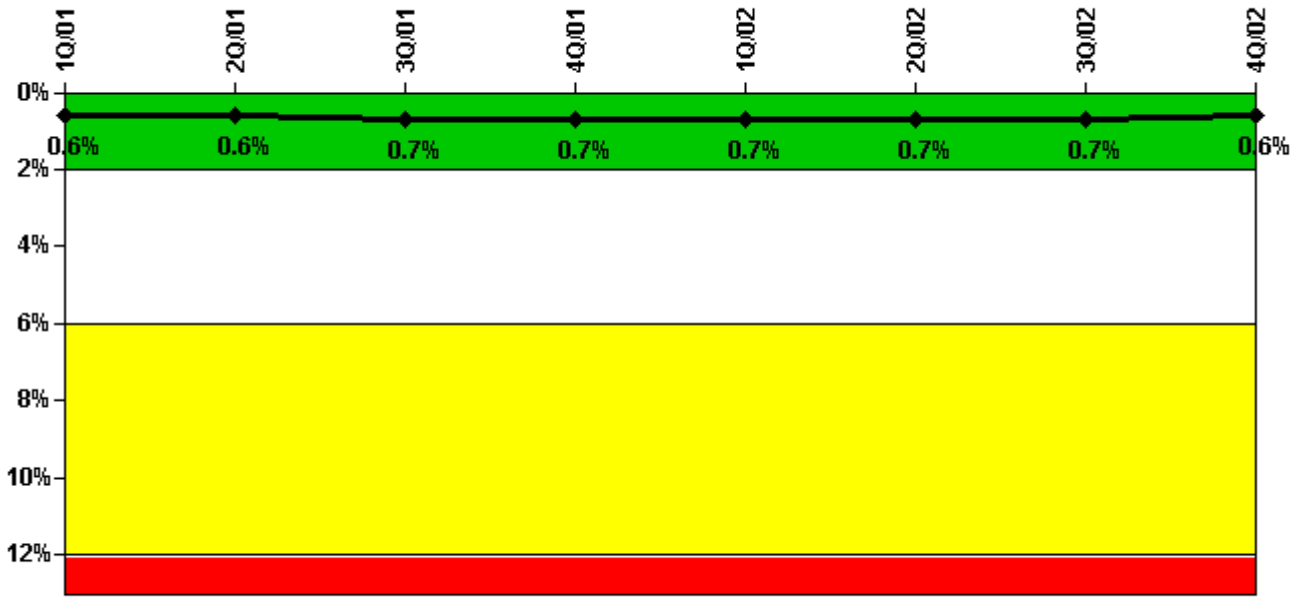
Notes

Safety System Unavailability, High Pressure Injection System (HPSI)	1Q/01	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02	3Q/02	4Q/02
Train 1								
Planned unavailable hours	11.80	51.80	70.67	15.60	0.40	17.62	13.43	10.38
Unplanned unavailable hours	0	111.20	6.60	0.80	21.90	0	0.93	0
Fault exposure hours	0	0	0	0	0	0	0	0
Effective Reset hours	0	0	0	0	0	0	0	0
Required hours	2160.00	2183.00	2208.00	2000.00	2160.00	1206.17	2190.43	2124.09
Train 2								
Planned unavailable hours	6.40	49.00	4.22	62.17	22.00	0	14.15	13.40
Unplanned unavailable hours	2.90	15.00	2.67	0	0	0	4.02	5.53
Fault exposure hours	0	0	0	0	0	0	0	0
Effective Reset hours	0	0	0	0	0	0	0	0
Required hours	2160.00	2183.00	2208.00	2000.00	2160.00	1206.17	2190.43	2124.09
Indicator value	0.4%	0.9%	1.1%	1.3%	1.3%	1.4%	1.4%	1.4%

Licensee Comments:

4Q/02: Discovered condition on 12/29/02 for HV9323 Train 2 (B). Planned/unplanned UA included in 4Q02 report. Engineering Evaluation in progress on fault exposure impact. Results will be included in 1Q03. Discovered condition on 12/12/02 for S21413MP113 Train 2 (B) Salt Water Cooling (SWC). Planned/unplanned UA included in 4Q02 report. Engineering Evaluation in progress on fault exposure impact. Results will be included in 1Q03 report.

Safety System Unavailability, Heat Removal System (AFW)



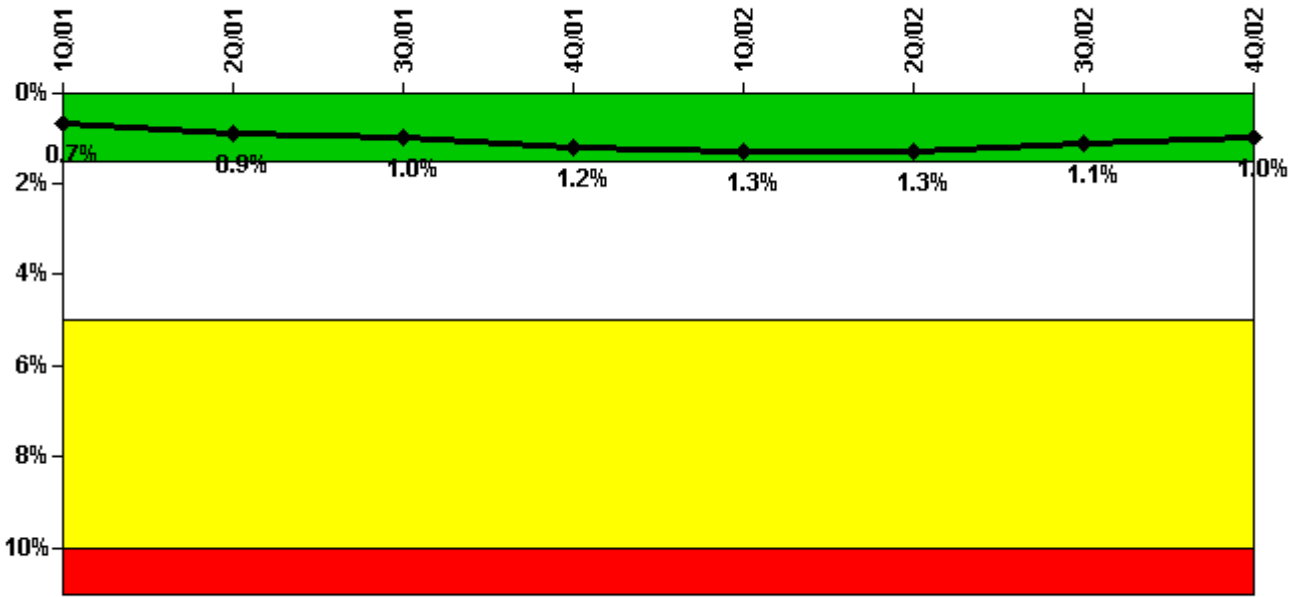
Thresholds: White > 2.0% Yellow > 6.0% Red > 12.0%

Notes

Safety System Unavailability, Heat Removal System (AFW)	1Q/01	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02	3Q/02	4Q/02
Train 1								
Planned unavailable hours	0	0	19.80	0	0	0	45.43	1.42
Unplanned unavailable hours	0	0	0	0	0	0	0	0
Fault exposure hours	0	0	0	0	0	0	0	0
Effective Reset hours	0	0	0	0	0	0	0	0
Required hours	2160.00	2183.00	2208.00	2000.00	2160.00	1206.17	2190.43	2124.09
Train 2								
Planned unavailable hours	37.10	0	0	0	22.40	0	6.03	23.75
Unplanned unavailable hours	0	0	0	0	7.60	0	0	0
Fault exposure hours	0	0	0	0	0	0	0	0
Effective Reset hours	0	0	0	0	0	0	0	0
Required hours	2160.00	2183.00	2208.00	2000.00	2160.00	1206.17	2190.43	2124.09
Train 3								
Planned unavailable hours	0	0	52.60	13.50	40.40	0	16.77	0.25
Unplanned unavailable hours	0	0	23.30	17.20	0	0	0	0
Fault exposure hours	0	0	0	0	0	0	0	0
Effective Reset hours	0	0	0	0	0	0	0	0
Required hours	2160.00	2183.00	2208.00	2000.00	2160.00	1206.17	2190.43	2124.09
Indicator value	0.6%	0.6%	0.7%	0.7%	0.7%	0.7%	0.7%	0.6%

Licensee Comments: none

Safety System Unavailability, Residual Heat Removal System



Thresholds: White > 1.5% Yellow > 5.0% Red > 10.0%

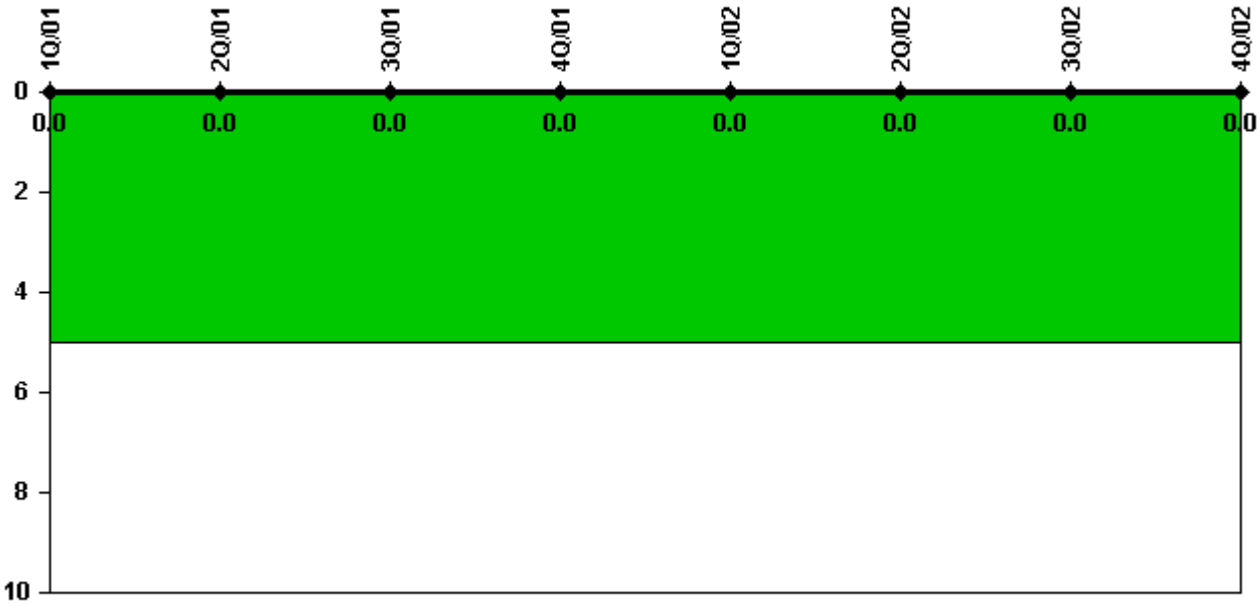
Notes

Safety System Unavailability, Residual Heat Removal System	1Q/01	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02	3Q/02	4Q/02
Train 1								
Planned unavailable hours	0.60	51.10	71.52	61.40	1.00	18.35	67.30	12.65
Unplanned unavailable hours	0	111.20	6.60	0.80	21.90	0	0.93	0
Fault exposure hours	0	0	0	0	0	0	0	0
Effective Reset hours	0	0	0	0	0	0	0	0
Required hours	2160.00	2183.00	2208.00	2035.00	2160.00	1269.38	2208.00	2209.00
Train 2								
Planned unavailable hours	4.90	50.70	1.12	84.60	2.50	25.00	44.43	3.35
Unplanned unavailable hours	2.90	15.00	2.67	0	0	0	4.02	4.78
Fault exposure hours	0	0	0	0	0	0	0	0
Effective Reset hours	0	0	0	0	0	0	0	0
Required hours	2160.00	2183.00	2208.00	2035.00	2160.00	1269.38	2208.00	2209.00
Train 3								
Planned unavailable hours	0	0	0	0.60	0	0	0	0
Unplanned unavailable hours	0	0	0	0	0	0	0	0
Fault exposure hours	0	0	0	0	0	0	0	0
Effective Reset hours	0	0	0	0	0	0	0	0
Required hours	0	0	0	174.00	0	913.62	0	0
Train 4								
Planned unavailable hours	0	0	0	0	0	0	0	0
Unplanned unavailable hours	0	0	0	0	0	0	0	0
Fault exposure hours	0	0	0	0	0	0	0	0
Effective Reset hours	0	0	0	0	0	0	0	0
Required hours	0	0	0	174.00	0	913.62	0	0
Indicator value	0.7%	0.9%	1.0%	1.2%	1.3%	1.3%	1.1%	1.0%

Licensee Comments:

4Q/02: Discovered condition on 12/12/02 for S21413MP113 Train 2 (B) Salt Water Cooling (SWC). Planned/unplanned UA included in 4Q02 report. Engineering Evaluation in progress on fault exposure impact. Results will be included in 1Q03 report.

Safety System Functional Failures (PWR)



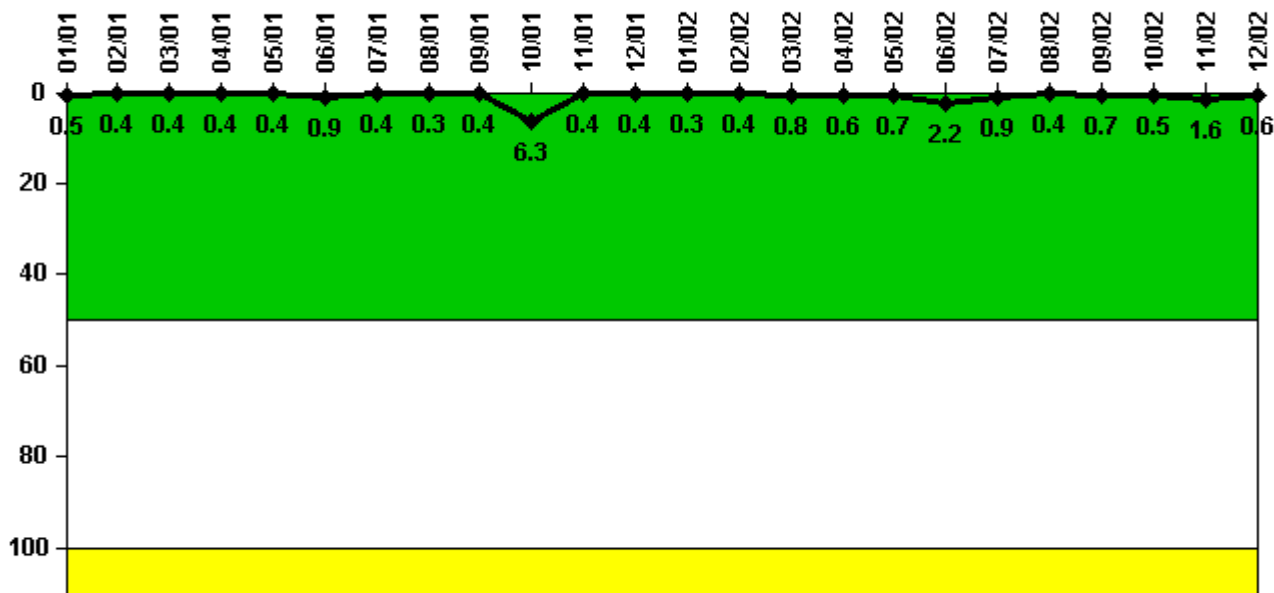
Thresholds: White > 5.0

Notes

Safety System Functional Failures (PWR)	1Q/01	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02	3Q/02	4Q/02
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

Reactor Coolant System Leakage



Thresholds: White > 50.0 Yellow > 100.0

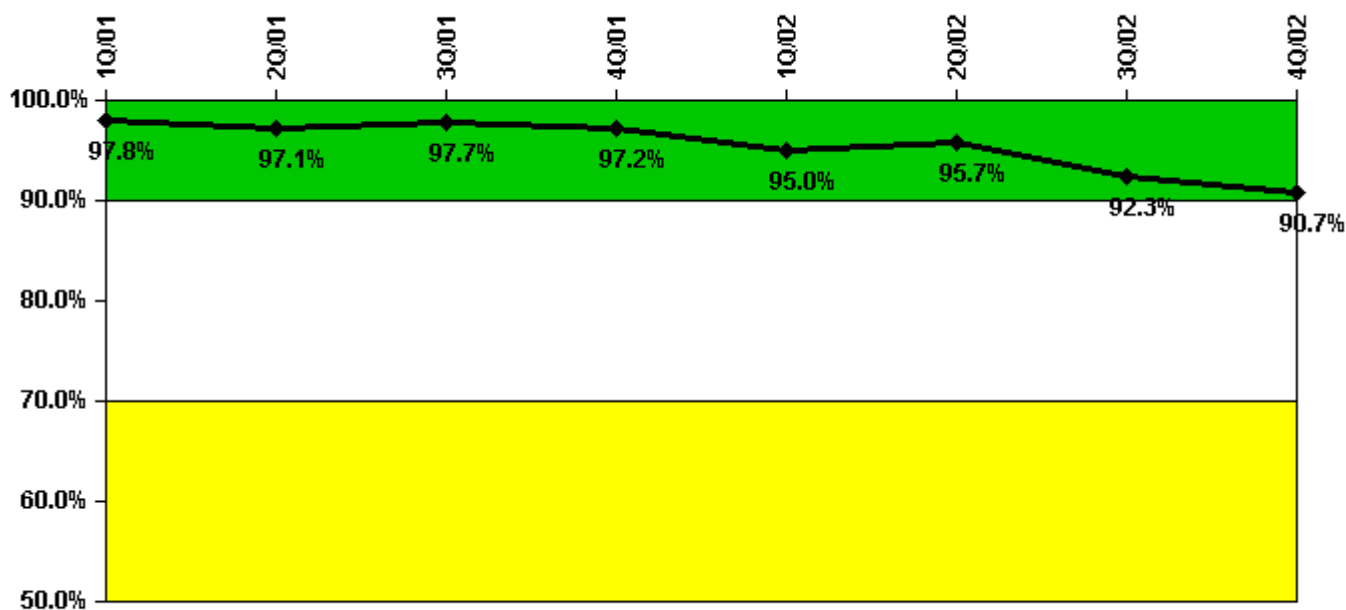
Notes

Reactor Coolant System Leakage	1/01	2/01	3/01	4/01	5/01	6/01	7/01	8/01	9/01	10/01	11/01	12/01
Maximum leakage	0.050	0.040	0.040	0.040	0.040	0.090	0.040	0.030	0.040	0.630	0.040	0.040
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	0.4	0.9	0.4	0.3	0.4	6.3	0.4	0.4

Reactor Coolant System Leakage	1/02	2/02	3/02	4/02	5/02	6/02	7/02	8/02	9/02	10/02	11/02	12/02
Maximum leakage	0.030	0.040	0.080	0.060	0.070	0.220	0.090	0.040	0.070	0.050	0.160	0.060
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	0.3	0.4	0.8	0.6	0.7	2.2	0.9	0.4	0.7	0.5	1.6	0.6

Licensee Comments: none

Drill/Exercise Performance



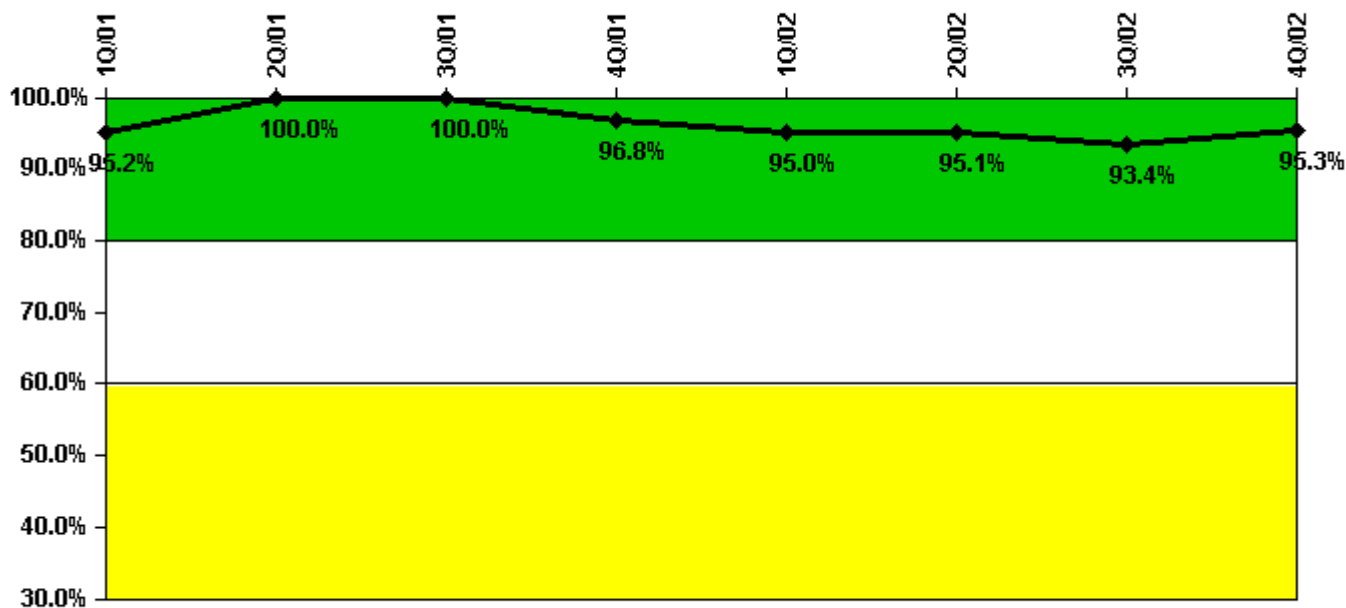
Thresholds: White < 90.0% Yellow < 70.0%

Notes

Drill/Exercise Performance	1Q/01	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02	3Q/02	4Q/02
Successful opportunities	2.0	46.0	8.0	0	1.0	0	39.0	11.0
Total opportunities	2.0	48.0	8.0	0	3.0	0	43.0	14.0
Indicator value	97.8%	97.1%	97.7%	97.2%	95.0%	95.7%	92.3%	90.7%

Licensee Comments: none

ERO Drill Participation



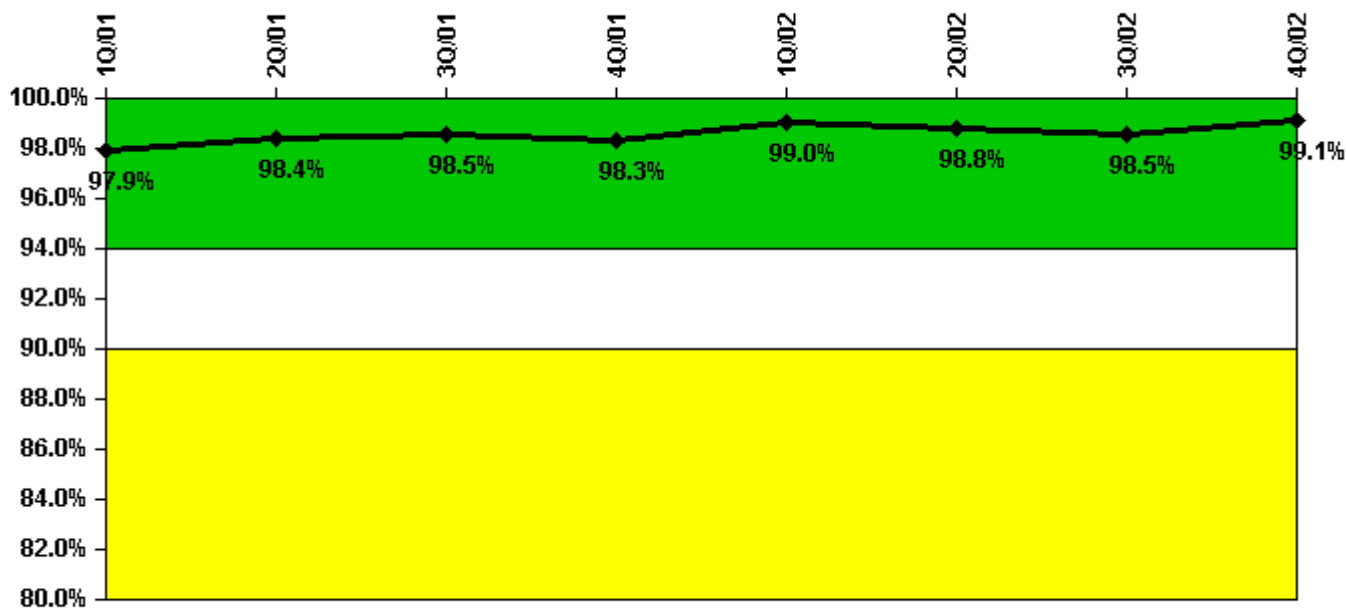
Thresholds: White < 80.0% Yellow < 60.0%

Notes

ERO Drill Participation	1Q/01	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02	3Q/02	4Q/02
Participating Key personnel	59.0	62.0	63.0	61.0	57.0	58.0	57.0	61.0
Total Key personnel	62.0	62.0	63.0	63.0	60.0	61.0	61.0	64.0
Indicator value	95.2%	100.0%	100.0%	96.8%	95.0%	95.1%	93.4%	95.3%

Licensee Comments: none

Alert & Notification System



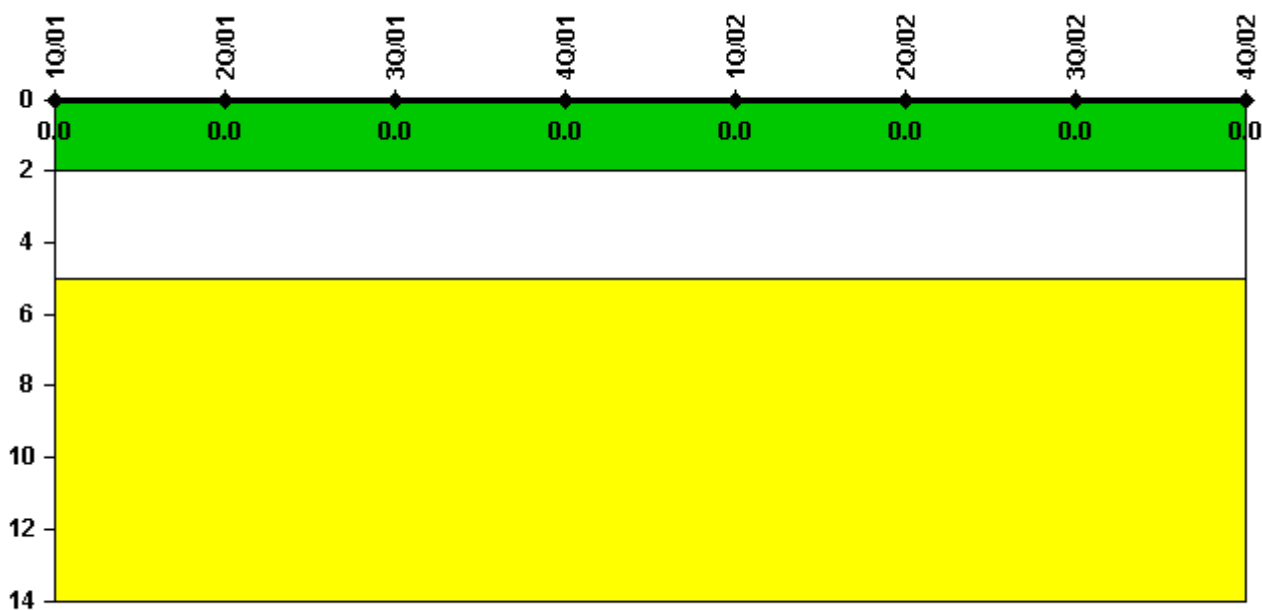
Thresholds: White < 94.0% Yellow < 90.0%

Notes

Alert & Notification System	1Q/01	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02	3Q/02	4Q/02
Successful siren-tests	379	341	390	431	390	338	386	488
Total sirens-tests	392	343	392	441	392	343	392	490
Indicator value	97.9%	98.4%	98.5%	98.3%	99.0%	98.8%	98.5%	99.1%

Licensee Comments: none

Occupational Exposure Control Effectiveness



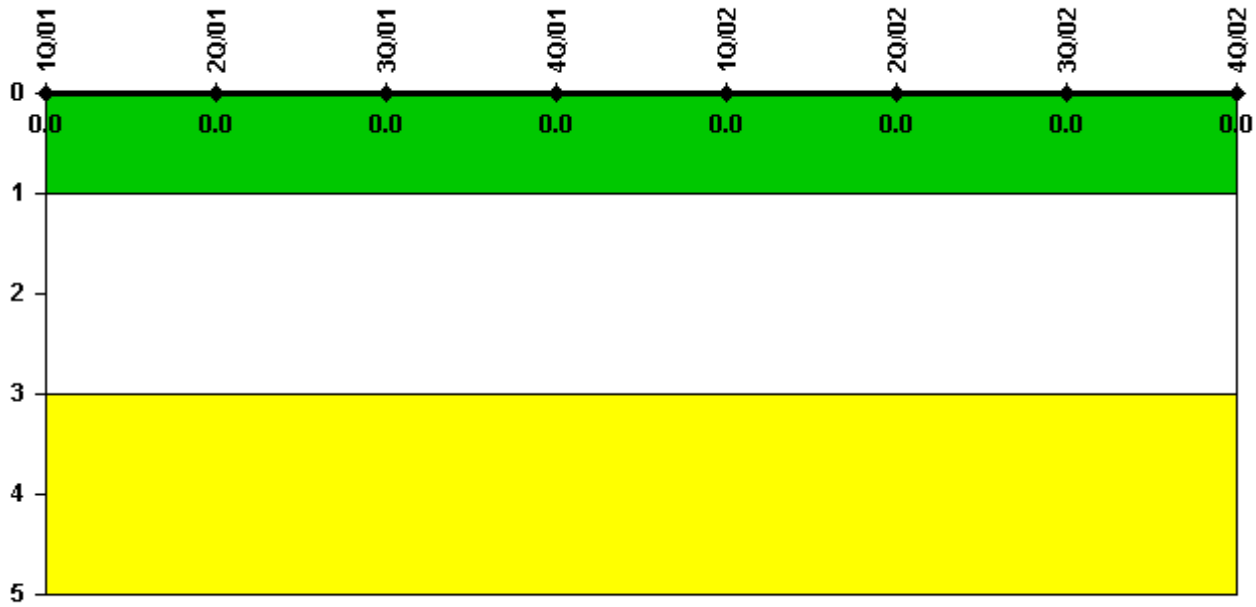
Thresholds: White > 2.0 Yellow > 5.0

Notes

Occupational Exposure Control Effectiveness	1Q/01	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02	3Q/02	4Q/02
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



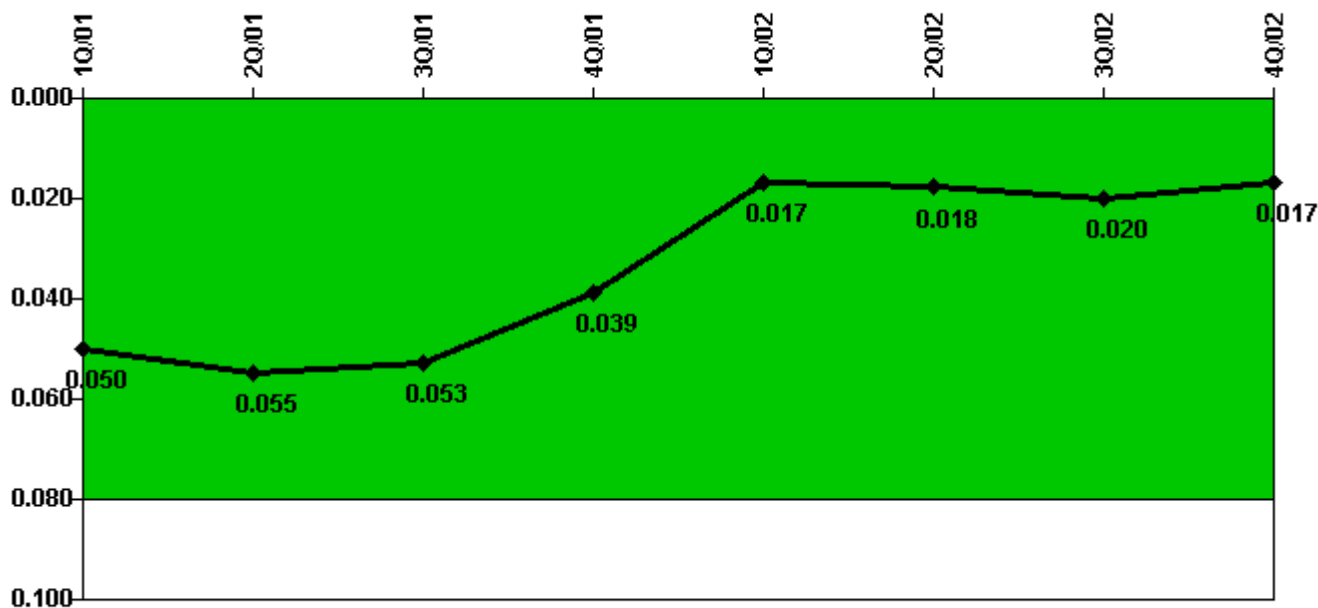
Thresholds: White > 1.0 Yellow > 3.0

Notes

RETS/ODCM Radiological Effluent	1Q/01	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02	3Q/02	4Q/02
RETS/ODCM occurrences	0	0	0	0	0	0	0	0
Indicator value	0	0	0	0	0	0	0	0

Licensee Comments: none

Protected Area Security Performance Index



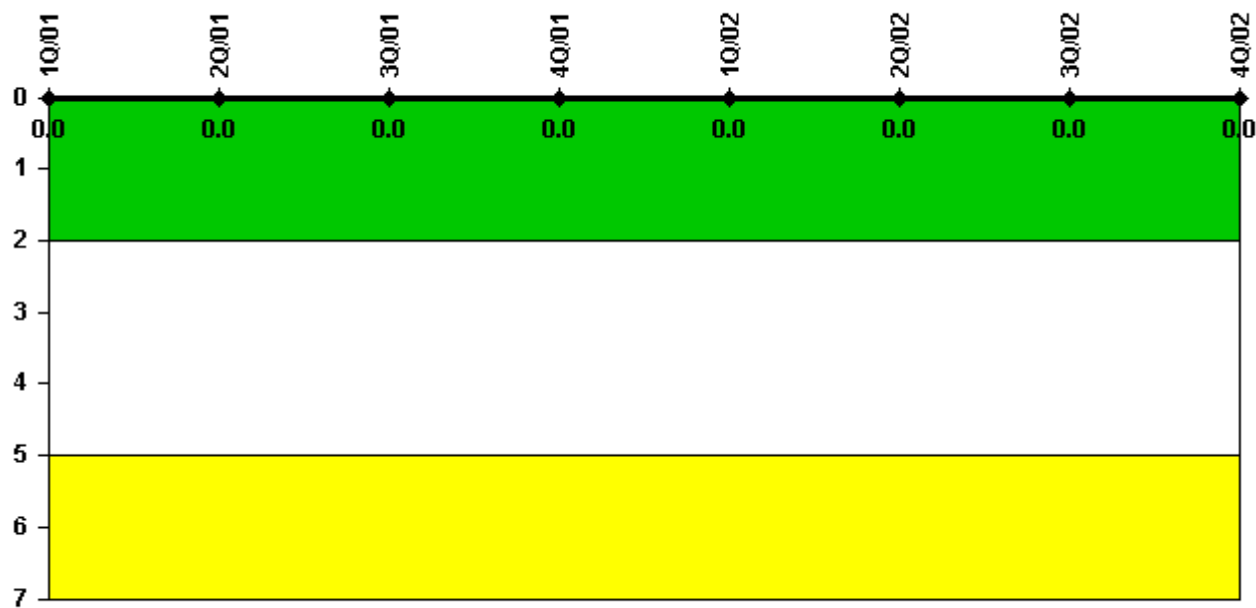
Thresholds: White > 0.080

Notes

Protected Area Security Performance Index	1Q/01	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02	3Q/02	4Q/02
IDS compensatory hours	504.80	96.00	65.60	82.30	40.90	141.20	145.30	15.70
CCTV compensatory hours	13.1	16.2	73.4	0	4.5	1.2	0	1.8
IDS normalization factor	1.55	1.38	1.20	1.20	1.20	1.20	1.20	1.20
CCTV normalization factor	1.0	1.0	1.0	1.8	1.8	1.8	1.8	1.8
Index Value	0.050	0.055	0.053	0.039	0.017	0.018	0.020	0.017

Licensee Comments: none

Personnel Screening Program



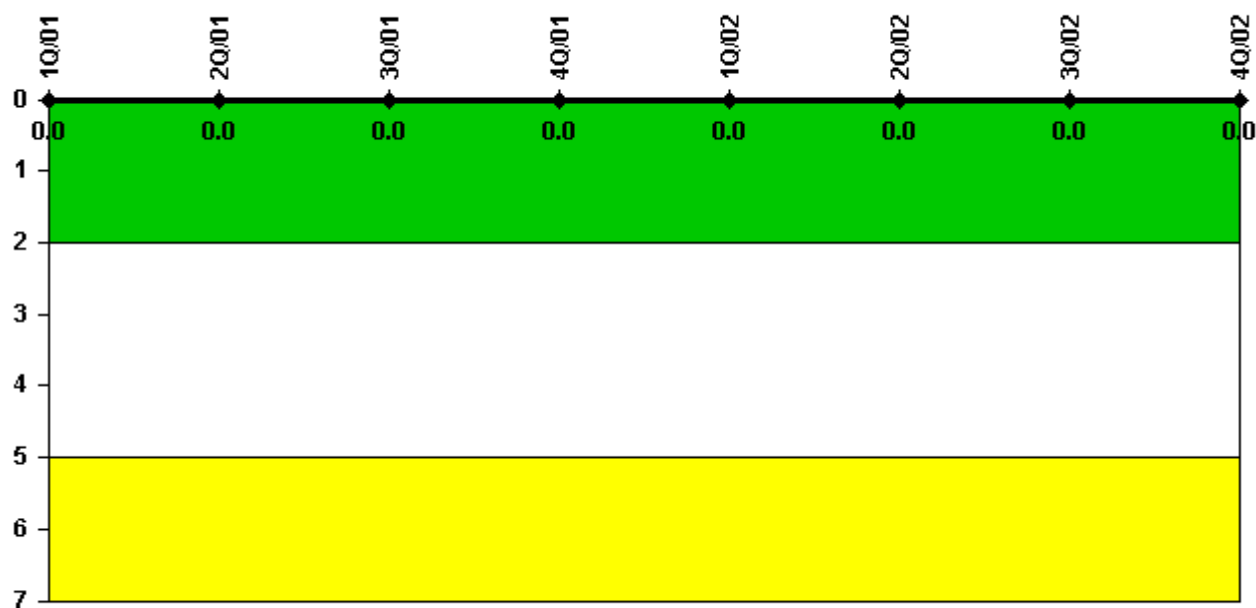
Thresholds: White > 2.0 Yellow > 5.0

Notes

Personnel Screening Program	1Q/01	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02	3Q/02	4Q/02
Program failures	0	0	0	0	0	0	0	0
Indicator value	0	0	0	0	0	0	0	0

Licensee Comments: none

FFD/Personnel Reliability



Thresholds: White > 2.0 Yellow > 5.0

Notes

FFD/Personnel Reliability	1Q/01	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02	3Q/02	4Q/02
Program Failures	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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Last Modified: January 30, 2003