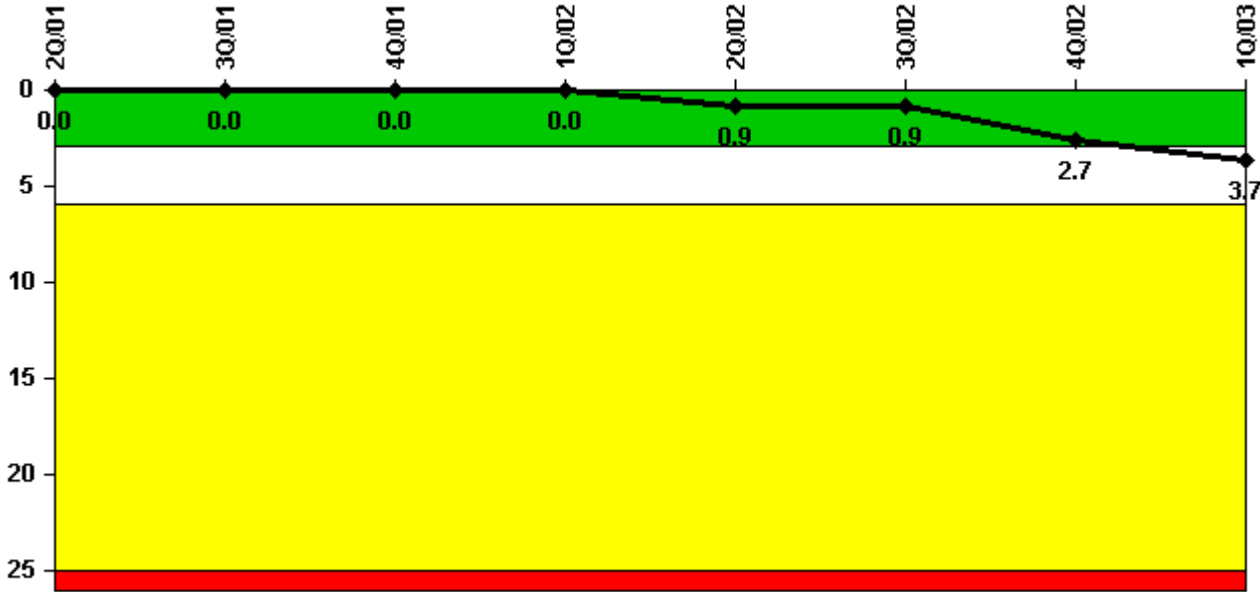


# San Onofre 2

## 1Q/2003 Performance Indicators

Licensee's General Comments: none

### Unplanned Scrams per 7000 Critical Hrs



Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

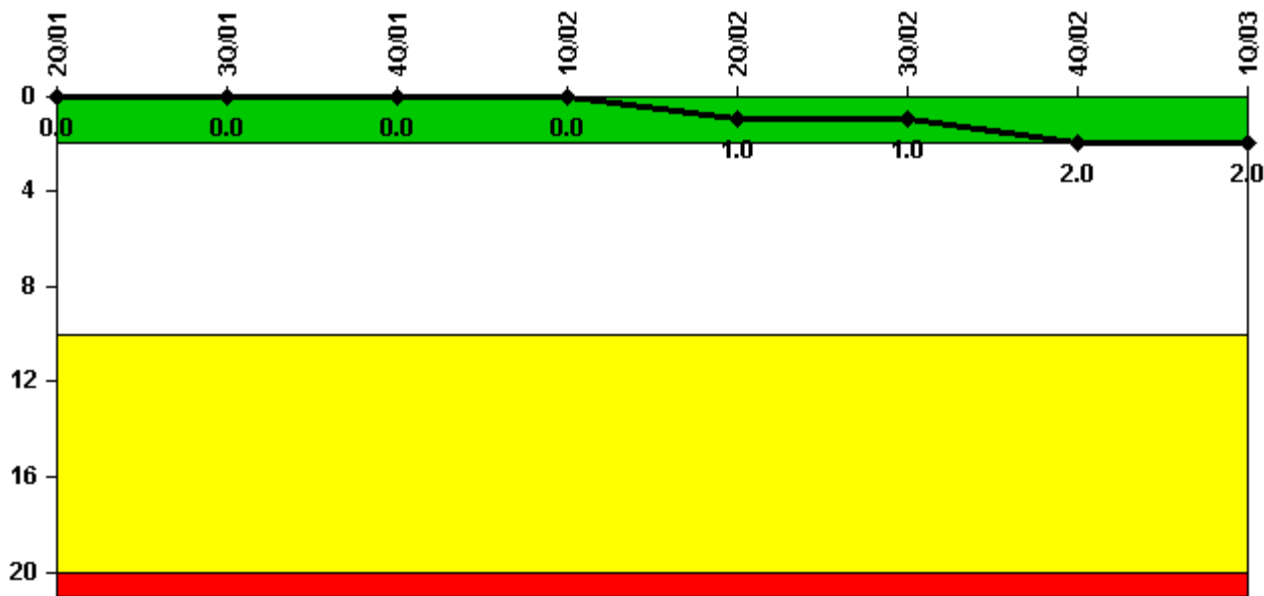
### Notes

Unplanned Scrams per 7000 Critical Hrs	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02	3Q/02	4Q/02	1Q/03
Unplanned scrams	0	0	0	0	1.0	0	2.0	1.0
Critical hours	2183.0	2208.0	2004.9	2160.0	1206.2	2190.4	2124.1	2147.1
Indicator value	0	0	0	0	0.9	0.9	2.7	3.7

Licensee Comments:

1Q/03: Reactor trip occurred on 2/1/03 due to loss of generator excitation. While performing refueling outage preventative maintenance on the Unit 3 Main Transformer/Unit Aux Transformer protective scheme, an incorrect test equipment setup resulted in a Loss of Generation Excitation Trip of Unit 2.

### Scrams with Loss of Normal Heat Removal



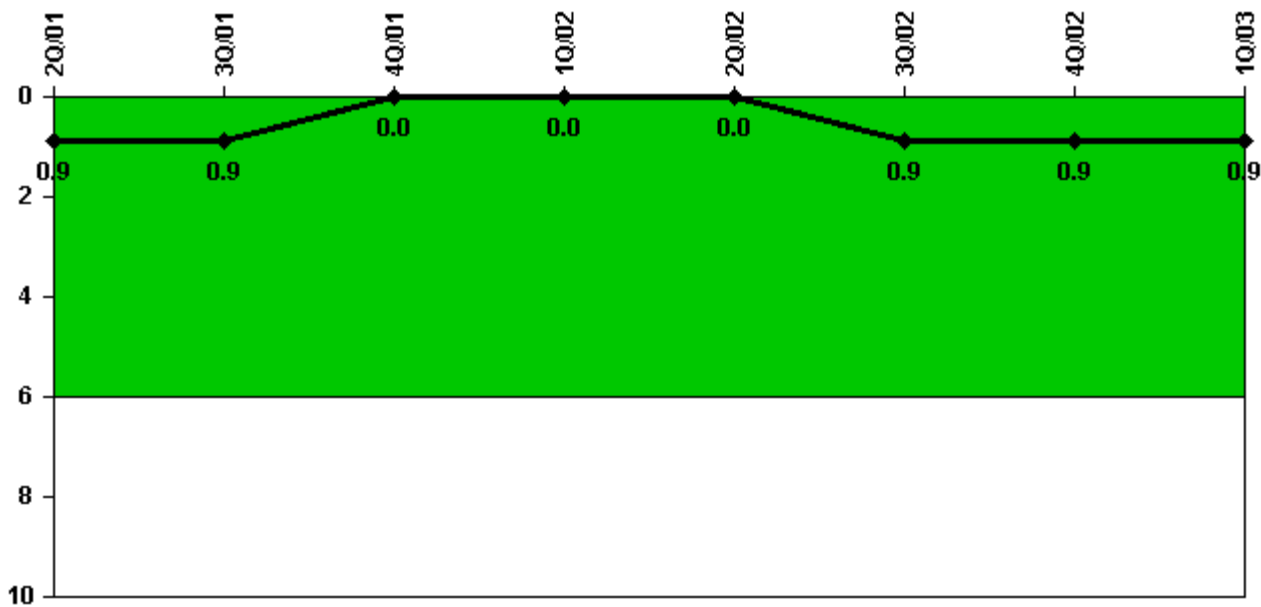
Thresholds: White > 2.0 Yellow > 10.0 Red > 20.0

#### Notes

Scrams with Loss of Normal Heat Removal	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02	3Q/02	4Q/02	1Q/03
Scrams	0	0	0	0	1.0	0	1.0	0
Indicator value	0	0	0	0	1.0	1.0	2.0	2.0

Licensee Comments: none

### Unplanned Power Changes per 7000 Critical Hrs



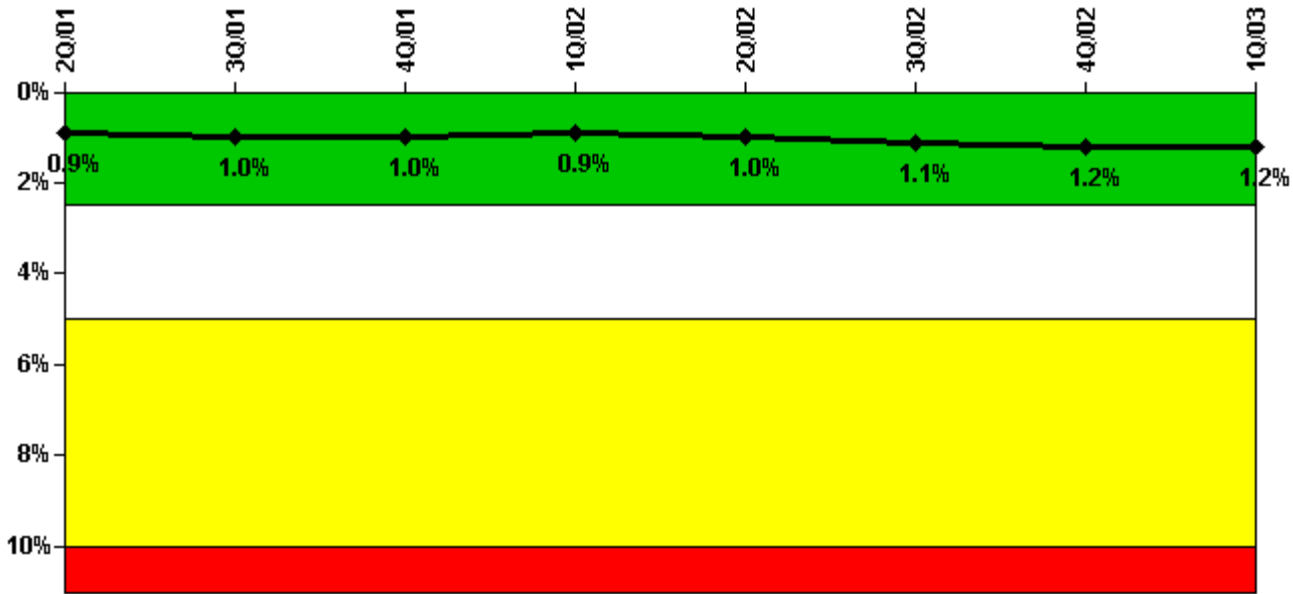
Thresholds: White > 6.0

#### Notes

Unplanned Power Changes per 7000 Critical Hrs	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02	3Q/02	4Q/02	1Q/03
Unplanned power changes	0	0	0	0	0	1.0	0	0
Critical hours	2183.0	2208.0	2004.9	2160.0	1206.2	2190.4	2124.1	2147.1
Indicator value	0.9	0.9	0	0	0	0.9	0.9	0.9

Licensee Comments: none

### Safety System Unavailability, Emergency AC Power



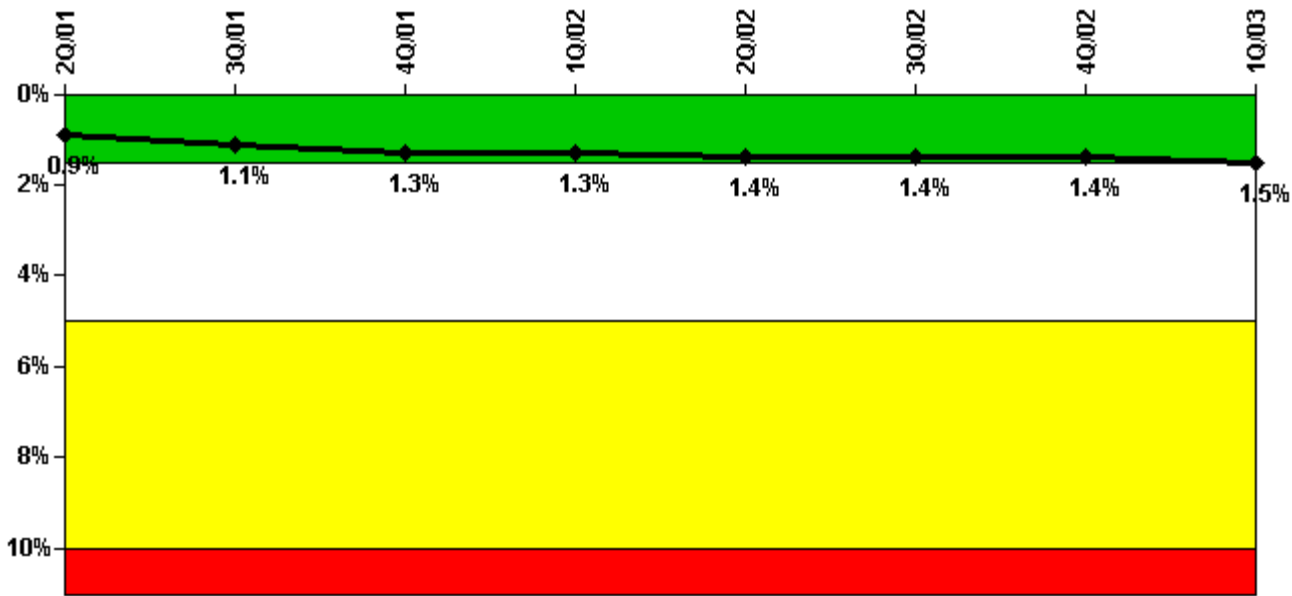
Thresholds: White > 2.5% Yellow > 5.0% Red > 10.0%

#### Notes

Safety System Unavailability, Emergency AC Power	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02	3Q/02	4Q/02	1Q/03
<b>Train 1</b>								
Planned unavailable hours	4.60	22.00	5.03	62.90	1.28	79.08	27.82	1.72
Unplanned unavailable hours	0	0	0	0	3.75	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	2183.00	2208.00	2209.00	2160.00	2183.00	2208.00	2209.00	2160.00
<b>Train 2</b>								
Planned unavailable hours	9.20	1.50	2.37	2.30	40.85	1.32	51.80	2.35
Unplanned unavailable hours	2.30	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	2183.00	2208.00	2209.00	2160.00	2183.00	2208.00	2209.00	2160.00
Indicator value	0.9%	1.0%	1.0%	0.9%	1.0%	1.1%	1.2%	1.2%

Licensee Comments: none

### Safety System Unavailability, High Pressure Injection System (HPSI)



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

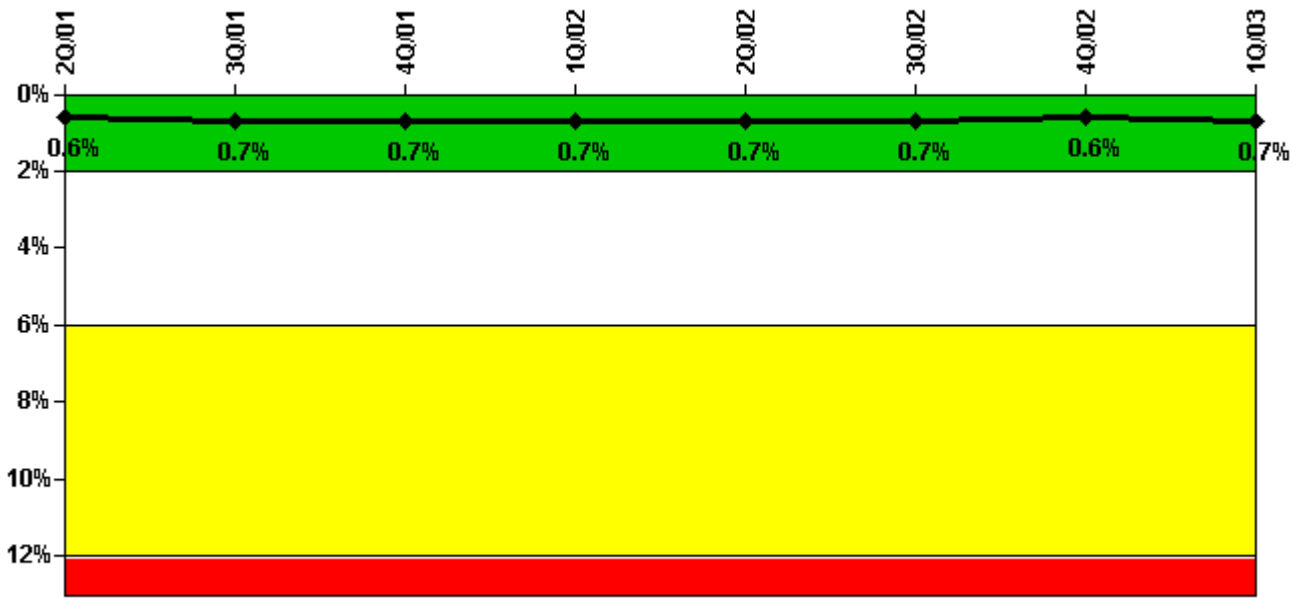
#### Notes

Safety System Unavailability, High Pressure Injection System (HPSI)	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02	3Q/02	4Q/02	1Q/03
<b>Train 1</b>								
Planned unavailable hours	51.80	70.67	15.60	0.40	17.62	13.43	10.38	0.25
Unplanned unavailable hours	111.20	6.60	0.80	21.90	0	0.93	0	16.85
Fault exposure hours	0	0	0	0	0	0	0	0
Effective Reset hours	0	0	0	0	0	0	0	0
Required hours	2183.00	2208.00	2000.00	2160.00	1206.17	2190.43	2124.09	2147.08
<b>Train 2</b>								
Planned unavailable hours	49.00	4.22	62.17	22.00	0	14.15	13.40	29.24
Unplanned unavailable hours	15.00	2.67	0	0	0	4.02	5.53	1.67
Fault exposure hours	0	0	0	0	0	0	0	0
Effective Reset hours	0	0	0	0	0	0	0	0
Required hours	2183.00	2208.00	2000.00	2160.00	1206.17	2190.43	2124.09	2147.08
<b>Indicator value</b>	<b>0.9%</b>	<b>1.1%</b>	<b>1.3%</b>	<b>1.3%</b>	<b>1.4%</b>	<b>1.4%</b>	<b>1.4%</b>	<b>1.5%</b>

Licensee Comments:

1Q/03: Engineering evaluations were completed on the degraded condition discussed in the 4Q02 comments. It determined that no fault exposure time is required.

### Safety System Unavailability, Heat Removal System (AFW)



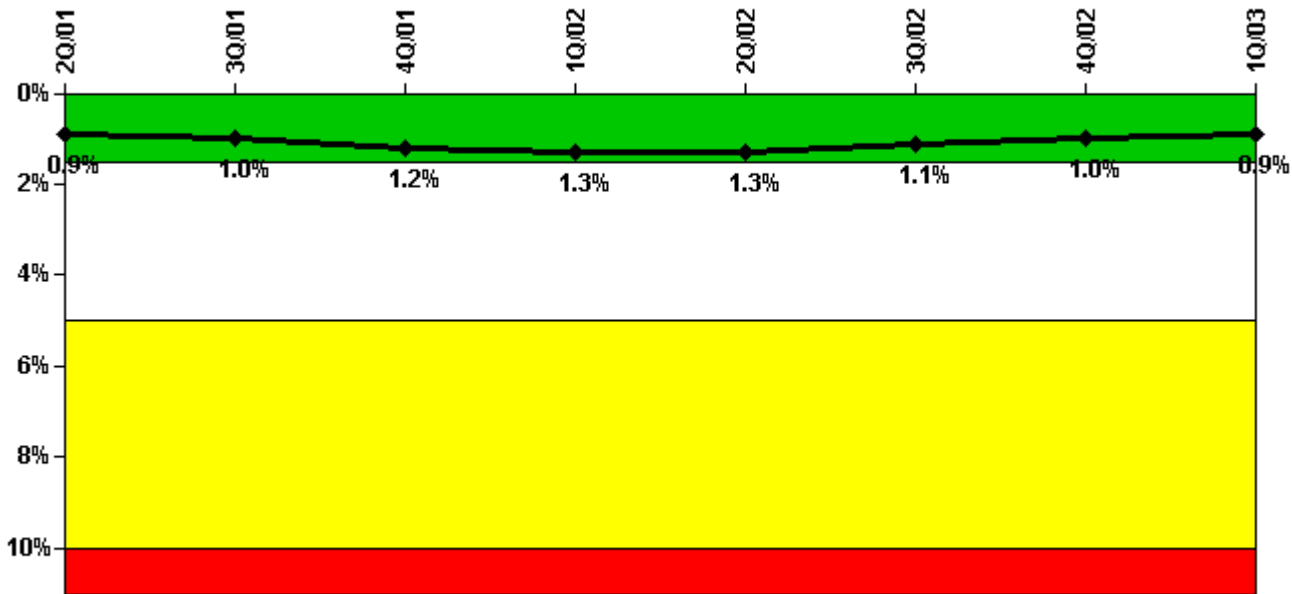
Thresholds: White > 2.0% Yellow > 6.0% Red > 12.0%

#### Notes

Safety System Unavailability, Heat Removal System (AFW)	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02	3Q/02	4Q/02	1Q/03
<b>Train 1</b>								
Planned unavailable hours	0	19.80	0	0	0	45.43	1.42	0.50
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	2183.00	2208.00	2000.00	2160.00	1206.17	2190.43	2124.09	2147.08
<b>Train 2</b>								
Planned unavailable hours	0	0	0	22.40	0	6.03	23.75	0
Unplanned unavailable hours	0	0	0	7.60	0	0	0	65.25
Fault exposure hours	0	0	0	0	0	0	0	0
Effective Reset hours	0	0	0	0	0	0	0	0
Required hours	2183.00	2208.00	2000.00	2160.00	1206.17	2190.43	2124.09	2147.08
<b>Train 3</b>								
Planned unavailable hours	0	52.60	13.50	40.40	0	16.77	0.25	0.77
Unplanned unavailable hours	0	23.30	17.20	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	2183.00	2208.00	2000.00	2160.00	1206.17	2190.43	2124.09	2147.08
Indicator value	0.6%	0.7%	0.7%	0.7%	0.7%	0.7%	0.6%	0.7%

Licensee Comments: none

### Safety System Unavailability, Residual Heat Removal System



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

#### Notes

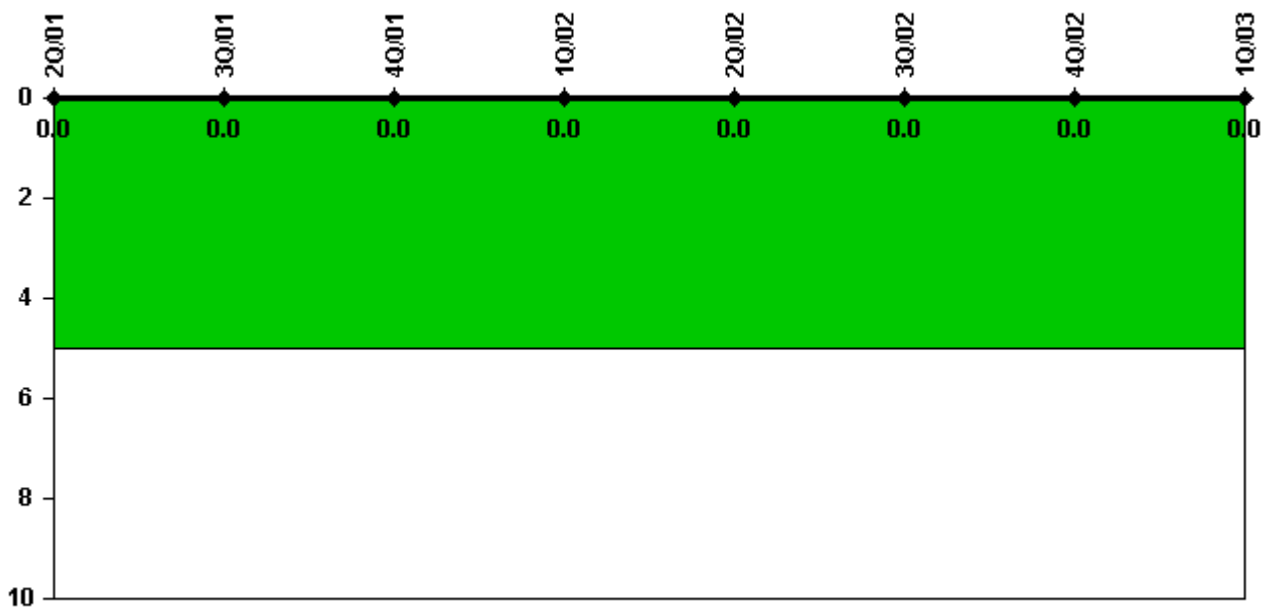
Safety System Unavailability, Residual Heat Removal System	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02	3Q/02	4Q/02	1Q/03
<b>Train 1</b>								
Planned unavailable hours	51.10	71.52	61.40	1.00	18.35	67.30	12.65	0.25
Unplanned unavailable hours	111.20	6.60	0.80	21.90	0	0.93	0	16.85
Fault exposure hours	0	0	0	0	0	0	0	0
Effective Reset hours	0	0	0	0	0	0	0	0
Required hours	2183.00	2208.00	2035.00	2160.00	1269.38	2208.00	2209.00	2160.00
<b>Train 2</b>								
Planned unavailable hours	50.70	1.12	84.60	2.50	25.00	44.43	3.35	38.47
Unplanned unavailable hours	15.00	2.67	0	0	0	4.02	4.78	1.67
Fault exposure hours	0	0	0	0	0	0	0	0
Effective Reset hours	0	0	0	0	0	0	0	0
Required hours	2183.00	2208.00	2035.00	2160.00	1269.38	2208.00	2209.00	2160.00
<b>Train 3</b>								
Planned unavailable hours	0	0	0.60	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	174.00	0	913.62	0	0	0
<b>Train 4</b>								

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	174.00	0	913.62	0	0	0
Indicator value	0.9%	1.0%	1.2%	1.3%	1.3%	1.1%	1.0%	0.9%

Licensee Comments:

1Q/03: Engineering evaluations were completed on the degraded condition discussed in the 4Q02 comments. It determined that no fault exposure time is required.

### Safety System Functional Failures (PWR)



Thresholds: White > 5.0

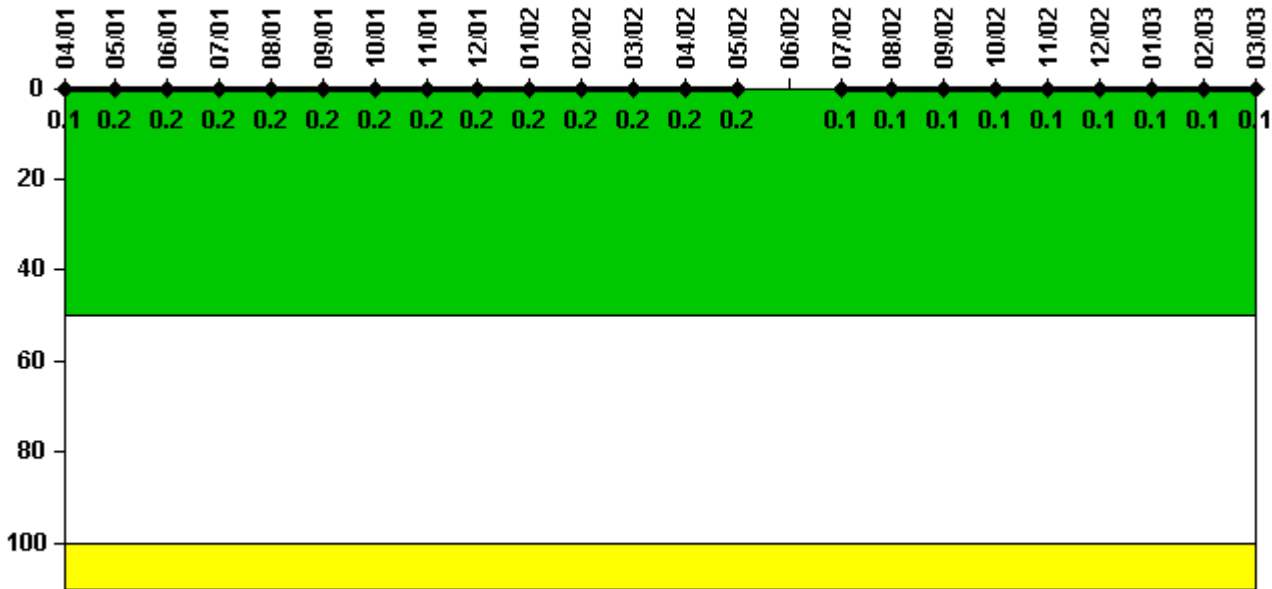
### Notes

Safety System Functional Failures (PWR)	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02	3Q/02	4Q/02	1Q/03
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 Activity



Thresholds: White > 50.0 Yellow > 100.0

### Notes

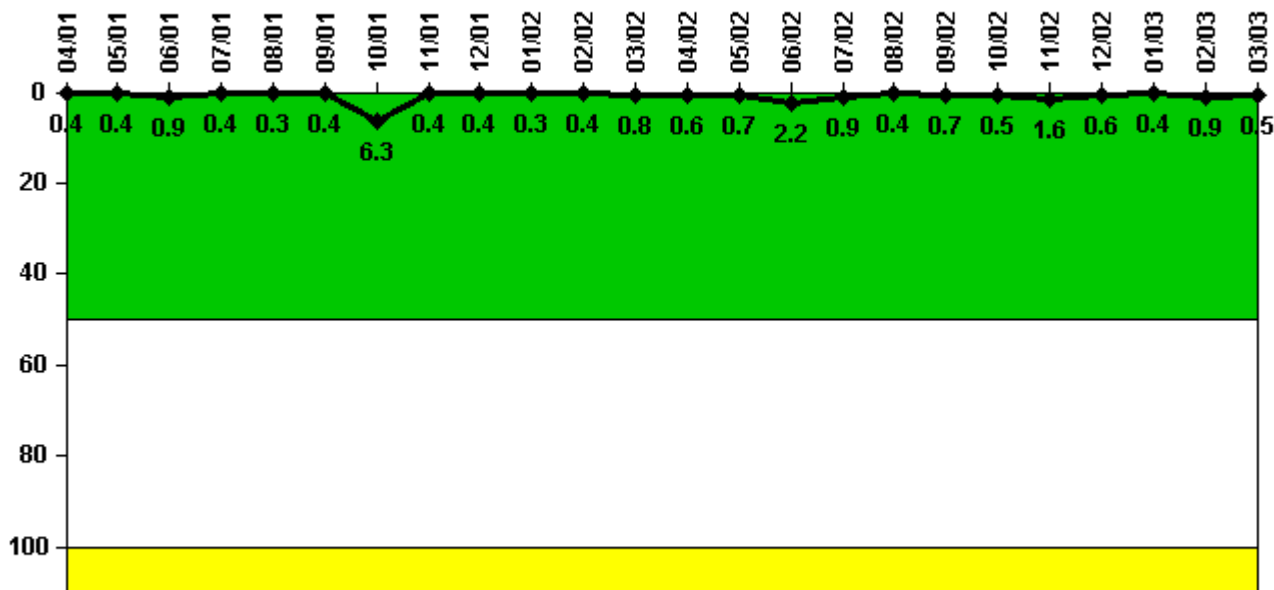
Reactor Coolant System Activity	4/01	5/01	6/01	7/01	8/01	9/01	10/01	11/01	12/01	1/02	2/02	3/02
Maximum activity	0.001000	0.002000	0.002000	0.002000	0.002000	0.002000	0.002000	0.002000	0.002000	0.002000	0.002000	0.002000
Technical specification limit	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Indicator value	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2

Reactor Coolant System Activity	4/02	5/02	6/02	7/02	8/02	9/02	10/02	11/02	12/02	1/03	2/03	3/03
Maximum activity	0.002000	0.002000	N/A	0.001000	0.001000	0.001000	0.001000	0.001000	0.001000	0.001000	0.001000	0.001000
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	N/A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1

Licensee Comments: none

### Reactor Coolant System Leakage



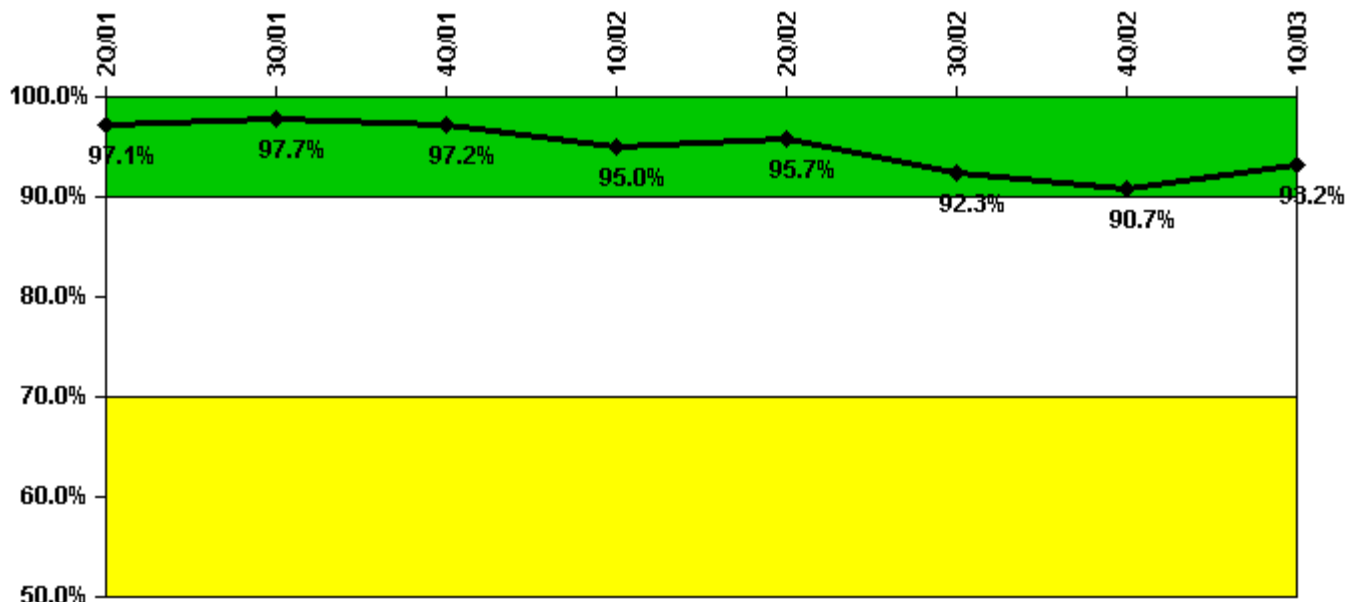
Thresholds: White > 50.0 Yellow > 100.0

#### Notes

Reactor Coolant System Leakage	4/01	5/01	6/01	7/01	8/01	9/01	10/01	11/01	12/01	1/02	2/02	3/02
Maximum leakage	0.040	0.040	0.090	0.040	0.030	0.040	0.630	0.040	0.040	0.030	0.040	0.080
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	0.4	0.4	0.9	0.4	0.3	0.4	6.3	0.4	0.4	0.3	0.4	0.8
Reactor Coolant System Leakage	4/02	5/02	6/02	7/02	8/02	9/02	10/02	11/02	12/02	1/03	2/03	3/03
Maximum leakage	0.060	0.070	0.220	0.090	0.040	0.070	0.050	0.160	0.060	0.040	0.090	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	0.6	0.7	2.2	0.9	0.4	0.7	0.5	1.6	0.6	0.4	0.9	0.5

Licensee Comments: none

### Drill/Exercise Performance



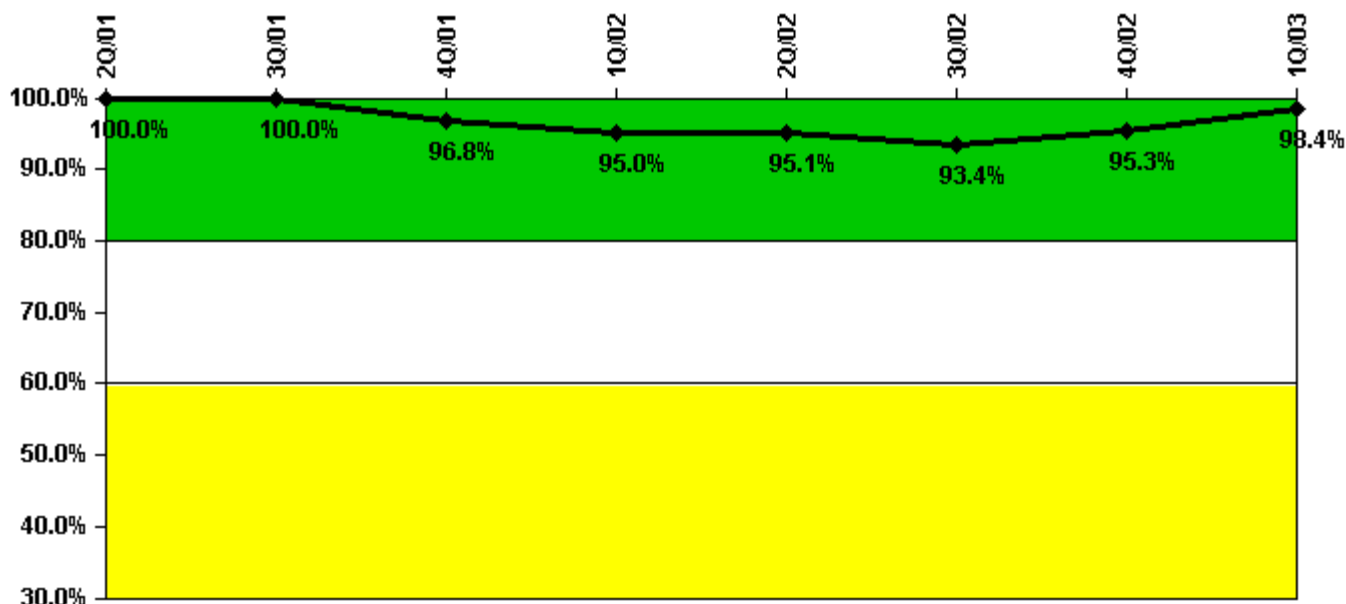
Thresholds: White < 90.0% Yellow < 70.0%

#### Notes

Drill/Exercise Performance	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02	3Q/02	4Q/02	1Q/03
Successful opportunities	46.0	8.0	0	1.0	0	39.0	11.0	60.0
Total opportunities	48.0	8.0	0	3.0	0	43.0	14.0	61.0
Indicator value	97.1%	97.7%	97.2%	95.0%	95.7%	92.3%	90.7%	93.2%

Licensee Comments: none

### ERO Drill Participation



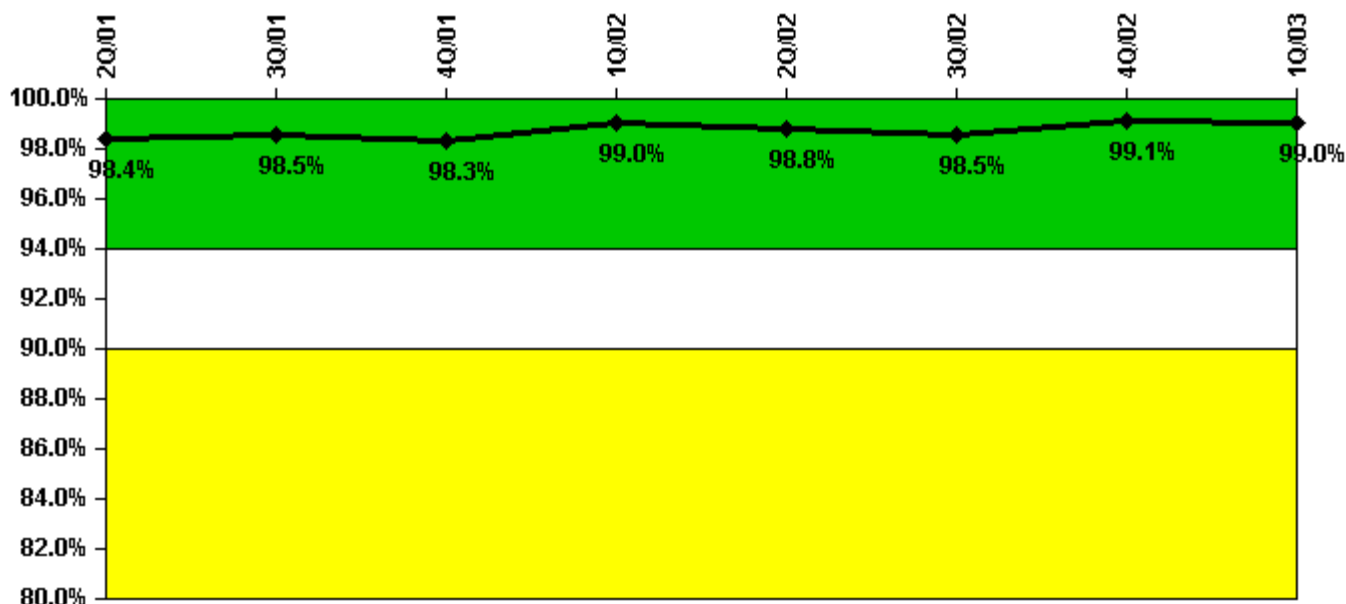
Thresholds: White < 80.0% Yellow < 60.0%

#### Notes

ERO Drill Participation	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02	3Q/02	4Q/02	1Q/03
Participating Key personnel	62.0	63.0	61.0	57.0	58.0	57.0	61.0	63.0
Total Key personnel	62.0	63.0	63.0	60.0	61.0	61.0	64.0	64.0
Indicator value	100.0%	100.0%	96.8%	95.0%	95.1%	93.4%	95.3%	98.4%

Licensee Comments: none

### Alert & Notification System



Thresholds: White < 94.0% Yellow < 90.0%

#### Notes

Alert & Notification System	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02	3Q/02	4Q/02	1Q/03
Successful siren-tests	341	390	431	390	338	386	488	340
Total sirens-tests	343	392	441	392	343	392	490	343
Indicator value	98.4%	98.5%	98.3%	99.0%	98.8%	98.5%	99.1%	99.0%

Licensee Comments: none

### Occupational Exposure Control Effectiveness



Thresholds: White > 2.0 Yellow > 5.0

**Notes**

Occupational Exposure Control Effectiveness	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02	3Q/02	4Q/02	1Q/03
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



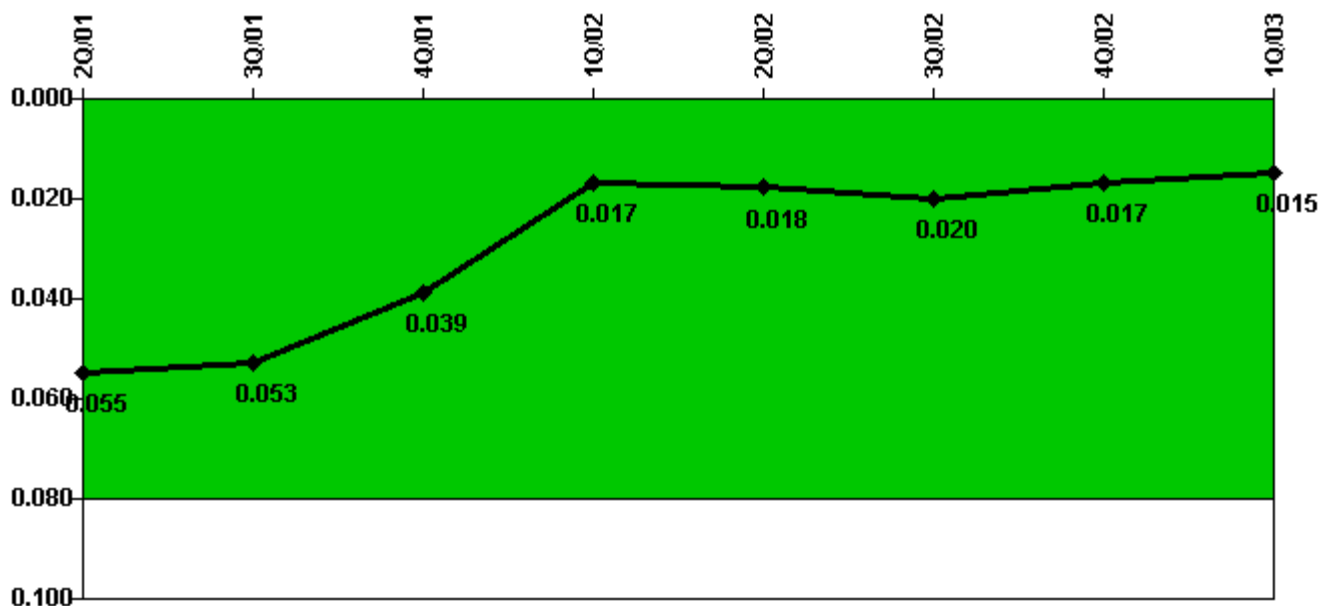
Thresholds: White > 1.0 Yellow > 3.0

#### Notes

RETS/ODCM Radiological Effluent	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02	3Q/02	4Q/02	1Q/03
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	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02	3Q/02	4Q/02	1Q/03
IDS compensatory hours	96.00	65.60	82.30	40.90	141.20	145.30	15.70	18.60
CCTV compensatory hours	16.2	73.4	0	4.5	1.2	0	1.8	0
IDS normalization factor	1.38	1.20	1.20	1.20	1.20	1.20	1.20	1.20
CCTV normalization factor	1.0	1.0	1.8	1.8	1.8	1.8	1.8	1.8
Index Value	0.055	0.053	0.039	0.017	0.018	0.020	0.017	0.015

Licensee Comments: none



### Personnel Screening Program



Thresholds: White > 2.0 Yellow > 5.0

#### Notes

Personnel Screening Program	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02	3Q/02	4Q/02	1Q/03
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	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02	3Q/02	4Q/02	1Q/03
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: April 22, 2003