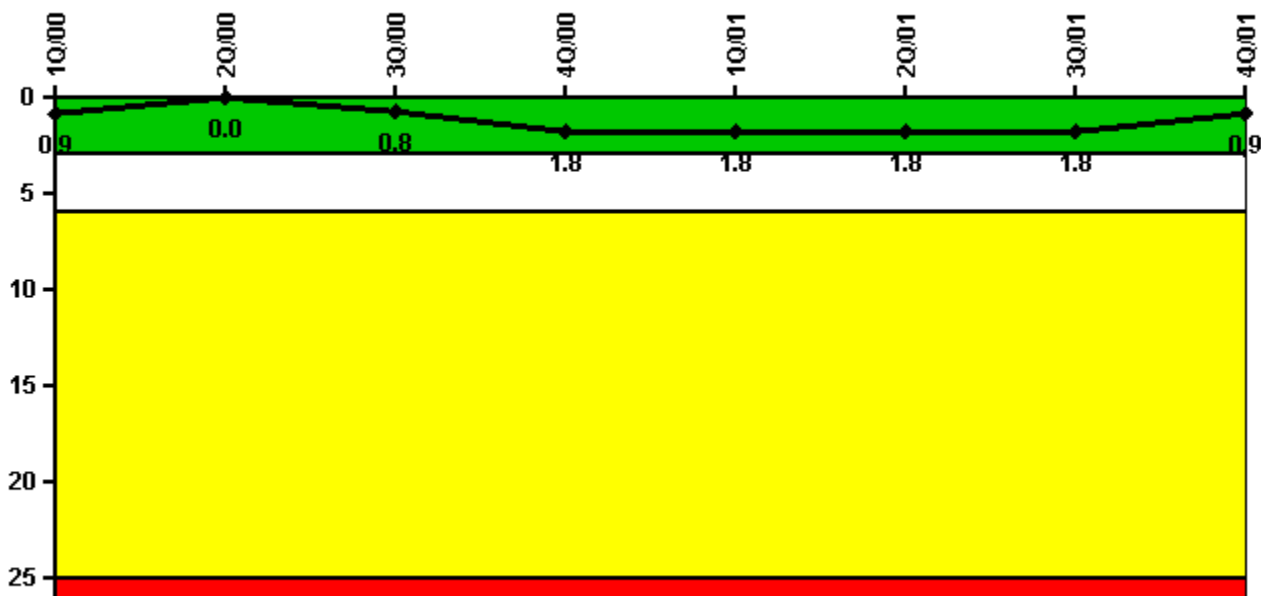


**Palo Verde 2**

**4Q/2001 Performance Indicators**

Licensee's General Comments: none

**Unplanned Scrams per 7000 Critical Hrs**



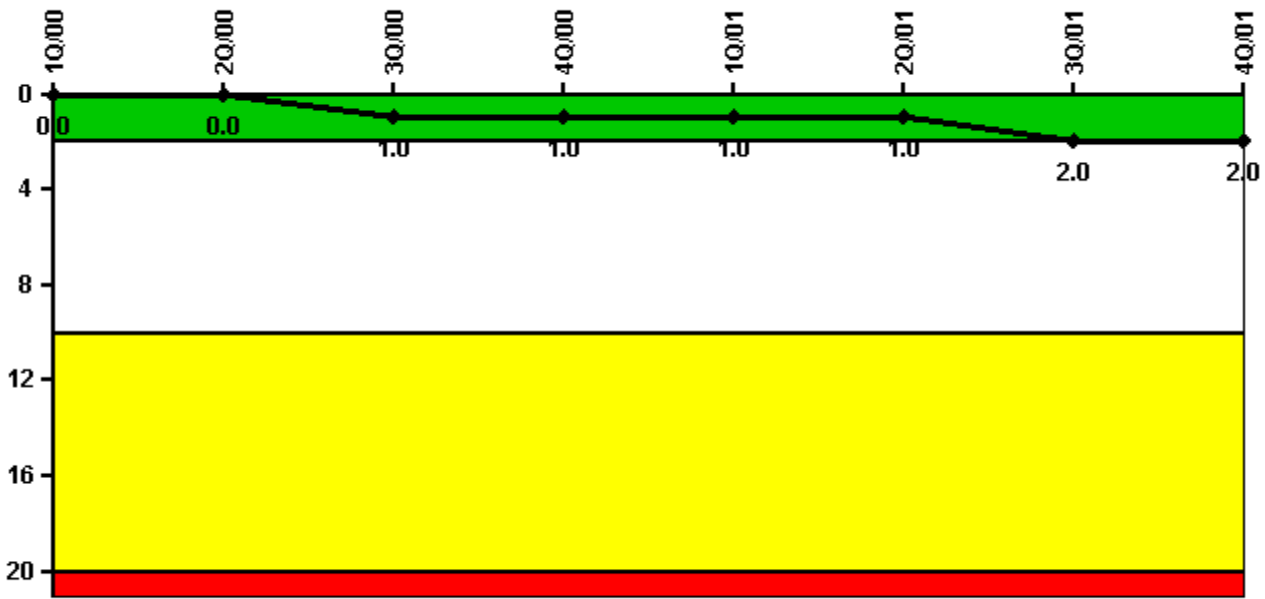
Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

**Notes**

Unplanned Scrams per 7000 Critical Hrs	1Q/00	2Q/00	3Q/00	4Q/00	1Q/01	2Q/01	3Q/01	4Q/01
Unplanned scrams	0	0	1.0	1.0	0	0	1.0	0
Critical hours	2025.6	2184.0	2170.6	1414.7	2160.0	2184.0	2174.4	1508.9
<b>Indicator value</b>	<b>0.9</b>	<b>0</b>	<b>0.8</b>	<b>1.8</b>	<b>1.8</b>	<b>1.8</b>	<b>1.8</b>	<b>0.9</b>

Licensee Comments: none

### Scrams with Loss of Normal Heat Removal



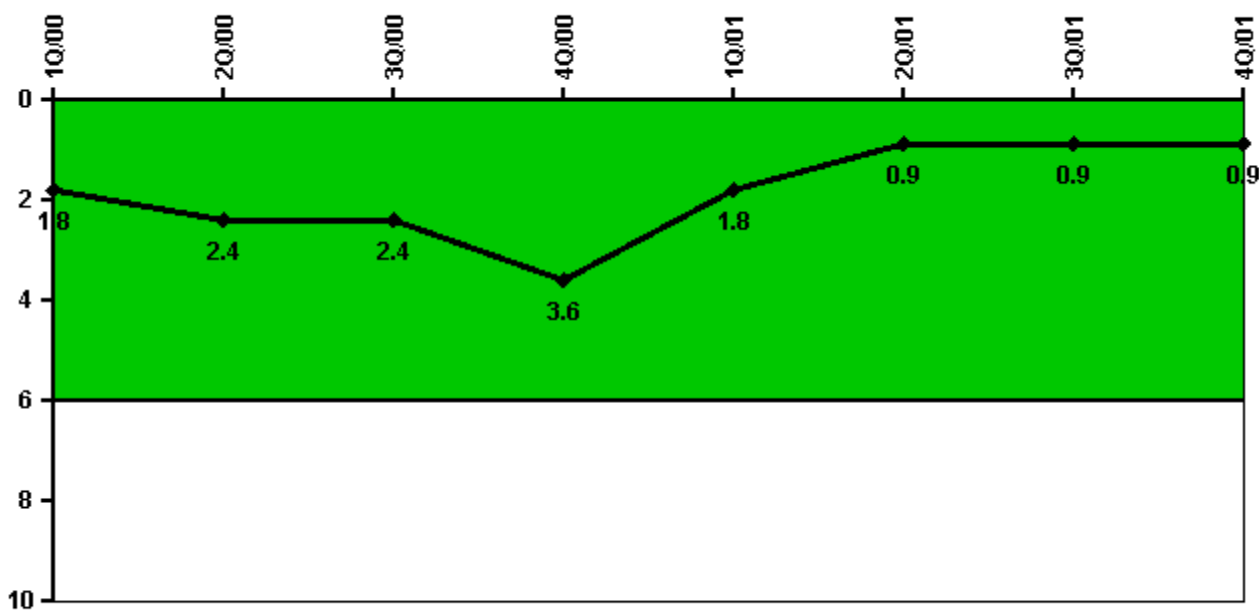
Thresholds: White > 2.0 Yellow > 10.0 Red > 20.0

#### Notes

Scrams with Loss of Normal Heat Removal	1Q/00	2Q/00	3Q/00	4Q/00	1Q/01	2Q/01	3Q/01	4Q/01
Scrams	0	0	1.0	0	0	0	1.0	0
Indicator value	0	0	1.0	1.0	1.0	1.0	2.0	2.0

Licensee Comments: none

### Unplanned Power Changes per 7000 Critical Hrs



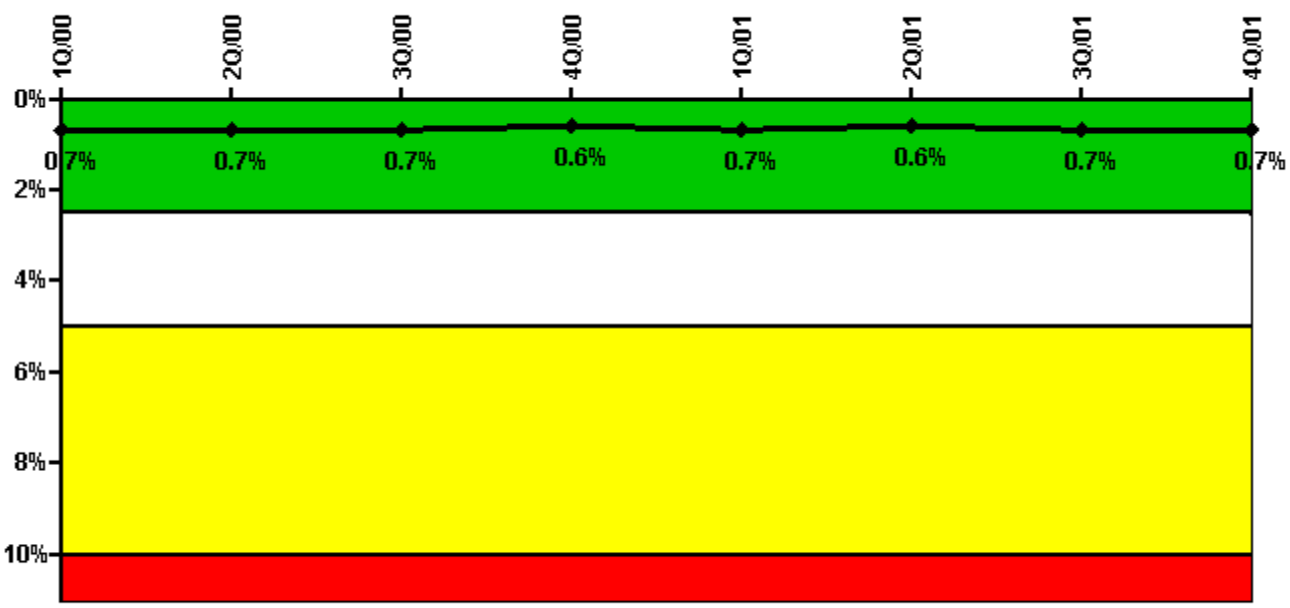
Thresholds: White > 6.0

#### Notes

Unplanned Power Changes per 7000 Critical Hrs	1Q/00	2Q/00	3Q/00	4Q/00	1Q/01	2Q/01	3Q/01	4Q/01
Unplanned power changes	2.0	1.0	0	1.0	0	0	0	1.0
Critical hours	2025.6	2184.0	2170.6	1414.7	2160.0	2184.0	2174.4	1508.9
Indicator value	1.8	2.4	2.4	3.6	1.8	0.9	0.9	0.9

Licensee Comments: none

### Safety System Unavailability, Emergency AC Power



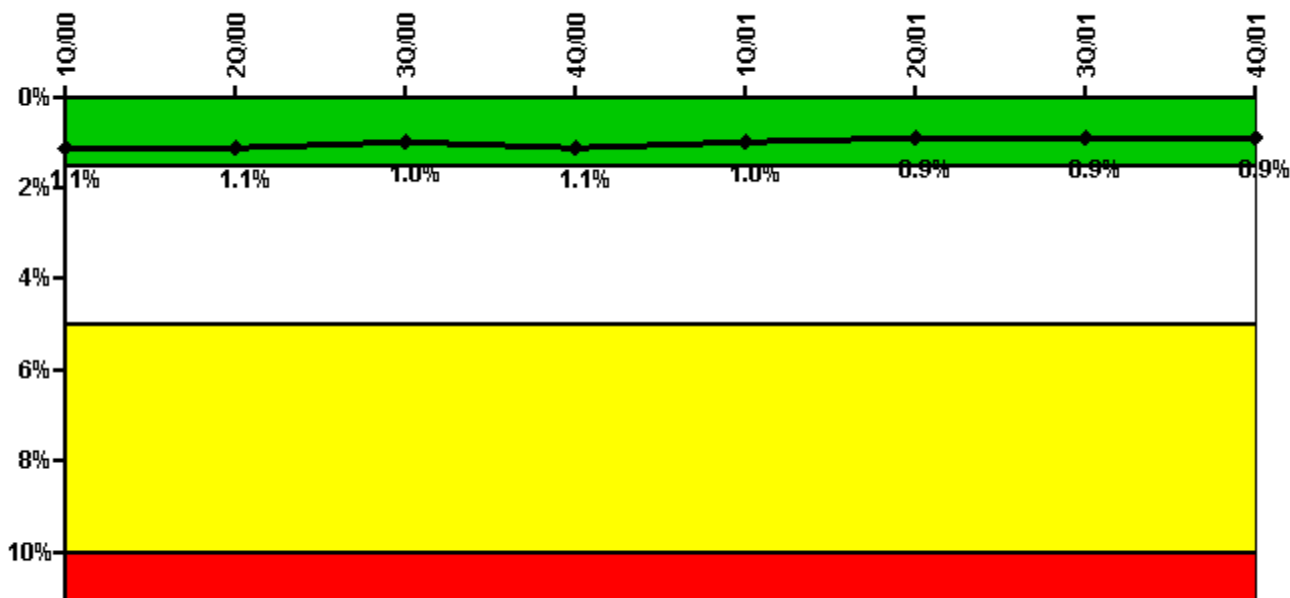
Thresholds: White > 2.5% Yellow > 5.0% Red > 10.0%

#### Notes

Safety System Unavailability, Emergency AC Power	1Q/00	2Q/00	3Q/00	4Q/00	1Q/01	2Q/01	3Q/01	4Q/01
<b>Train 1</b>								
Planned unavailable hours	25.90	0.65	21.22	0	20.62	0	26.88	21.84
Unplanned unavailable hours	0	0	0	0	9.12	0	60.07	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	2184.00	2184.00	2208.00	2208.00	2160.00	2184.00	2208.00	2208.00
<b>Train 2</b>								
Planned unavailable hours	0	24.67	0	0	21.48	0	5.93	0.02
Unplanned unavailable hours	0	0	0	0	6.50	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	2184.00	2184.00	2208.00	2208.00	2160.00	2184.00	2208.00	2208.00
<b>Indicator value</b>	<b>0.7%</b>	<b>0.7%</b>	<b>0.7%</b>	<b>0.6%</b>	<b>0.7%</b>	<b>0.6%</b>	<b>0.7%</b>	<b>0.7%</b>

Licensee Comments: none

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



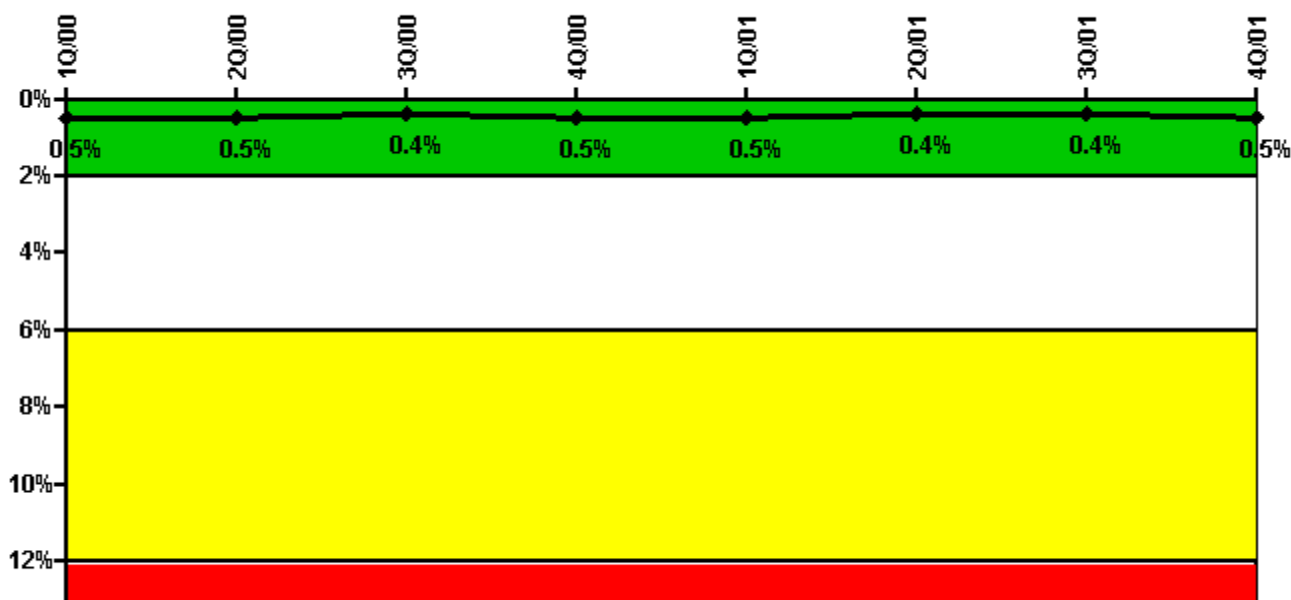
Thresholds: White > 1.5% Yellow > 5.0% Red > 10.0%

#### Notes

Safety System Unavailability, High Pressure Injection System (HPSI)	1Q/00	2Q/00	3Q/00	4Q/00	1Q/01	2Q/01	3Q/01	4Q/01
<b>Train 1</b>								
Planned unavailable hours	14.79	9.18	16.87	18.20	15.27	0.90	29.17	17.52
Unplanned unavailable hours	0	0	0	0	0	0	0	0
Fault exposure hours	2.56	13.10	0	29.57	0	0	0	0
Effective Reset hours	0	0	0	0	0	0	0	0
Required hours	2025.60	2184.00	2170.55	1414.68	2160.00	2184.00	2174.40	1508.90
<b>Train 2</b>								
Planned unavailable hours	5.35	24.26	25.23	31.28	13.42	7.38	7.69	8.35
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	2025.60	2184.00	2170.55	1414.68	2160.00	2184.00	2174.40	1508.90
<b>Indicator value</b>	<b>1.1%</b>	<b>1.1%</b>	<b>1.0%</b>	<b>1.1%</b>	<b>1.0%</b>	<b>0.9%</b>	<b>0.9%</b>	<b>0.9%</b>

Licensee Comments: none

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



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

#### Notes

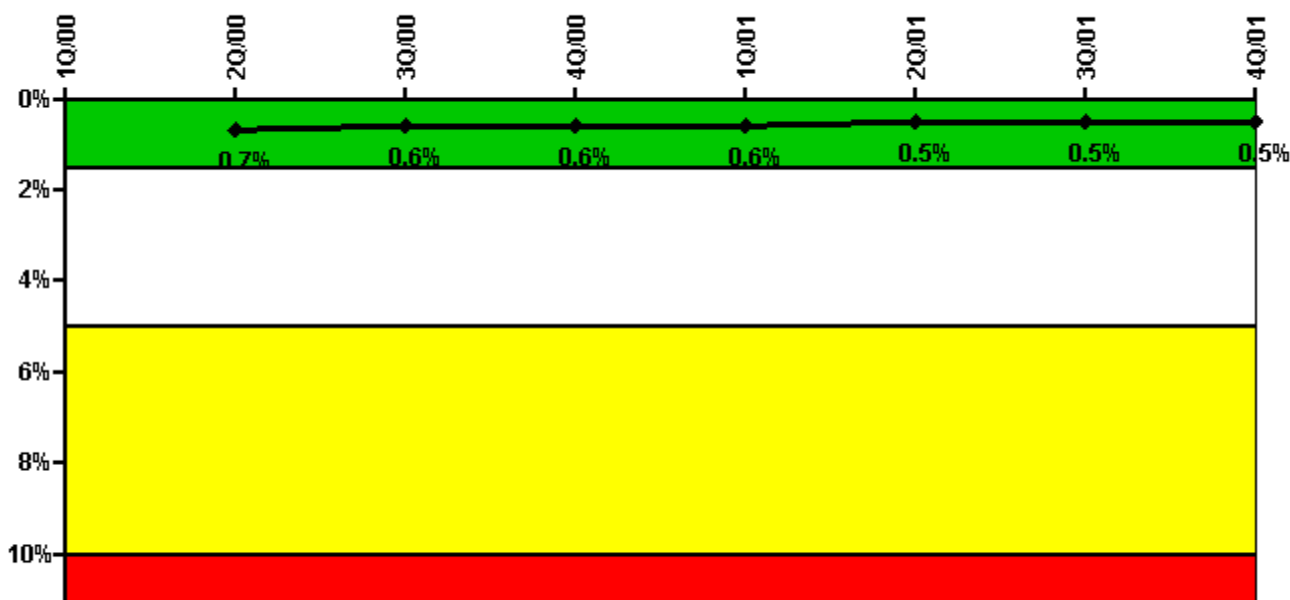
Safety System Unavailability, Heat Removal System (AFW)	1Q/00	2Q/00	3Q/00	4Q/00	1Q/01	2Q/01	3Q/01	4Q/01
<b>Train 1</b>								
Planned unavailable hours	16.06	3.99	13.50	31.48	13.52	1.13	17.19	19.76
Unplanned unavailable hours	13.98	21.97	0	13.97	0	0	0	14.52
Fault exposure hours	0	0	0	0	0	0	0	0
Effective Reset hours	366.76	0	0	0	0	0	0	0
Required hours	2025.60	2184.00	2170.55	1414.68	2160.00	2184.00	2174.40	1508.90
<b>Train 2</b>								
Planned unavailable hours	1.27	9.60	0.60	0.40	13.28	1.02	5.50	1.40
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	2025.60	2184.00	2170.55	1414.68	2160.00	2184.00	2174.40	1508.90
<b>Train 3</b>								
Planned unavailable hours	3.88	0.97	6.47	10.27	0.42	0.55	0.67	0.94
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	2025.60	2184.00	2170.55	1414.68	2160.00	2184.00	2174.40	1508.90
<b>Indicator value</b>	<b>0.5%</b>	<b>0.5%</b>	<b>0.4%</b>	<b>0.5%</b>	<b>0.5%</b>	<b>0.4%</b>	<b>0.4%</b>	<b>0.5%</b>

Licensee Comments: none

Effective Reset Comments:

1Q/00: Previously reset hours were reset under the new process.

### Safety System Unavailability, Residual Heat Removal System



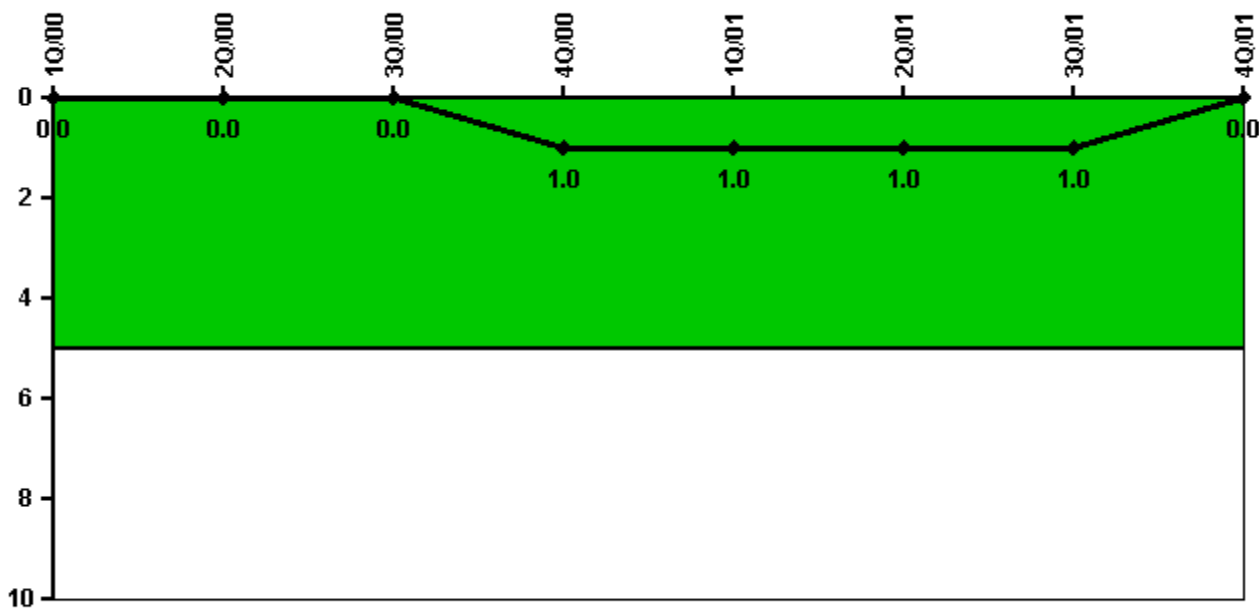
Thresholds: White > 1.5% Yellow > 5.0% Red > 10.0%

#### Notes

Safety System Unavailability, Residual Heat Removal System	1Q/00	2Q/00	3Q/00	4Q/00	1Q/01	2Q/01	3Q/01	4Q/01
<b>Train 1</b>								
Planned unavailable hours	16.81	11.51	27.48	21.16	14.62	2.33	25.86	37.19
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	2184.00	2184.00	2208.00	1440.51	2160.00	2184.00	2208.00	1567.70
<b>Train 2</b>								
Planned unavailable hours	9.68	48.68	11.65	5.25	21.73	2.70	10.09	7.83
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	2184.00	2184.00	2208.00	1440.51	2160.00	2184.00	2208.00	1567.70
<b>Train 3</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	0	357.28	0	0	0	356.70
<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	0	298.75	0	0	0	469.78
<b>Indicator value</b>		0.7%	0.6%	0.6%	0.6%	0.5%	0.5%	0.5%

Licensee Comments: none

### Safety System Functional Failures (PWR)



Thresholds: White > 5.0

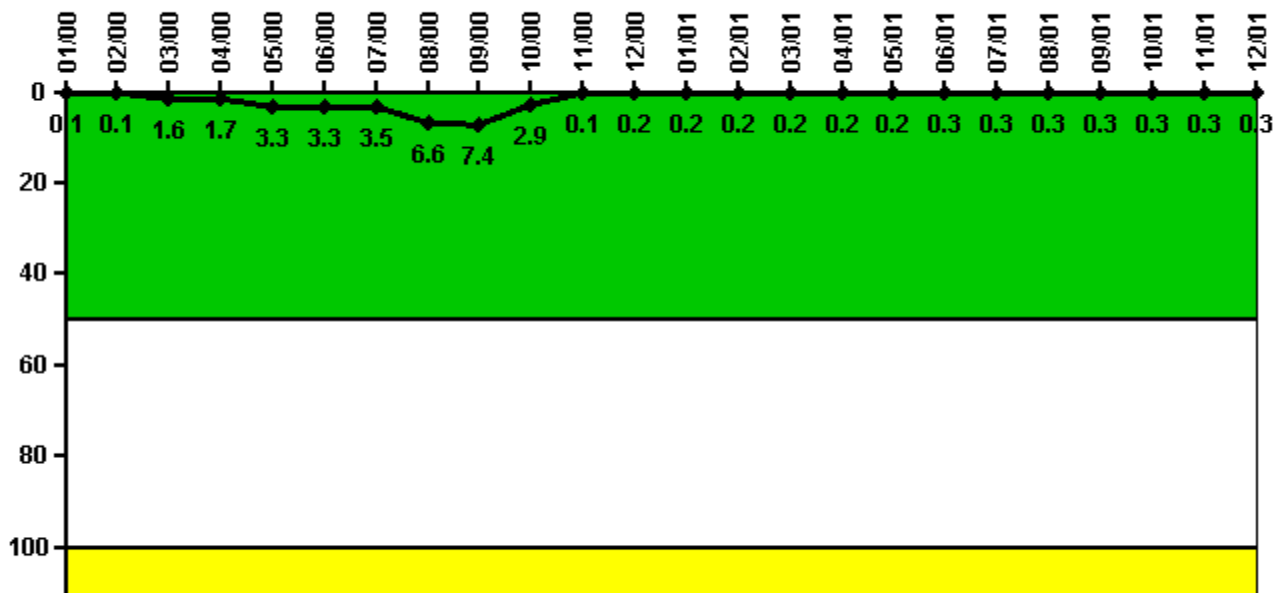
#### Notes

Safety System Functional Failures (PWR)	1Q/00	2Q/00	3Q/00	4Q/00	1Q/01	2Q/01	3Q/01	4Q/01
Safety System Functional Failures	0	0	0	1	0	0	0	0
Indicator value	0	0	0	1	1	1	1	0

Licensee Comments: none



### Reactor Coolant System Activity



Thresholds: White > 50.0 Yellow > 100.0

### Notes

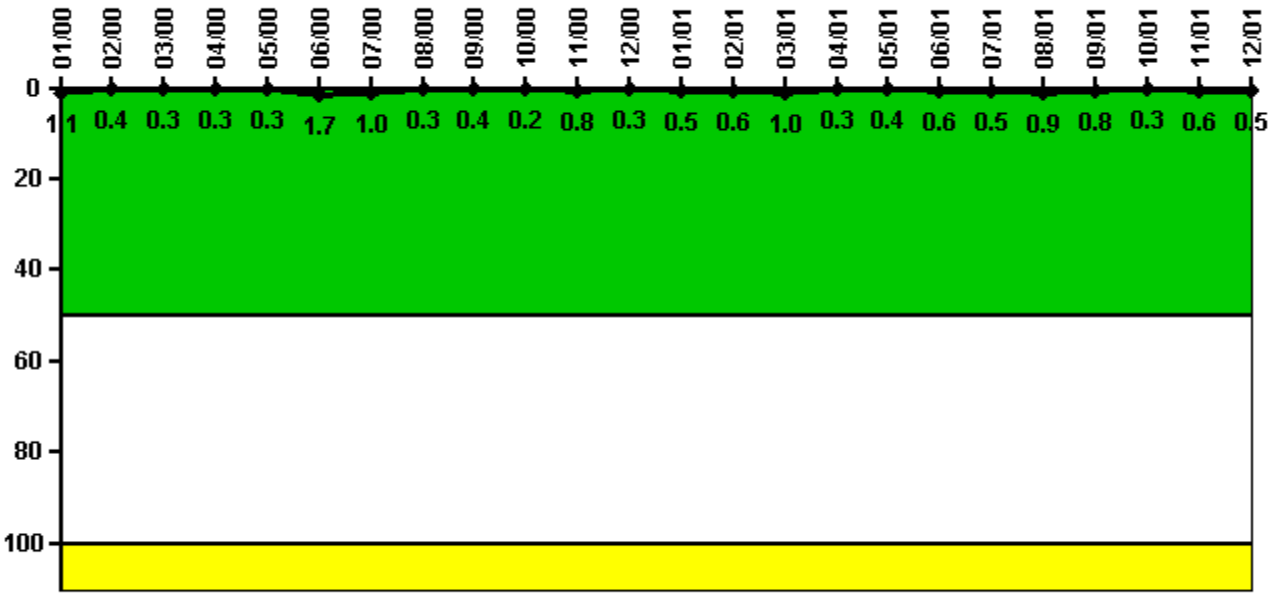
Reactor Coolant System Activity	1/00	2/00	3/00	4/00	5/00	6/00	7/00	8/00	9/00	10/00	11/00	12/00
Maximum activity	0.001000	0.001000	0.015800	0.017000	0.033000	0.033000	0.035000	0.066000	0.074000	0.029000	0.001000	0.002000
Technical specification limit	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Indicator value	0.1	0.1	1.6	1.7	3.3	3.3	3.5	6.6	7.4	2.9	0.1	0.2

Reactor Coolant System Activity	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 activity	0.002000	0.002000	0.002000	0.002000	0.002000	0.003000	0.003000	0.003000	0.003000	0.003000	0.003000	0.003000
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	0.3	0.3	0.3	0.3	0.3	0.3	0.3

Licensee Comments: none

### Reactor Coolant System Leakage



Thresholds: White > 50.0 Yellow > 100.0

#### Notes

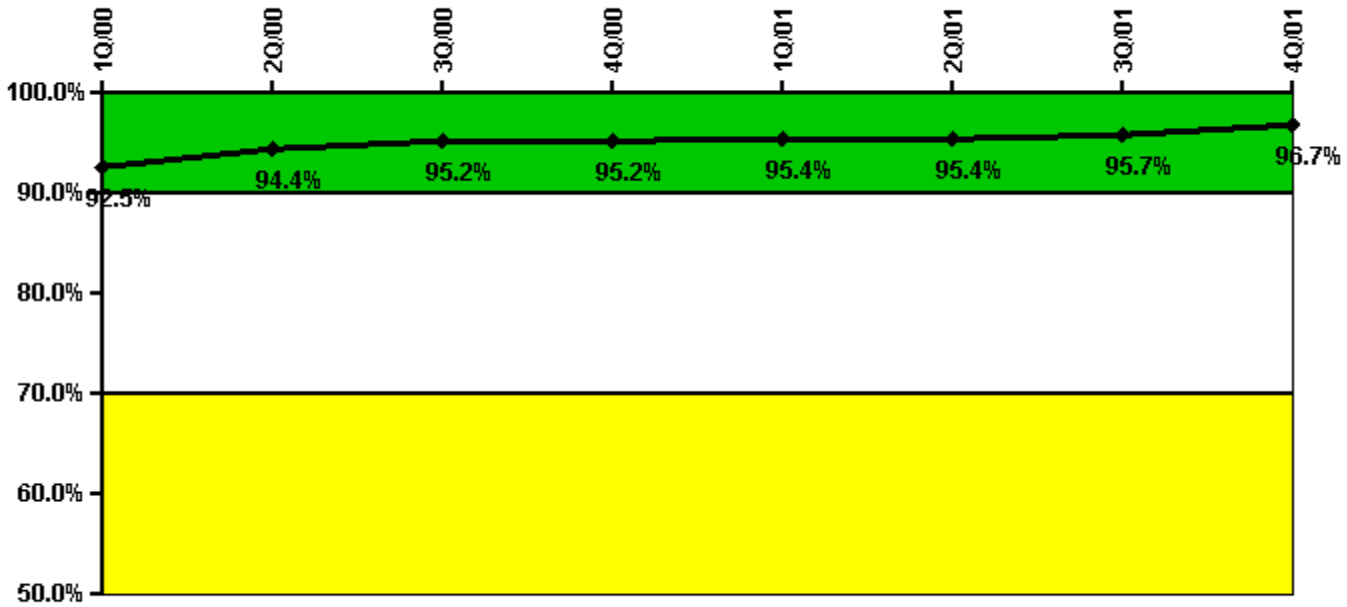
Reactor Coolant System Leakage	1/00	2/00	3/00	4/00	5/00	6/00	7/00	8/00	9/00	10/00	11/00	12/00
Maximum leakage	0.111	0.035	0.027	0.026	0.031	0.166	0.102	0.033	0.036	0.019	0.077	0.029
Technical specification limit	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Indicator value	1.1	0.4	0.3	0.3	0.3	1.7	1.0	0.3	0.4	0.2	0.8	0.3

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	0.051	0.059	0.099	0.034	0.035	0.061	0.047	0.090	0.075	0.030	0.056	0.053
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	0.6	1.0	0.3	0.4	0.6	0.5	0.9	0.8	0.3	0.6	0.5

Licensee Comments: none

### Drill/Exercise Performance



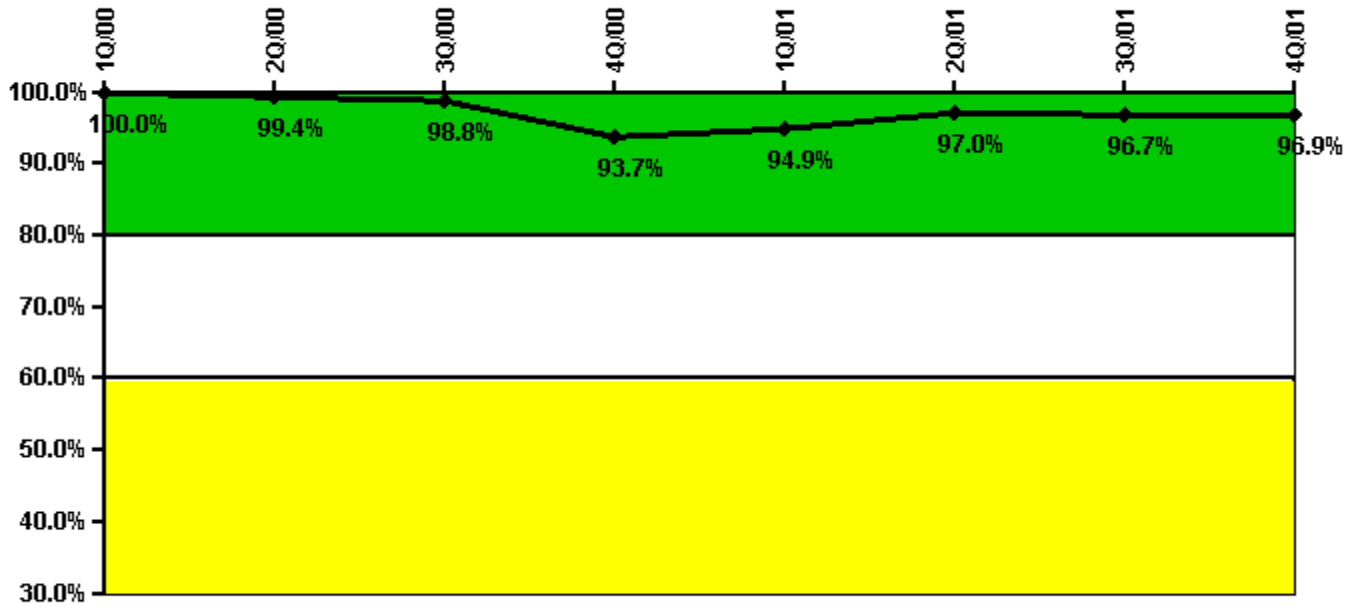
Thresholds: White < 90.0% Yellow < 70.0%

### Notes

Drill/Exercise Performance	1Q/00	2Q/00	3Q/00	4Q/00	1Q/01	2Q/01	3Q/01	4Q/01
Successful opportunities	29.0	22.0	95.0	0	20.0	0	9.0	86.0
Total opportunities	32.0	22.0	100.0	0	20.0	0	9.0	87.0
Indicator value	92.5%	94.4%	95.2%	95.2%	95.4%	95.4%	95.7%	96.7%

Licensee Comments: none

### ERO Drill Participation



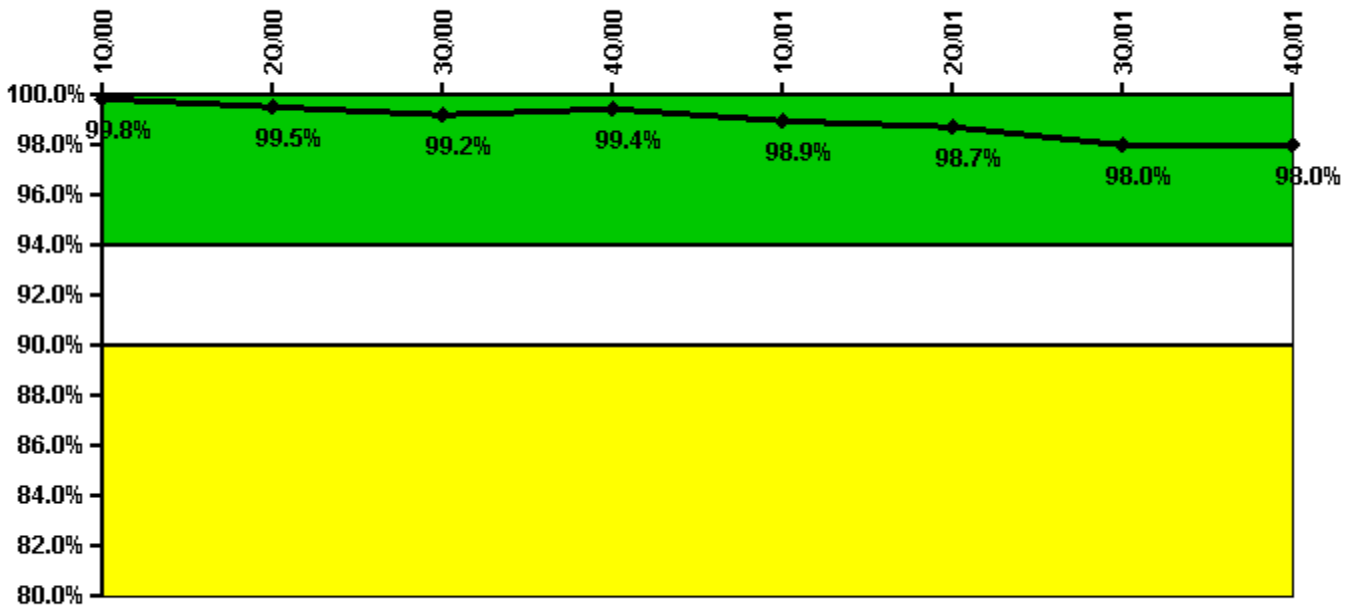
Thresholds: White < 80.0% Yellow < 60.0%

#### Notes

ERO Drill Participation	1Q/00	2Q/00	3Q/00	4Q/00	1Q/01	2Q/01	3Q/01	4Q/01
Participating Key personnel	132.0	166.0	165.0	163.0	166.0	160.0	176.0	188.0
Total Key personnel	132.0	167.0	167.0	174.0	175.0	165.0	182.0	194.0
Indicator value	100.0%	99.4%	98.8%	93.7%	94.9%	97.0%	96.7%	96.9%

Licensee Comments: none

### Alert & Notification System



Thresholds: White < 94.0% Yellow < 90.0%

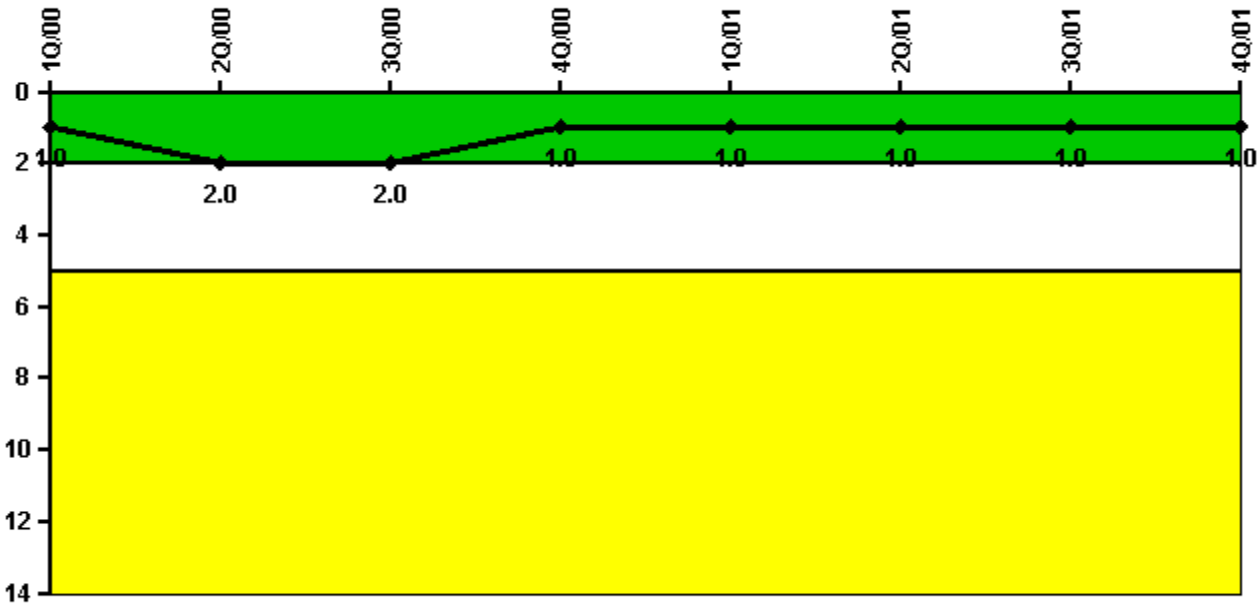
#### Notes

Alert & Notification System	1Q/00	2Q/00	3Q/00	4Q/00	1Q/01	2Q/01	3Q/01	4Q/01
Successful siren-tests	390	385	347	467	382	382	375	466
Total sirens-tests	390	390	351	468	390	390	390	468
Indicator value	99.8%	99.5%	99.2%	99.4%	98.9%	98.7%	98.0%	98.0%

Licensee Comments:

3Q/01: The number of successful ANS siren tests was originally incorrectly counted. The number reported in the 3Q2001 should have been 375 instead of 376. The change did not affect the "color" of the indicator.

### Occupational Exposure Control Effectiveness



Thresholds: White > 2.0 Yellow > 5.0

#### Notes

Occupational Exposure Control Effectiveness	1Q/00	2Q/00	3Q/00	4Q/00	1Q/01	2Q/01	3Q/01	4Q/01
High radiation area occurrences	0	1	0	0	0	1	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
<b>Indicator value</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>

Licensee Comments: none

### RETS/ODCM Radiological Effluent



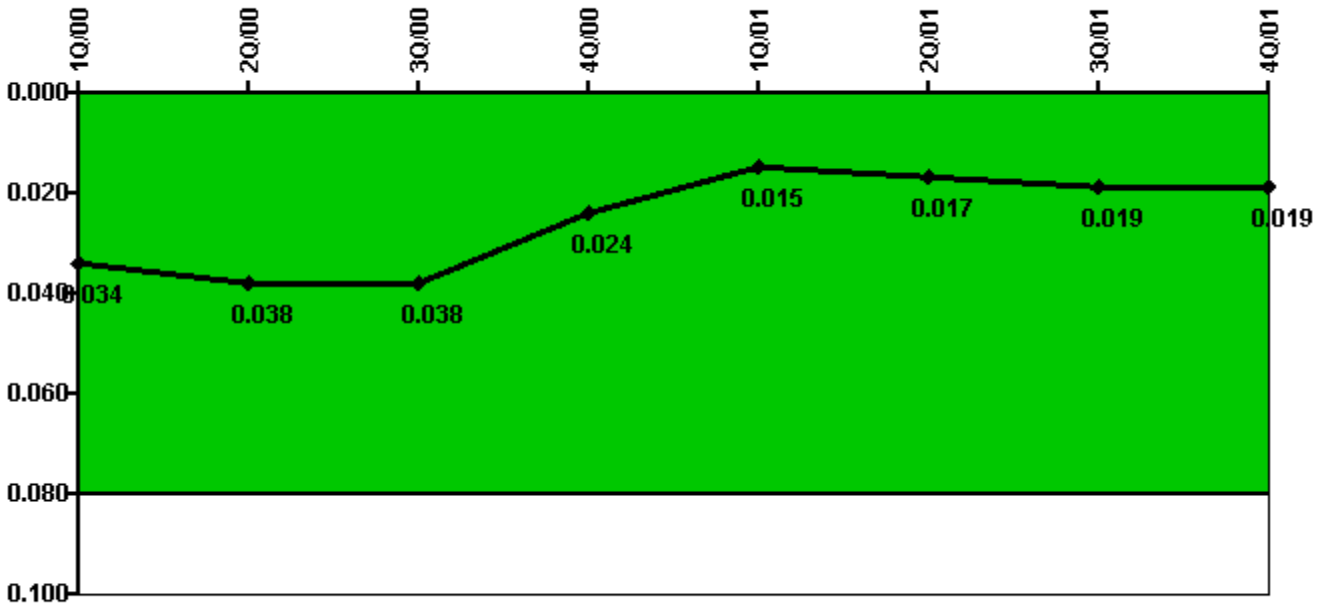
Thresholds: White > 1.0 Yellow > 3.0

#### Notes

RETS/ODCM Radiological Effluent	1Q/00	2Q/00	3Q/00	4Q/00	1Q/01	2Q/01	3Q/01	4Q/01
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

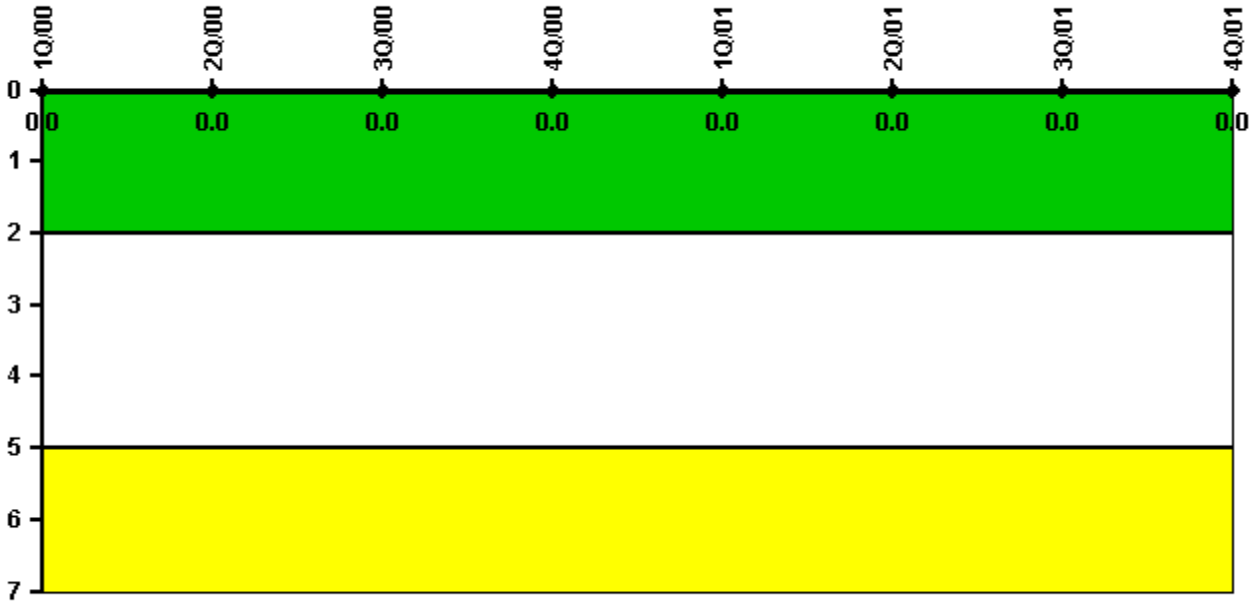
#### Notes

Protected Area Security Performance Index	1Q/00	2Q/00	3Q/00	4Q/00	1Q/01	2Q/01	3Q/01	4Q/01
IDS compensatory hours	326.60	79.20	85.60	95.20	71.50	109.90	71.00	65.30
CCTV compensatory hours	35.2	76.7	8.5	1.3	19.8	82.6	69.5	14.6
IDS normalization factor	1.85	1.85	1.85	1.85	1.85	1.85	1.85	1.85
CCTV normalization factor	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
<b>Index Value</b>	<b>0.034</b>	<b>0.038</b>	<b>0.038</b>	<b>0.024</b>	<b>0.015</b>	<b>0.017</b>	<b>0.019</b>	<b>0.019</b>

Licensee Comments: none



### Personnel Screening Program



Thresholds: White > 2.0 Yellow > 5.0

#### Notes

Personnel Screening Program	1Q/00	2Q/00	3Q/00	4Q/00	1Q/01	2Q/01	3Q/01	4Q/01
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/00	2Q/00	3Q/00	4Q/00	1Q/01	2Q/01	3Q/01	4Q/01
Program Failures	0	0	0	0	0	0	0	0
Indicator value	0	0	0	0	0	0	0	0

Licensee Comments: none

▲ [PI Summary](#) | [Inspection Findings Summary](#) | [Action Matrix Summary](#) | [Reactor Oversight Process](#)

Last Modified: March 15, 2002