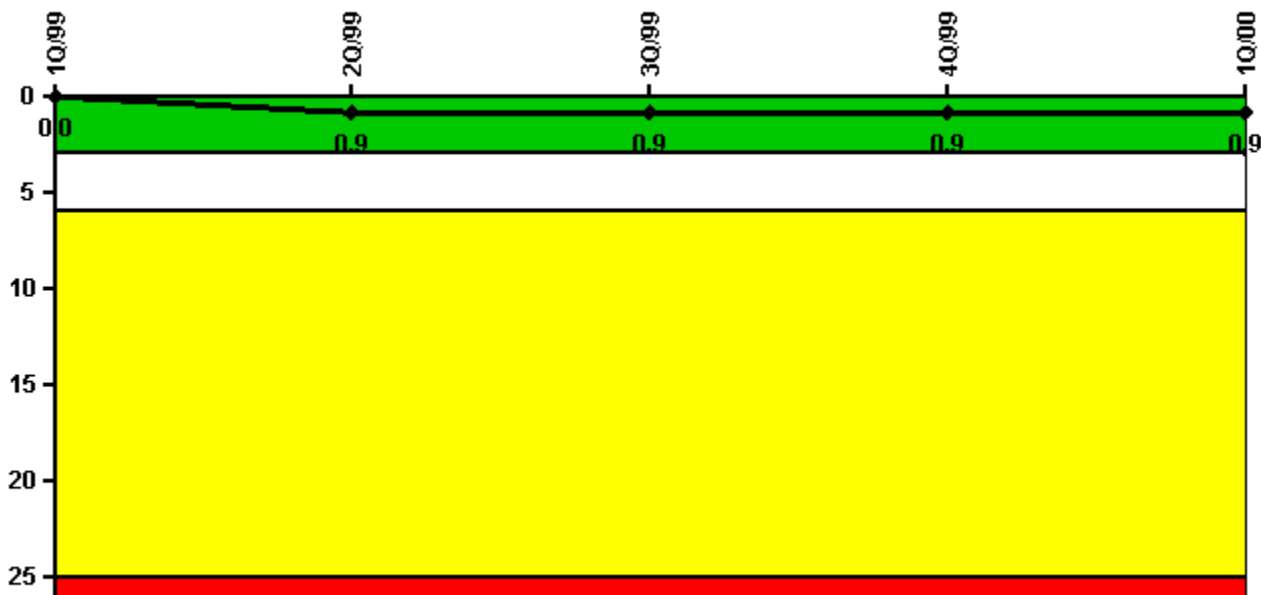


### Palo Verde 2

#### 1Q/2000 Performance Indicators

Licensee's General Comments: none

#### Unplanned Scrams per 7000 Critical Hrs



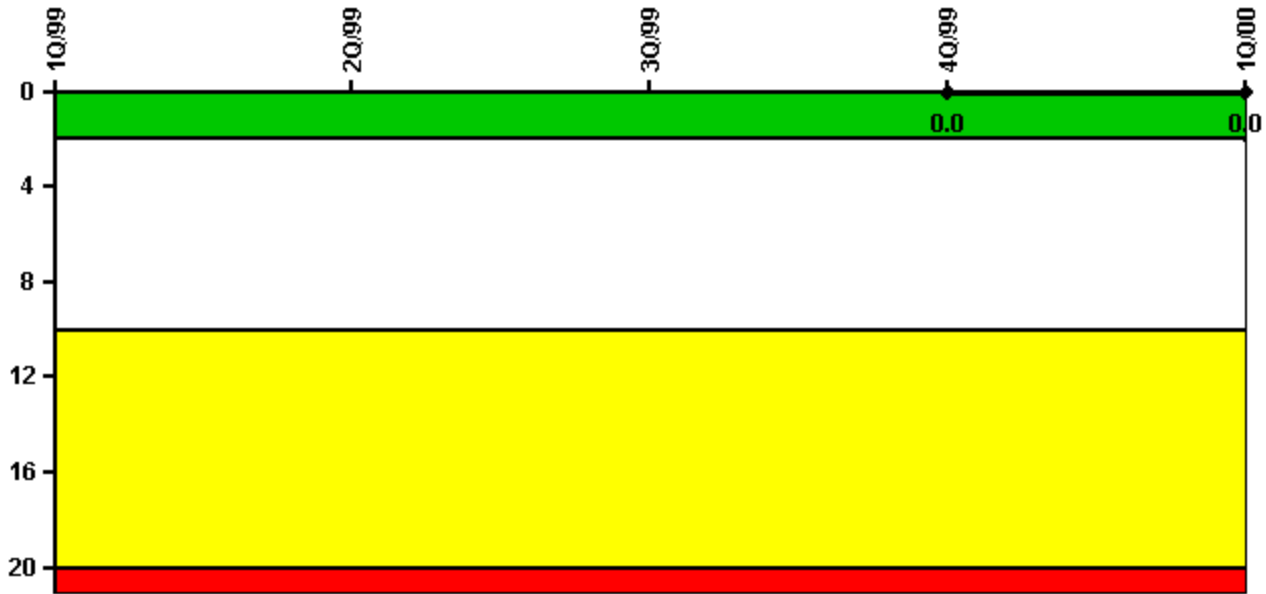
Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

#### Notes

Unplanned Scrams per 7000 Critical Hrs	1Q/99	2Q/99	3Q/99	4Q/99	1Q/00
Unplanned scrams	0	1.0	0	0	0
Critical hours	2040.0	1437.6	2208.0	2208.0	2025.6
<b>Indicator value</b>	<b>0</b>	<b>0.9</b>	<b>0.9</b>	<b>0.9</b>	<b>0.9</b>

Licensee Comments: none

### Scrams with Loss of Normal Heat Removal



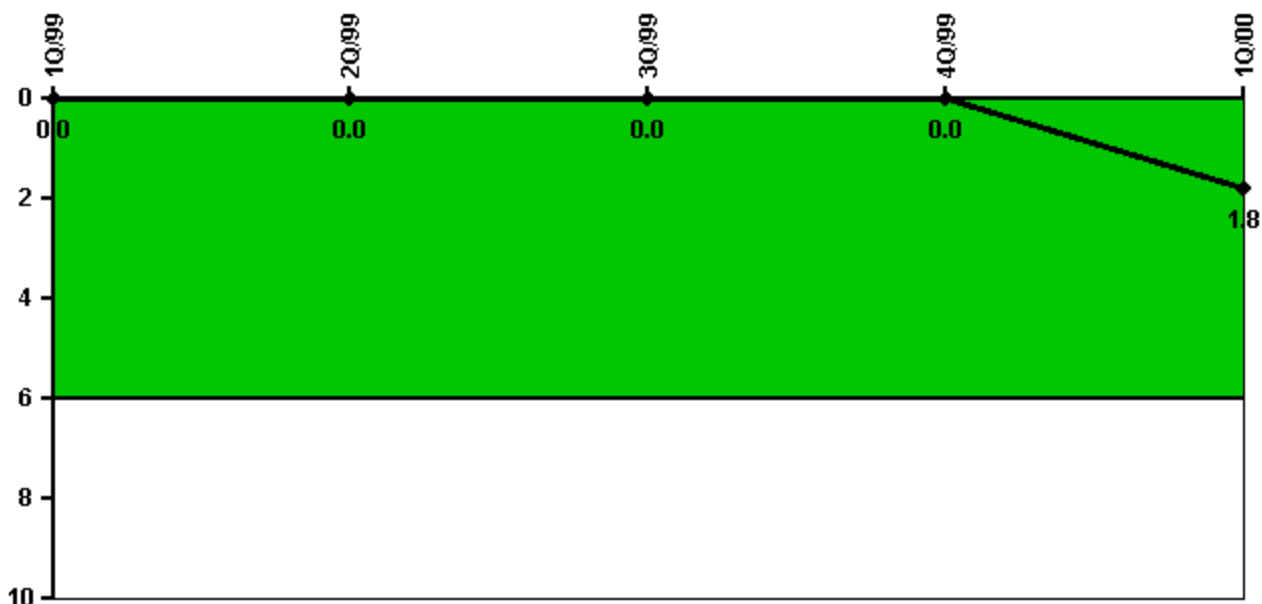
Thresholds: White > 2.0 Yellow > 10.0 Red > 20.0

#### Notes

Scrams with Loss of Normal Heat Removal	1Q/99	2Q/99	3Q/99	4Q/99	1Q/00
Scrams	0	0	0	0	0
Indicator value				0	0

Licensee Comments: none

### Unplanned Power Changes per 7000 Critical Hrs



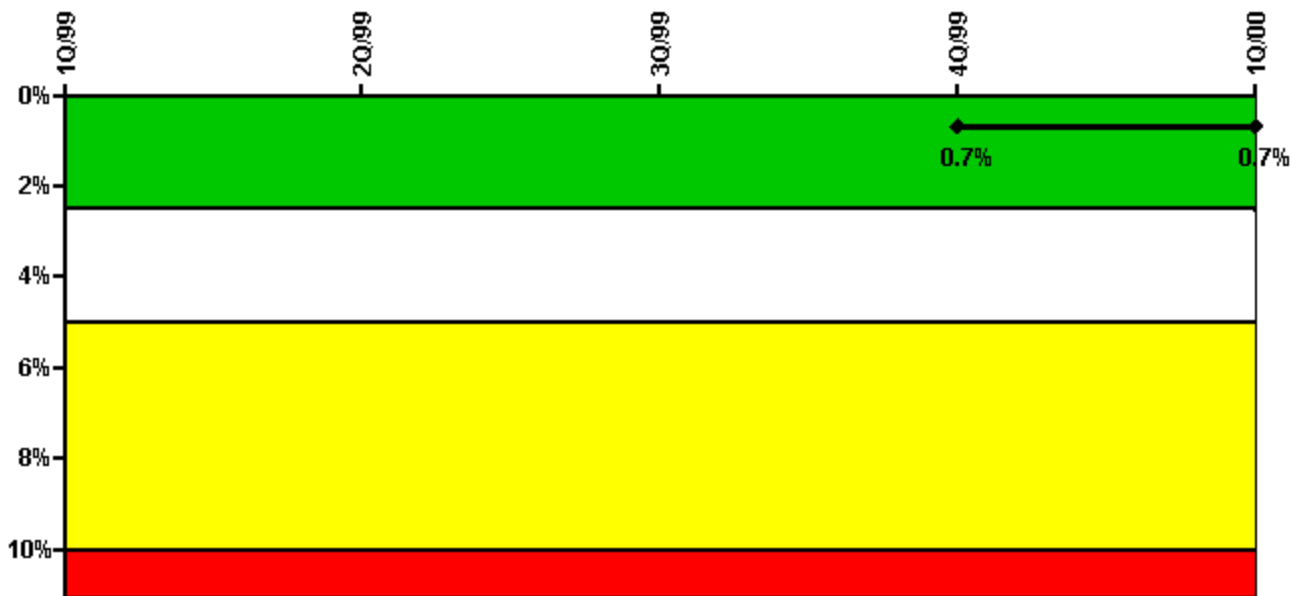
Thresholds: White > 6.0

#### Notes

Unplanned Power Changes per 7000 Critical Hrs	1Q/99	2Q/99	3Q/99	4Q/99	1Q/00
Unplanned power changes	0	0	0	0	2.0
Critical hours	2040.0	1437.6	2208.0	2208.0	2025.6
<b>Indicator value</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1.8</b>

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/99	2Q/99	3Q/99	4Q/99	1Q/00
<b>Train 1</b>					
Planned unavailable hours	21.33	0	64.80	0	25.90
Unplanned unavailable hours	0	0	0	5.87	0
Fault exposure hours	0	0	0	0	0
Effective Reset hours	0	0	0	0	0
Required hours	2160.00	2184.00	2208.00	2208.00	2184.00
<b>Train 2</b>					
Planned unavailable hours	3.32	0	0	18.83	0
Unplanned unavailable hours	0	0	2.08	0	0
Fault exposure hours	0	0	0	0	0
Effective Reset hours	0	0	0	0	0
Required hours	2160.00	2184.00	2208.00	2208.00	2184.00
<b>Indicator value</b>				<b>0.7%</b>	<b>0.7%</b>

Licensee Comments: none

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



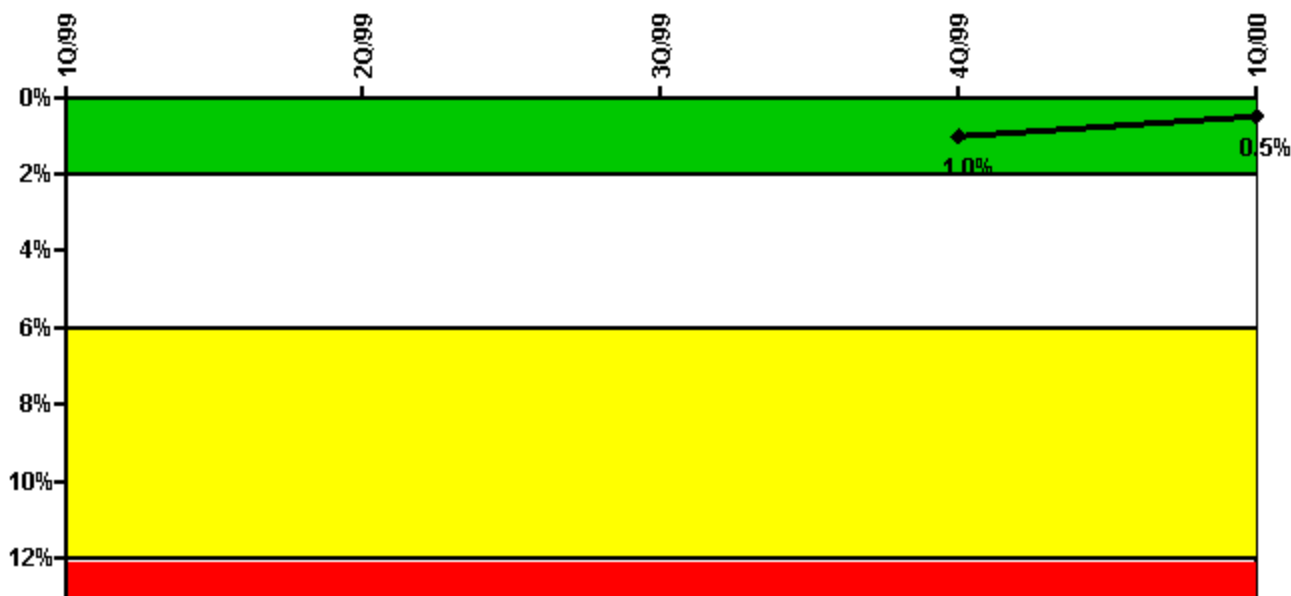
Thresholds: **White** > 1.5% **Yellow** > 5.0% **Red** > 10.0%

#### Notes

Safety System Unavailability, High Pressure Injection System (HPSI)	1Q/99	2Q/99	3Q/99	4Q/99	1Q/00
<b>Train 1</b>					
Planned unavailable hours	35.91	2.82	24.57	4.40	14.79
Unplanned unavailable hours	0	0	0	0	0
Fault exposure hours	8.97	2.07	6.52	0.32	2.56
Effective Reset hours	0	0	0	0	0
Required hours	2060.30	1437.60	2208.00	2208.00	2025.60
<b>Train 2</b>					
Planned unavailable hours	27.20	3.66	7.95	10.46	5.35
Unplanned unavailable hours	15.23	0	5.23	0	0
Fault exposure hours	0	0	0	0	0
Effective Reset hours	0	0	0	0	0
Required hours	2060.30	1437.60	2208.00	2208.00	2025.60
<b>Indicator value</b>				<b>1.2%</b>	<b>1.1%</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/99	2Q/99	3Q/99	4Q/99	1Q/00
<b>Train 1</b>					
Planned unavailable hours	41.57	1.62	23.84	1.30	16.06
Unplanned unavailable hours	0	1.92	5.35	0	13.98
Fault exposure hours	366.76	0	0	0	0
Effective Reset hours	0	0	0	0	366.76
Required hours	2060.30	1437.60	2208.00	2208.00	2025.60
<b>Train 2</b>					
Planned unavailable hours	12.85	1.50	0	9.96	1.27
Unplanned unavailable hours	0	0	5.23	0	0
Fault exposure hours	0	0	0	0	0
Effective Reset hours	0	0	0	0	0
Required hours	2060.30	1437.60	2208.00	2208.00	2025.60
<b>Train 3</b>					
Planned unavailable hours	0.68	0.65	0.32	0.62	3.88
Unplanned unavailable hours	0	0	0	0	0
Fault exposure hours	0	0	0	0	0
Effective Reset hours	0	0	0	0	0
Required hours	2060.30	1437.60	2208.00	2208.00	2025.60
<b>Indicator value</b>				<b>1.0%</b>	<b>0.5%</b>

#### Licensee Comments:

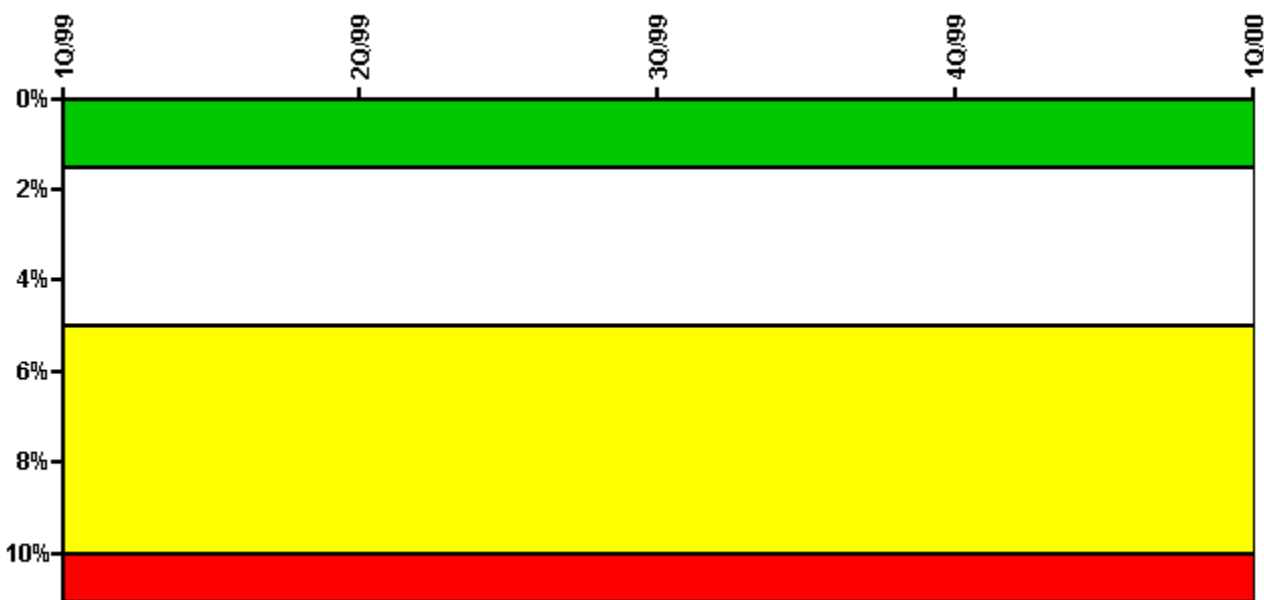
2Q/99: In accordance with the guidance in NEI 99-02, revision 0, previously reported negative fault exposure hours have been revised to indicate 0.

1Q/99: In accordance with the guidance in NEI 99-02, revision 0, previously reported positive fault exposure hours have been revised to indicate 0.

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/99	2Q/99	3Q/99	4Q/99	1Q/00
<b>Train 1</b>					
Planned unavailable hours	56.30	31.00	31.90	15.69	16.81
Unplanned unavailable hours	0	0	0	0	0
Fault exposure hours	0	0	0	0	0
Effective Reset hours	0	0	0	0	0
Required hours	2060.27	1509.62	2208.00	2208.00	2184.00
<b>Train 2</b>					
Planned unavailable hours	46.96	16.06	1.82	14.16	9.68
Unplanned unavailable hours	18.92	0	5.23	0	0
Fault exposure hours	0	0	0	0	0
Effective Reset hours	0	0	0	0	0
Required hours	2060.27	1509.62	2208.00	2208.00	2184.00
<b>Train 3</b>					
Planned unavailable hours	0	0	0	0	0
Unplanned unavailable hours	0	0	0	0	0
Fault exposure hours	0	0	0	0	0
Effective Reset hours	0	0	0	0	0
Required hours	58.83	244.87	0	0	0
<b>Train 4</b>					

Planned unavailable hours	0	0	0	0	0
Unplanned unavailable hours	0	0	0	0	0
Fault exposure hours	0	0	0	0	0
Effective Reset hours	0	0	0	0	0
Required hours	99.73	220.52	0	0	0
<b>Indicator value</b>					

Licensee Comments:

1Q/00: Data has been revised for the RHR PI in Quarters 3Q97 through 1Q00 to reflect the methodology specified by FAQ 172. The FAQ 172 methodology essentially split 2 trains of RHR, which were considered required for service at all times, into 4 MODE dependent RHR trains. No thresholds were crossed as a result of the changes. In accordance with the provisions of FAQ 172, Palo Verde collected actual unavailability and required hours for the historical period. In addition to the data revisions in 3Q97 through 1Q00, the RHR comment fields for 1Q97 and 2Q97 have been cleared.

1Q/00: Data has been revised for the RHR PI in Quarters 3Q97 through 1Q00 to reflect the methodology specified by FAQ 172. The FAQ 172 methodology essentially split 2 trains of RHR, which were considered required for service at all times, into 4 MODE dependent RHR trains. No thresholds were crossed as a result of the changes. In accordance with the provisions of FAQ 172, Palo Verde collected actual unavailability and required hours for the historical period. In addition to the data revisions in 3Q97 through 1Q00, the RHR comment fields for 1Q97 and 2Q97 have been cleared.

4Q/99: Palo Verde re-defined the RHR system to be more consistent with the RHR system function definitions and Frequently Asked Question number 146 in NEI 99-02 revision 0. As a result, the total number of unavailable hours changed.

3Q/99: Palo Verde re-defined the RHR system to be more consistent with the RHR system function definitions and Frequently Asked Question number 146 in NEI 99-02 revision 0. As a result, the total number of unavailable hours changed.

2Q/99: Palo Verde re-defined the RHR system to be more consistent with the RHR system function definitions and Frequently Asked Question number 146 in NEI 99-02 revision 0. As a result, the total number of unavailable hours changed.

1Q/99: Palo Verde re-defined the RHR system to be more consistent with the RHR system function definitions and Frequently Asked Question number 146 in NEI 99-02 revision 0. As a result, the total number of unavailable hours changed. Additionally, refinements in accounting methods resulted in a slight increase in the number of planned and unplanned unavailable hours.

4Q/98: Palo Verde re-defined the RHR system to be more consistent with the RHR system function definitions and Frequently Asked Question number 146 in NEI 99-02 revision 0. As a result, the total number of unavailable hours changed. Additionally, refinements in accounting methods resulted in a slight increase in the number of planned unavailable hours

3Q/98: Palo Verde re-defined the RHR system to be more consistent with the RHR system function definitions and Frequently Asked Question number 146 in NEI 99-02 revision 0. As a result, the total number of unavailable hours changed.

2Q/98: Palo Verde re-defined the RHR system to be more consistent with the RHR system function definitions and Frequently Asked Question number 146 in NEI 99-02 revision 0. As a result, the total number of unavailable hours changed.

1Q/98: Palo Verde re-defined the RHR system to be more consistent with the RHR system function definitions and Frequently Asked Question number 146 in NEI 99-02 revision 0. As a result, the total number of unavailable hours changed. Additionally, refinements in accounting methods resulted in a slight increase in the number of planned unavailable hours.

4Q/97: Palo Verde re-defined the RHR system to be more consistent with the RHR system function definitions and Frequently Asked Question number 146 in NEI 99-02 revision 0. As a result, the total number of unavailable hours changed.

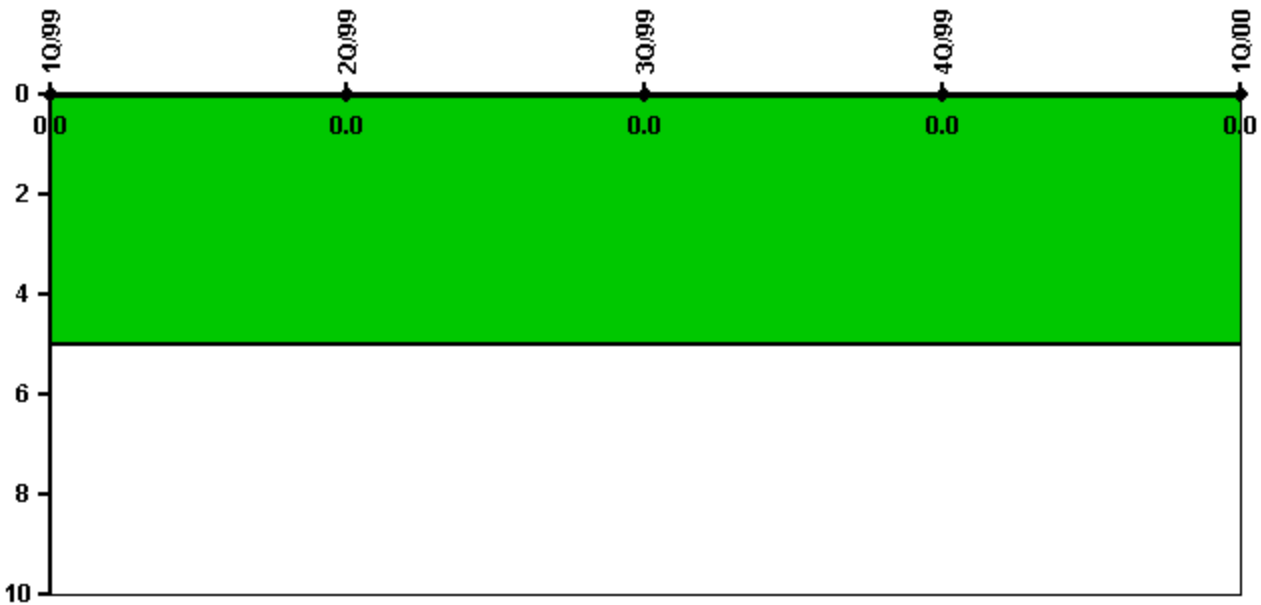
3Q/97: Palo Verde re-defined the RHR system to be more consistent with the RHR system function definitions and Frequently Asked Question number 146 in NEI 99-02 revision 0. As a result, the total number of unavailable hours changed.

2Q/97: Palo Verde re-defined the RHR system to be more consistent with the RHR system function definitions and Frequently Asked Question number 146 in NEI 99-02 revision 0. As a result, the total number of unavailable hours changed.

1Q/97: Palo Verde re-defined the RHR system to be more consistent with the RHR system function definitions and Frequently Asked Question number 146 in NEI 99-02 revision 0. As a result, the total number of unavailable hours changed.



### Safety System Functional Failures (PWR)



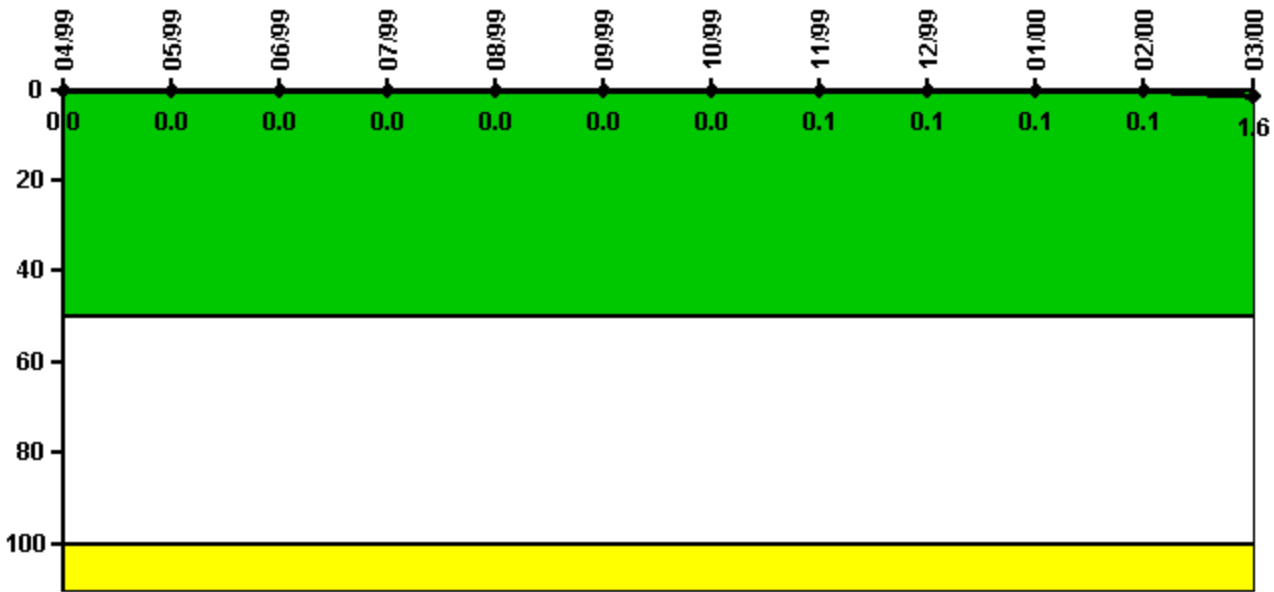
Thresholds: White > 5.0

#### Notes

Safety System Functional Failures (PWR)	1Q/99	2Q/99	3Q/99	4Q/99	1Q/00
Safety System Functional Failures	0	0	0	0	0
Indicator value	0	0	0	0	0

Licensee Comments: none

### Reactor Coolant System Activity



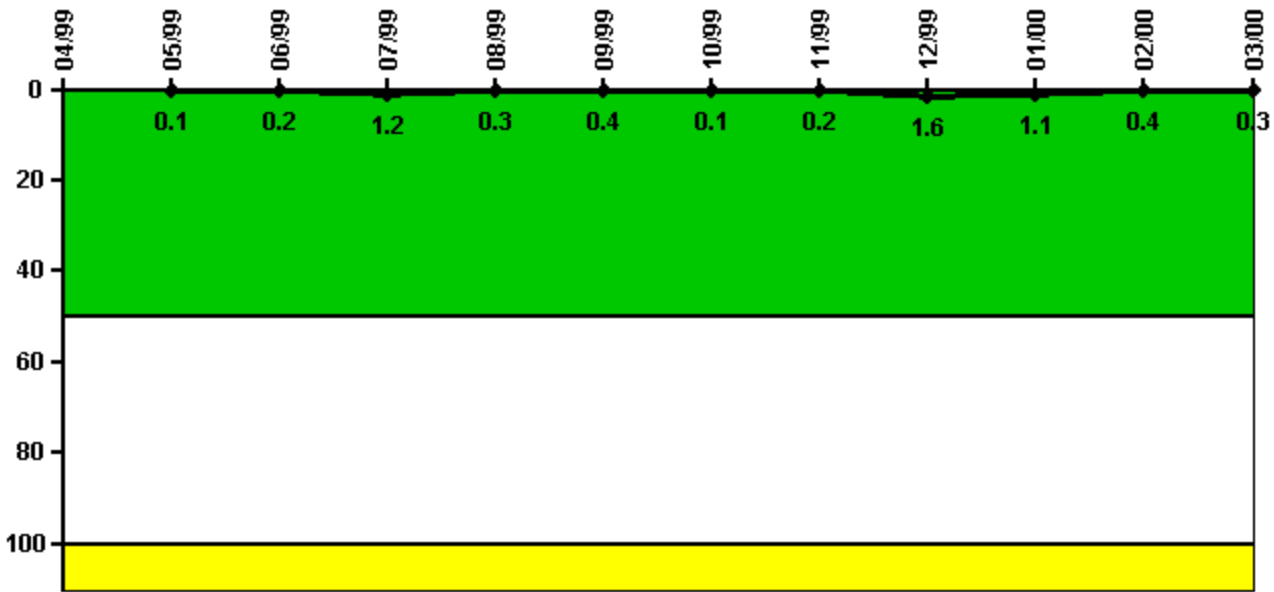
Thresholds: White > 50.0 Yellow > 100.0

#### Notes

Reactor Coolant System Activity	4/99	5/99	6/99	7/99	8/99	9/99	10/99	11/99	12/99	1/00	2/00	3/00
Maximum activity	0	0	0	0	0	0	0	0.001000	0.001000	0.001000	0.001000	0.015800
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	0	0	0	0	0	0	0.1	0.1	0.1	0.1	1.6

Licensee Comments: none

### Reactor Coolant System Leakage



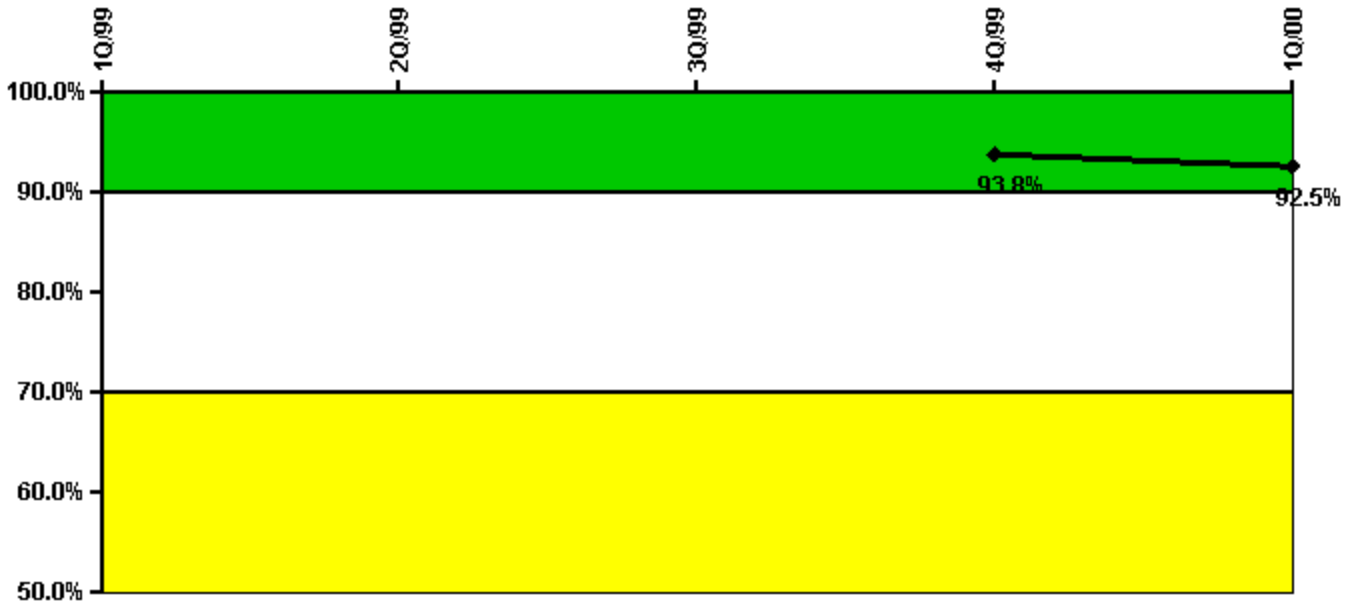
Thresholds: White > 50.0 Yellow > 100.0

#### Notes

Reactor Coolant System Leakage	4/99	5/99	6/99	7/99	8/99	9/99	10/99	11/99	12/99	1/00	2/00	3/00
Maximum leakage	N/A	0.010	0.020	0.120	0.030	0.040	0.010	0.020	0.160	0.111	0.035	0.027
Technical specification limit	N/A	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	0.1	0.2	1.2	0.3	0.4	0.1	0.2	1.6	1.1	0.4	0.3

Licensee Comments: none

### Drill/Exercise Performance



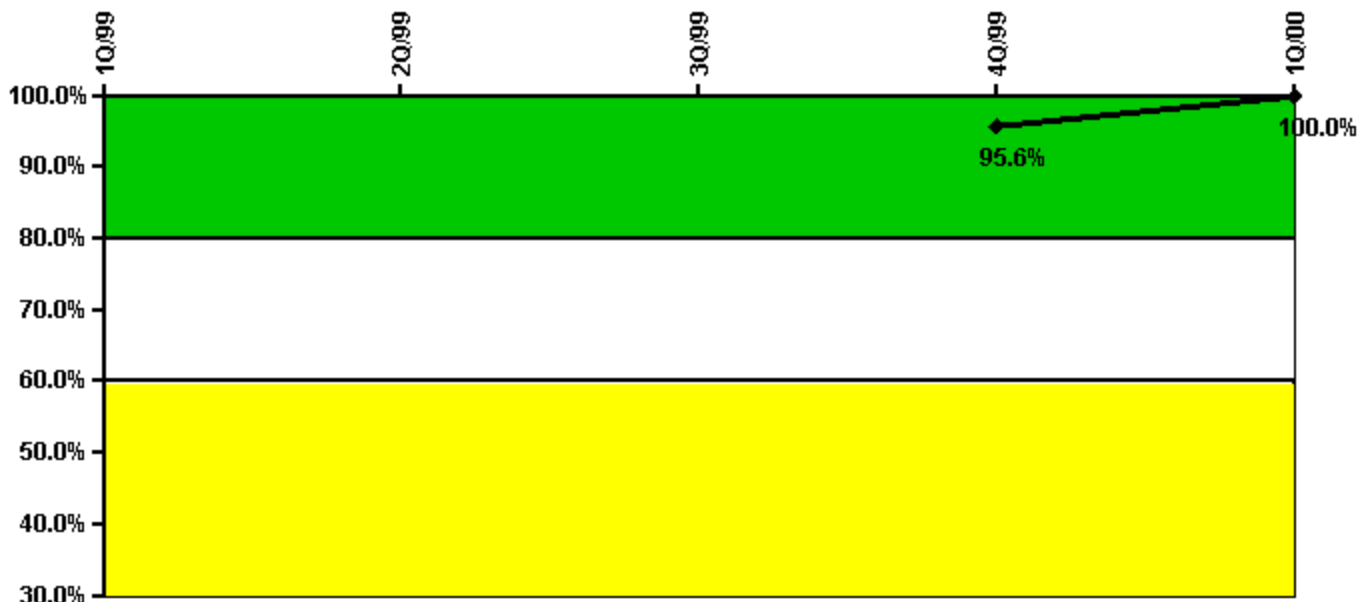
Thresholds: White < 90.0% Yellow < 70.0%

#### Notes

Drill/Exercise Performance	1Q/99	2Q/99	3Q/99	4Q/99	1Q/00
Successful opportunities	11.0	0	17.0	3.0	29.0
Total opportunities	11.0	0	18.0	3.0	32.0
<b>Indicator value</b>				<b>93.8%</b>	<b>92.5%</b>

Licensee Comments: none

### ERO Drill Participation



Thresholds: White < 80.0% Yellow < 60.0%

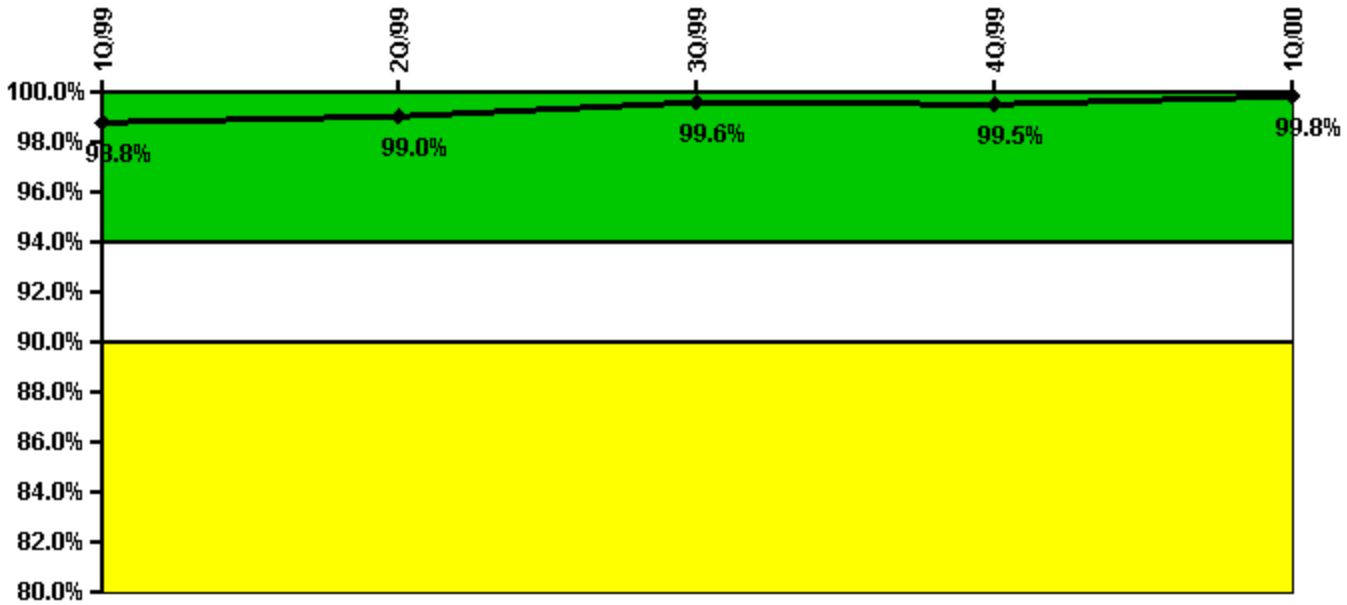
#### Notes

ERO Drill Participation	1Q/99	2Q/99	3Q/99	4Q/99	1Q/00
Participating Key personnel				65.0	132.0
Total Key personnel				68.0	132.0
<b>Indicator value</b>				<b>95.6%</b>	<b>100.0%</b>

Licensee Comments:

1Q/00: The reduction in the total ERO count from the number reported in previous quarters is the result of removing some radiation protection positions from the key ERO member population.

### Alert & Notification System



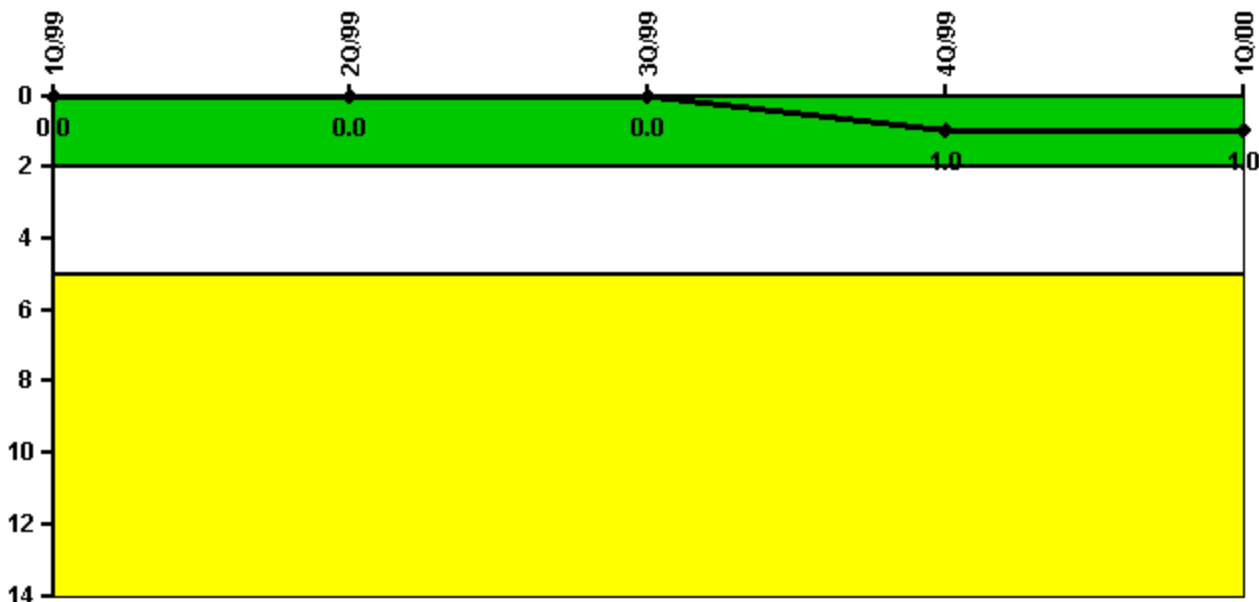
Thresholds: White < 94.0% Yellow < 90.0%

#### Notes

Alert & Notification System	1Q/99	2Q/99	3Q/99	4Q/99	1Q/00
Successful siren-tests	350	390	351	426	390
Total sirens-tests	354	390	351	429	390
Indicator value	98.8%	99.0%	99.6%	99.5%	99.8%

Licensee Comments: none

### Occupational Exposure Control Effectiveness



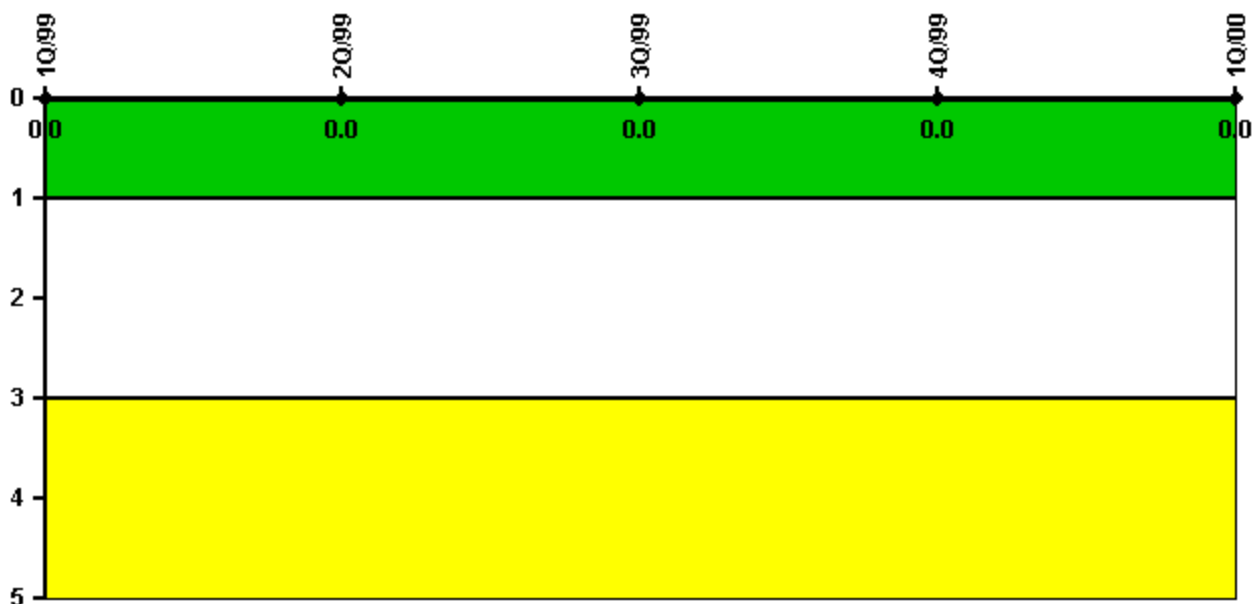
Thresholds: White > 2.0 Yellow > 5.0

**Notes**

Occupational Exposure Control Effectiveness	1Q/99	2Q/99	3Q/99	4Q/99	1Q/00
High radiation area occurrences	0	0	0	1	0
Very high radiation area occurrences	0	0	0	0	0
Unintended exposure occurrences	0	0	0	0	0
<b>Indicator value</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>

Licensee Comments: none

### RETS/ODCM Radiological Effluent



Thresholds: White > 1.0 Yellow > 3.0

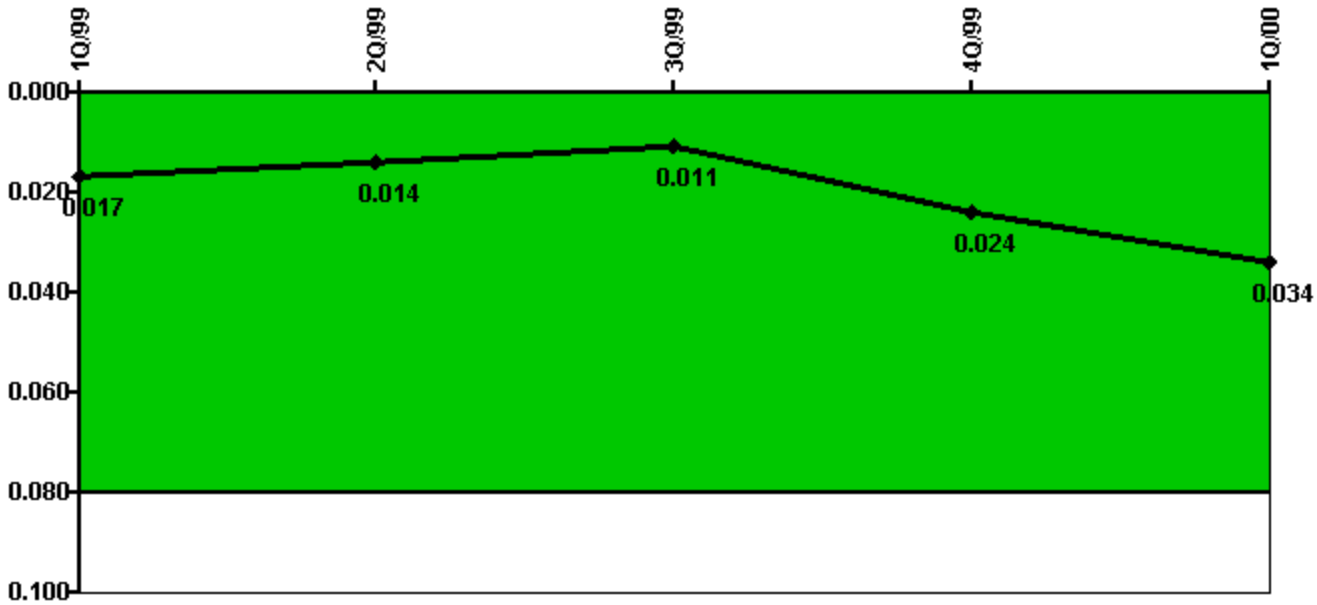
#### Notes

RETS/ODCM Radiological Effluent	1Q/99	2Q/99	3Q/99	4Q/99	1Q/00
RETS/ODCM occurrences	0	0	0	0	0
Indicator value	0	0	0	0	0

Licensee Comments: none



### Protected Area Security Performance Index



Thresholds: White > 0.080

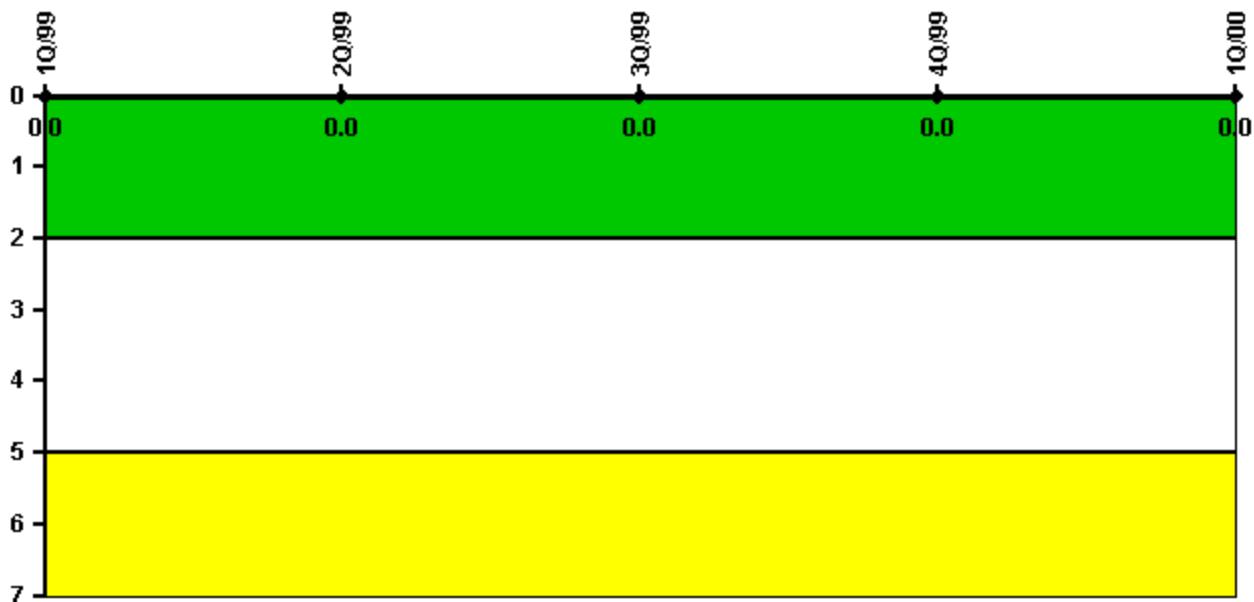
#### Notes

Protected Area Security Performance Index	1Q/99	2Q/99	3Q/99	4Q/99	1Q/00
IDS compensatory hours	81.70	76.70	55.20	220.10	326.60
CCTV compensatory hours	0	0	17.8	225.3	35.2
IDS normalization factor	1.85	1.85	1.85	1.85	1.85
CCTV normalization factor	1.4	1.4	1.4	1.4	1.2
<b>Index Value</b>	<b>0.017</b>	<b>0.014</b>	<b>0.011</b>	<b>0.024</b>	<b>0.034</b>

#### Licensee Comments:

4Q/99: Historical security compensatory hours prior to October 1999 was a best estimate based on the information and resources used to collect the data. Previous records did not log enough information to accurately reconstruct this PI. In the fourth quarter of 1999, a clarification on IDS compensatory hours resulted in a change to counted hours. To correct data prior to October 1999, an average of the additional hours counted during the fourth quarter was applied to data collected prior to October 1999. As a result of a recent self-assessment (April 2000), refinements in accounting methods resulted in a very slight increase in the number of IDS compensatory hours.

### Personnel Screening Program



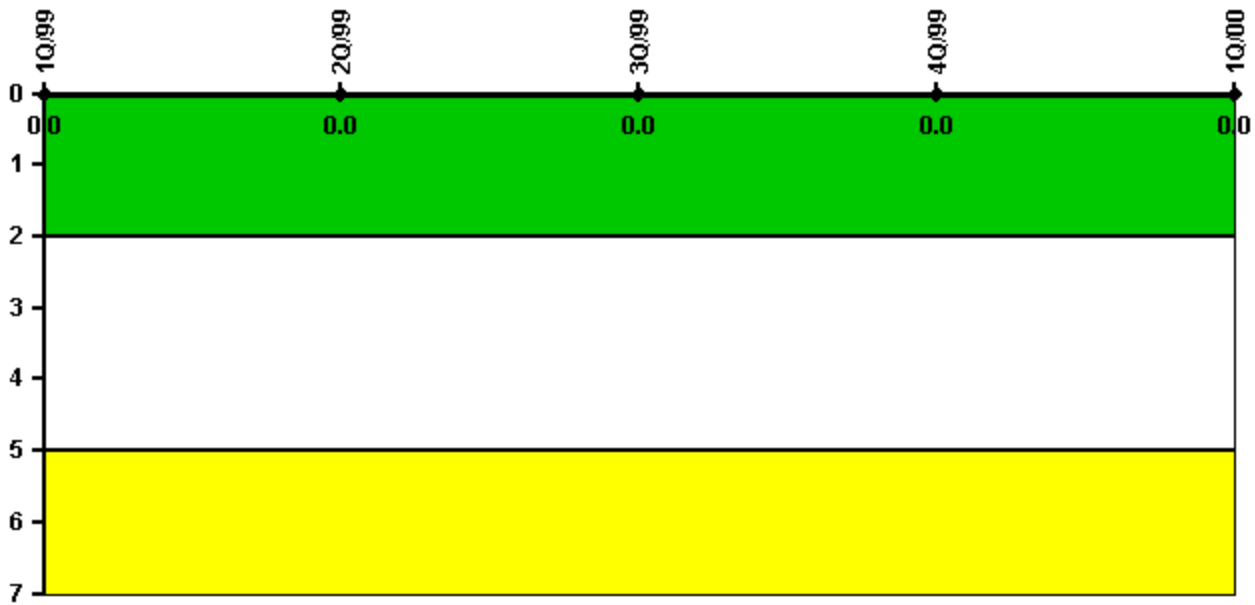
Thresholds: White > 2.0 Yellow > 5.0

#### Notes

Personnel Screening Program	1Q/99	2Q/99	3Q/99	4Q/99	1Q/00
Program failures	0	0	0	0	0
Indicator value	0	0	0	0	0

Licensee Comments: none

### FFD/Personnel Reliability



Thresholds: White > 2.0 Yellow > 5.0

#### Notes

FFD/Personnel Reliability	1Q/99	2Q/99	3Q/99	4Q/99	1Q/00
Program Failures	0	0	0	0	0
Indicator value	0	0	0	0	0

Licensee Comments: none

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

Last Modified: April 1, 2002