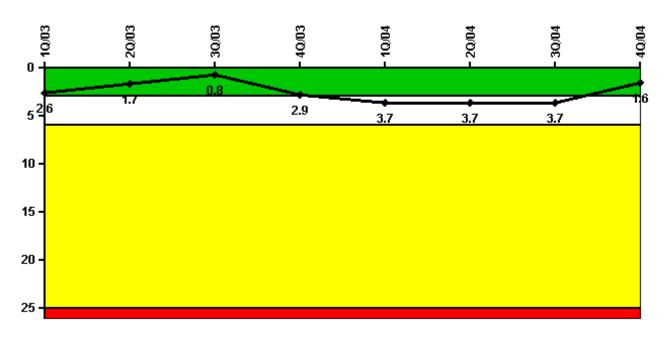
### Millstone 2

### **4Q/2004 Performance Indicators**

Licensee's General Comments: none

# Unplanned Scrams per 7000 Critical Hrs

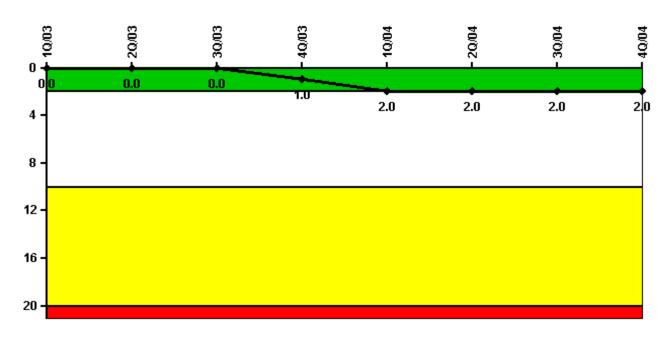


Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

### Notes

Unplanned Scrams per 7000 Critical Hrs	1Q/03	2Q/03	3Q/03	4Q/03	1Q/04	2Q/04	3Q/04	4Q/04
Unplanned scrams	1.0	0	0	2.0	2.0	0	0	0
Critical hours	1711.2	2183.0	2208.0	1075.0	2108.5	2183.0	2208.0	2209.0
Indicator value	2.6	1.7	0.8	2.9	3.7	3.7	3.7	1.6

### Scrams with Loss of Normal Heat Removal

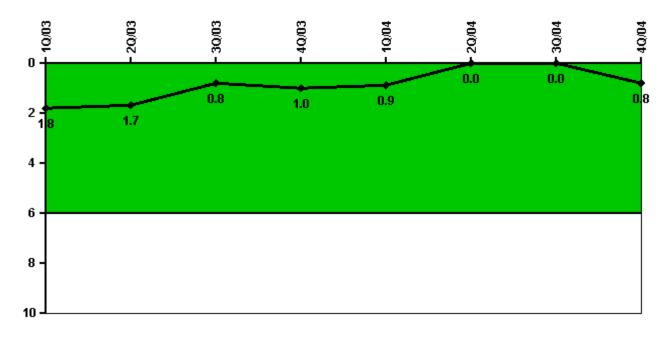


Thresholds: White > 2.0 Yellow > 10.0 Red > 20.0

### Notes

Scrams with Loss of Normal Heat Removal	1Q/03	2Q/03	3Q/03	4Q/03	1Q/04	2Q/04	3Q/04	4Q/04
Scrams	0	0	0	1.0	1.0	0	0	0
Indicator value	О	О	О	1.0	2.0	2.0	2.0	2.0

# Unplanned Power Changes per 7000 Critical Hrs

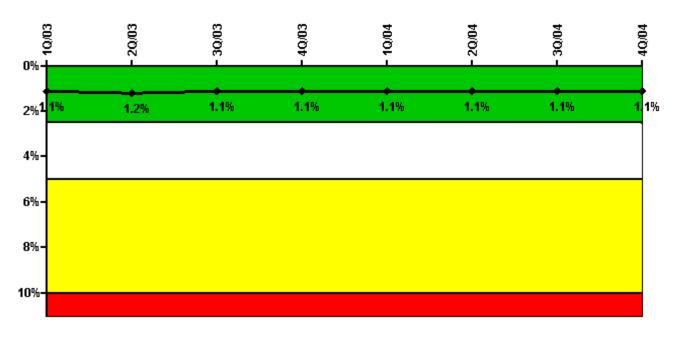


Thresholds: White > 6.0

### Notes

Unplanned Power Changes per 7000 Critical Hrs	1Q/03	2Q/03	3Q/03	4Q/03	1Q/04	2Q/04	3Q/04	4Q/04
Unplanned power changes	0	1.0	0	0	0	0	0	1.0
Critical hours	1711.2	2183.0	2208.0	1075.0	2108.5	2183.0	2208.0	2209.0
Indicator value	1.8	1.7	0.8	1.0	0.9	0	0	0.8

### Safety System Unavailability, Emergency AC Power



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

#### Notes

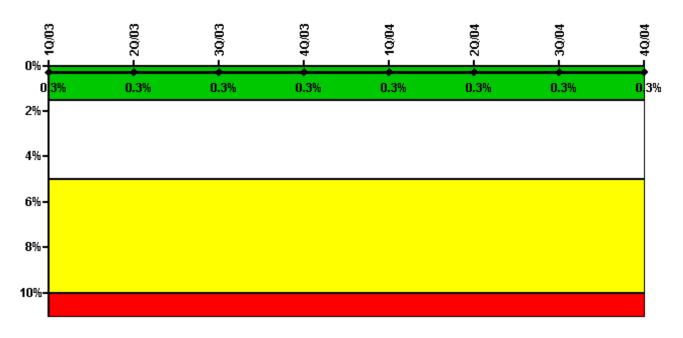
Safety System Unavailability, Emergency AC Power	10/03	2Q/03	3Q/03	4Q/03	1Q/04	2Q/04	3Q/04	4Q/04
Train 1								
Planned unavailable hours	5.30	31.00	11.59	5.71	12.63	8.20	6.26	18.11
Unplanned unavailable hours	0	27.86	0	0	1.03	7.18	0	0
Fault exposure hours	0	0	0	0	0	0	0	0
Effective Reset hours	0	0	0	0	0	0	0	0
Required hours	2073.86	2183.00	2208.00	1498.80	2184.00	2183.00	2208.00	2209.00
Train 2								
Planned unavailable hours	16.90	20.10	25.08	17.62	17.17	7.57	7.29	30.84
Unplanned unavailable hours	0	0	0	0	0	0	11.32	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	1872.00	2183.00	2208.00	1918.75	2184.00	2183.00	2208.00	2209.00
Indicator value	1.1%	1.2%	1.1%	1.1%	1.1%	1.1%	1.1%	1.1%

#### Licensee Comments:

4Q/04: Unavailability hours were added to account for the inadvertent omission of cascaded support system unavailability (cooling water and electrical equipment testing). The systems affected are Unit 2 and 3 Emergency Diesel Generator (4th quarter 2001 thru 3rd quarter 2004), and Unit 3 High Pressure Safety Injection (3rd quarter 2001 thru 3rd quarter 2004). Unavailability hours were also added to correct data collection errors for Unit 2 High Pressure Safety Injection (July and October 2003). These revisions did not result in any of the affected indicators crossing a threshold.

1Q/03: Planned unavailability hour data was revised to correct a data entry error. No threshold was crossed.

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



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

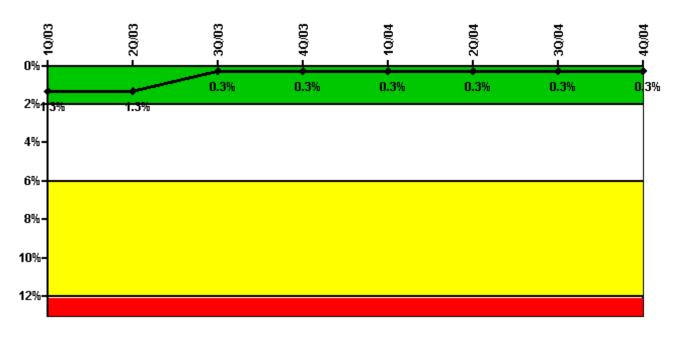
#### Notes

Safety System Unavailability, High Pressure Injection System (HPSI)	1Q/03	2Q/03	3Q/03	4Q/03	1Q/04	2Q/04	3Q/04	4Q/04
Train 1								
Planned unavailable hours	4.40	0.60	2.73	32.37	1.50	1.60	0.27	4.83
Unplanned unavailable hours	0	0	0	2.00	0	0	0	0
Fault exposure hours	0	0	0	2.00	0	0	0	0
Effective Reset hours	0	0	0	0	0	0	0	0
Required hours	1767.00	2183.00	2208.00	1198.00	2184.00	2183.00	2208.00	2209.00
Train 2								
Planned unavailable hours	1.00	4.20	8.73	0.90	0.50	1.10	0.49	5.39
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	1767.00	2183.00	2208.00	1198.00	2184.00	2183.00	2208.00	2209.00
Indicator value	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%

#### Licensee Comments:

4Q/04: Unavailability hours were added to account for the inadvertent omission of cascaded support system unavailability (cooling water and electrical equipment testing). The systems affected are Unit 2 and 3 Emergency Diesel Generator (4th quarter 2001 thru 3rd quarter 2004), and Unit 3 High Pressure Safety Injection (3rd quarter 2001 thru 3rd quarter 2004). Unavailability hours were also added to correct data collection errors for Unit 2 High Pressure Safety Injection (July and October 2003). These revisions did not result in any of the affected indicators crossing a threshold.

# Safety System Unavailability, Heat Removal System (AFW)

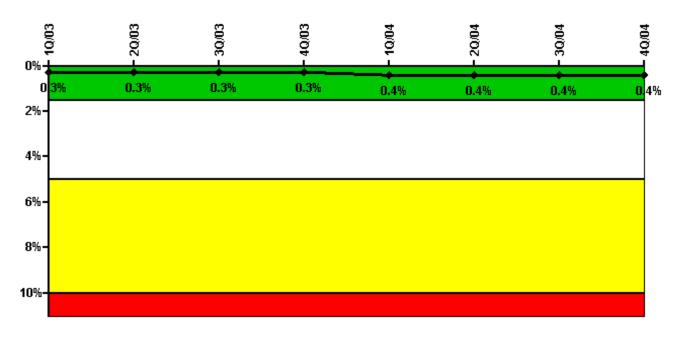


Thresholds: White > 2.0% Yellow > 6.0% Red > 12.0%

### Notes

Safety System Unavailability, Heat Removal System (AFW)	10/03	2Q/03	3Q/03	4Q/03	1Q/04	2Q/04	3Q/04	4Q/04
Train 1								
Planned unavailable hours	0	25.50	0	0	12.50	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	1769.00	2183.00	2208.00	1183.30	2184.00	2183.00	2208.00	2209.00
Train 2								
Planned unavailable hours	9.00	9.50	1.00	0	0	0	0	4.68
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	1769.00	2183.00	2208.00	1183.30	2184.00	2183.00	2208.00	2209.00
Train 3								
Planned unavailable hours	13.75	2.50	19.00	0	0	0	0	12.25
Unplanned unavailable hours	0	0	0	33.75	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	1769.00	2183.00	2208.00	1183.30	2184.00	2183.00	2208.00	2209.00
Indicator value	1.3%	1.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%

# Safety System Unavailability, Residual Heat Removal System



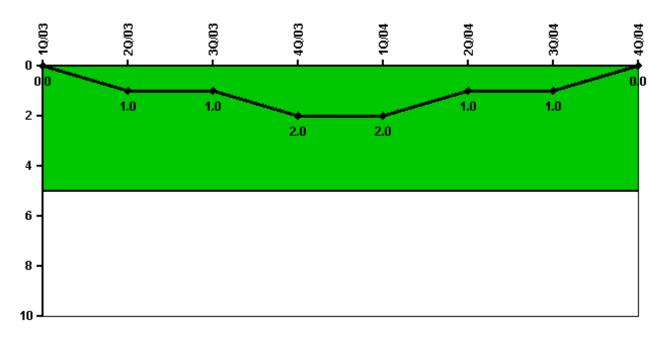
Thresholds: White > 1.5% Yellow > 5.0% Red > 10.0%

### Notes

Safety System Unavailability, Residual Heat Removal System	10/03	2Q/03	3Q/03	4Q/03	10/04	20/04	3Q/04	4Q/04
Train 1								
Planned unavailable hours	3.50	5.10	32.80	3.90	15.00	11.52	23.95	11.44
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	1706.00	2183.00	2208.00	1169.30	2184.00	2183.00	2208.00	2209.00
Train 2								
Planned unavailable hours	2.20	6.80	47.50	3.90	35.97	9.16	10.70	14.37
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	1706.00	2183.00	2208.00	1169.30	2184.00	2183.00	2208.00	2209.00
Train 3								
Planned unavailable hours	0	0	0	0	0	0	0	0
Unplanned unavailable hours	0	0	0	0.30	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	454.00	0	0	1048.40	0	0	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	454.00	0	0	1048.40	0	0	0	0
Indicator value	0.3%	0.3%	0.3%	0.3%	0.4%	0.4%	0.4%	0.4%

Licensee Comments: none

# Safety System Functional Failures (PWR)

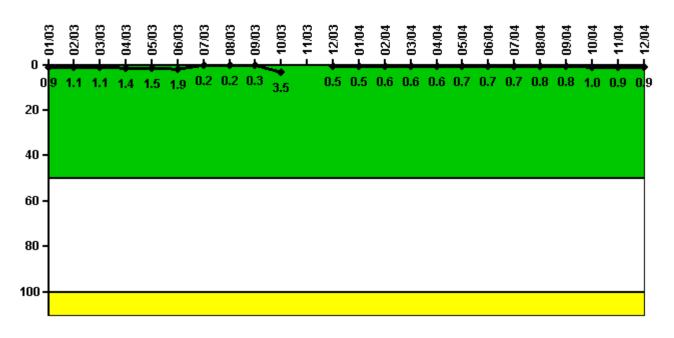


Thresholds: White > 5.0

### Notes

Safety System Functional Failures (PWR)	1Q/03	2Q/03	3Q/03	4Q/03	1Q/04	2Q/04	3Q/04	4Q/04
Safety System Functional Failures	0	1	0	1	0	0	0	0
Indicator value	О	1	1	2	2	1	1	О

# **Reactor Coolant System Activity**

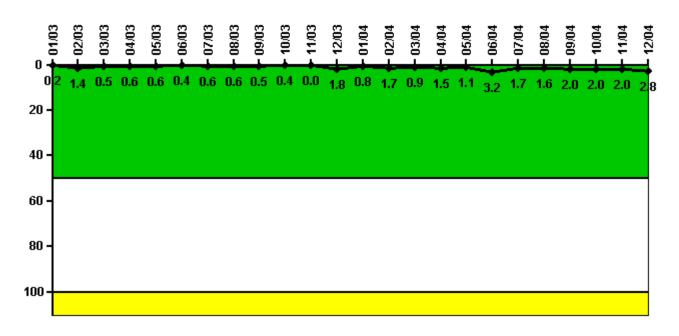


Thresholds: White > 50.0 Yellow > 100.0

### Notes

Reactor Coolant System Activity	1/0	3 2/0	3/0	3 4/0	3 5/0	03 6/0	03 7/0	03 8/0	9/0	3 10/0	3 11/03	12/03
Maximum activity	0.00928	0.01070	0.01110	0.01380	0 0.01480	0.01910	0.0015	40 0.00177	0.00253	0.03470	00 N/A	0.004580
Technical specification limi	t 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.	9 1	.1 1.	1 1.	4 1	.5 1	.9 0	.2 0.	.2 0.	.3 3	.5 N/A	0.5
Reactor Coolant System Activity	1/04	2/04	3/04	4/04	5/04	6/04	7/04	8/04	9/04	10/04	11/04	12/04
Maximum activity	0.005310	0.005620	0.005760	0.006140	0.006770	0.006980	0.007270	0.007640	0.008190	0.010200	0.008570	0.008750
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	0.5	0.6	0.6	0.6	0.7	0.7	0.7	0.8	0.8	1.0	0.9	0.9

# **Reactor Coolant System Leakage**

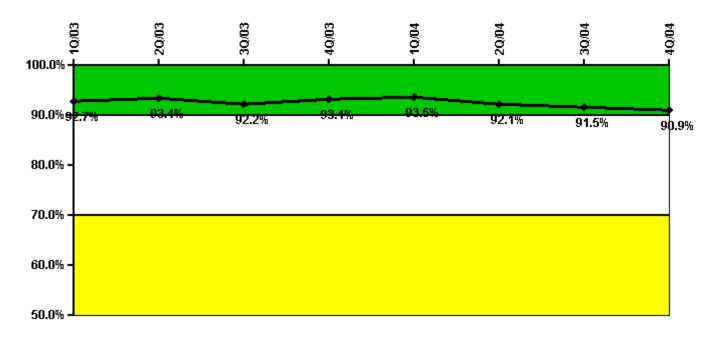


Thresholds: White > 50.0 Yellow > 100.0

### Notes

Reactor Coolant System Leakage	1/03	2/03	3/03	4/03	5/03	6/03	7/03	8/03	9/03	10/03	11/03	12/03
Maximum leakage	0.017	0.142	0.051	0.055	0.058	0.037	0.061	0.064	0.049	0.039	0	0.182
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	0.2	1.4	0.5	0.6	0.6	0.4	0.6	0.6	0.5	0.4	0	1.8
Reactor Coolant System Leakage	1/04	2/04	3/04	4/04	5/04	6/04	7/04	8/04	9/04	10/04	11/04	12/04
Maximum leakage	0.082	0.165	0.089	0.148	0.111	0.319	0.169	0.164	0.195	0.199	0.204	0.280
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	0.8	1.7	0.9	1.5	1.1	3.2	1.7	1.6	2.0	2.0	2.0	2.8

### **Drill/Exercise Performance**

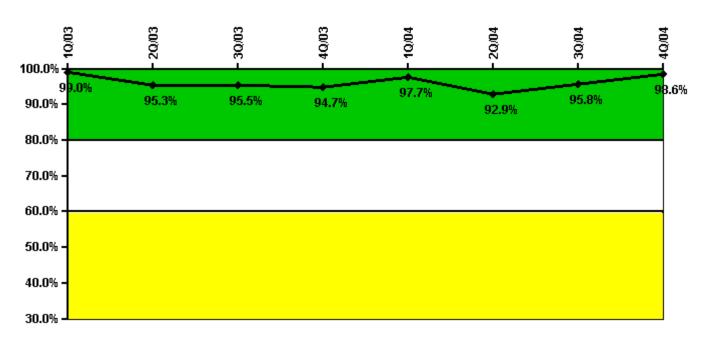


Thresholds: White < 90.0% Yellow < 70.0%

### Notes

Drill/Exercise Performance	1Q/03	2Q/03	3Q/03	4Q/03	1Q/04	2Q/04	3Q/04	4Q/04
Successful opportunities	1.0	66.0	38.0	27.0	43.0	11.0	58.0	85.0
Total opportunities	2.0	70.0	44.0	29.0	45.0	16.0	63.0	93.0
Indicator value	92.7%	93.4%	92.2%	93.1%	93.5%	92.1%	91.5%	90.9%

# **ERO Drill Participation**

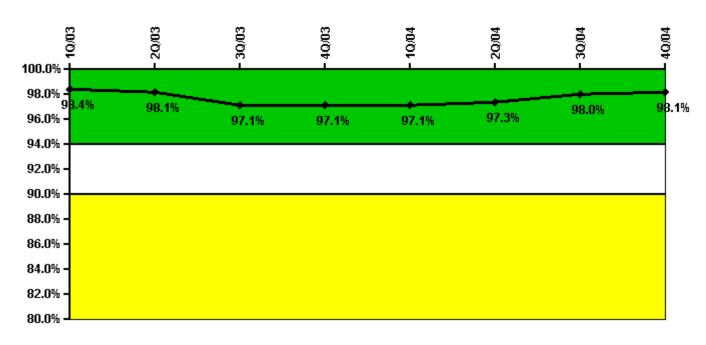


Thresholds: White < 80.0% Yellow < 60.0%

### Notes

ERO Drill Participation	1Q/03	2Q/03	3Q/03	4Q/03	1Q/04	2Q/04	3Q/04	4Q/04
Participating Key personnel	101.0	122.0	127.0	126.0	130.0	131.0	138.0	141.0
Total Key personnel	102.0	128.0	133.0	133.0	133.0	141.0	144.0	143.0
Indicator value	99.0%	95.3%	95.5%	94.7%	97.7%	92.9%	95.8%	98.6%

# **Alert & Notification System**

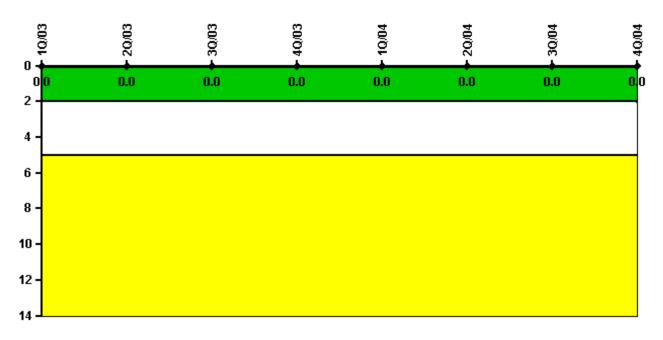


Thresholds: White < 94.0% Yellow < 90.0%

### Notes

Alert & Notification System	1Q/03	2Q/03	3Q/03	4Q/03	1Q/04	2Q/04	3Q/04	4Q/04
Successful siren-tests	314	308	453	314	314	312	462	316
Total sirens-tests	318	318	477	318	318	318	477	318
Indicator value	98.4%	98.1%	97.1%	97.1%	97.1%	97.3%	98.0%	98.1%

# **Occupational Exposure Control Effectiveness**

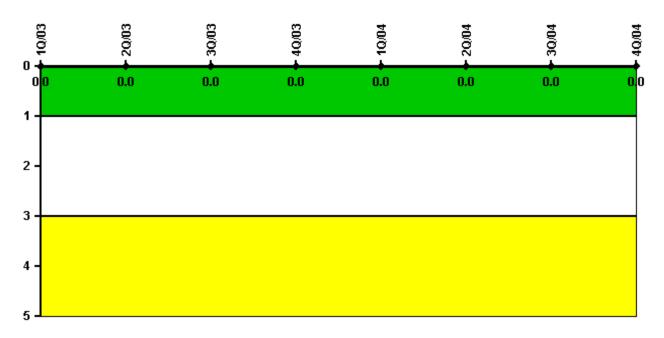


Thresholds: White > 2.0 Yellow > 5.0

### Notes

Occupational Exposure Control Effectiveness	1Q/03	2Q/03	3Q/03	4Q/03	1Q/04	2Q/04	3Q/04	4Q/04
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	О	О	О	О	О	О	0

# **RETS/ODCM Radiological Effluent**



Thresholds: White > 1.0 Yellow > 3.0

### Notes

RETS/ODCM Radiological Effluent	1Q/03	2Q/03	3Q/03	4Q/03	1Q/04	2Q/04	3Q/04	4Q/04
RETS/ODCM occurrences	0	0	0	0	0	0	0	0
Indicator value	0	0	0	0	0	0	0	0

Licensee Comments: none

<u>Physical Protection</u> information not publicly available.

Action Matrix Summary | Inspection Findings Summary | PI Summary | Reactor Oversight Process

Last Modified: March 9, 2005