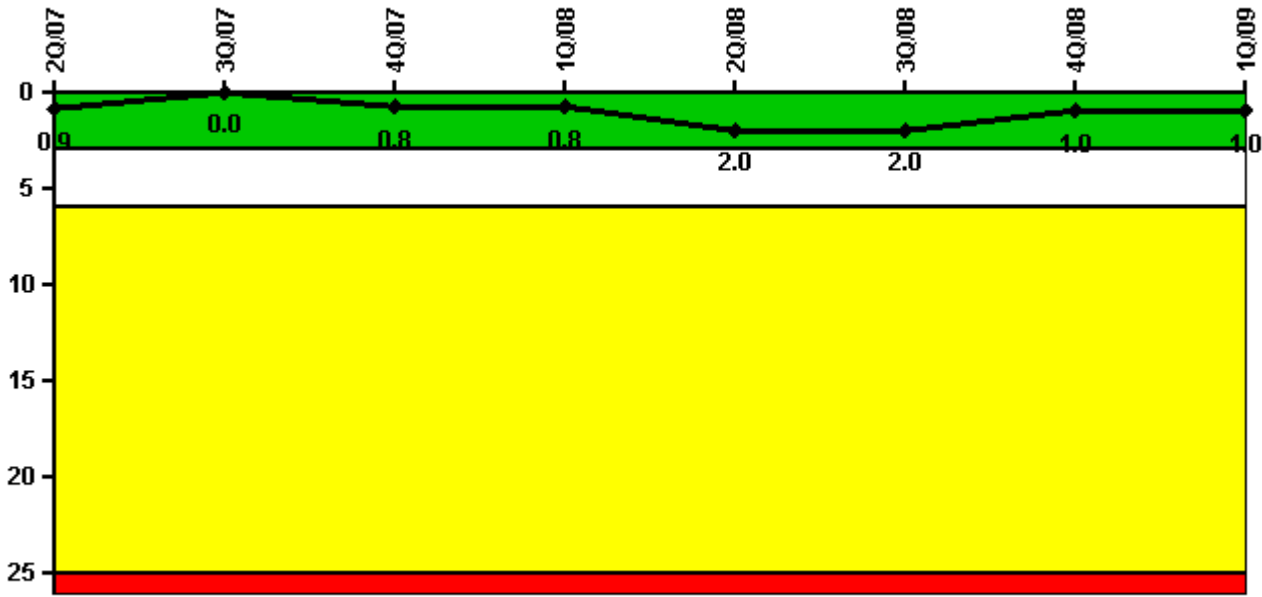


# Palo Verde 2

## 1Q/2009 Performance Indicators

Licensee's General Comments: none

### Unplanned Scrams per 7000 Critical Hrs



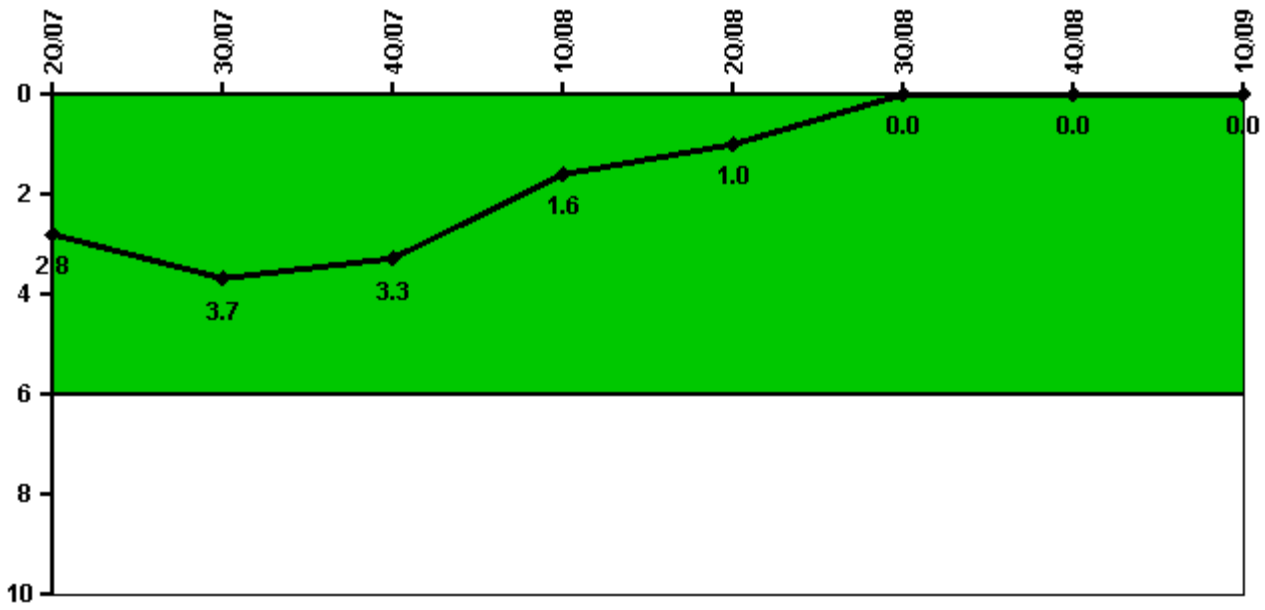
Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

### Notes

Unplanned Scrams per 7000 Critical Hrs	2Q/07	3Q/07	4Q/07	1Q/08	2Q/08	3Q/08	4Q/08	1Q/09
Unplanned scrams	0	0	1.0	0	1.0	0	0	0
Critical hours	2184.0	2208.0	2069.1	2112.0	687.6	2208.0	1673.3	2160.0
Indicator value	0.9	0	0.8	0.8	2.0	2.0	1.0	1.0

Licensee Comments: none

## Unplanned Power Changes per 7000 Critical Hrs



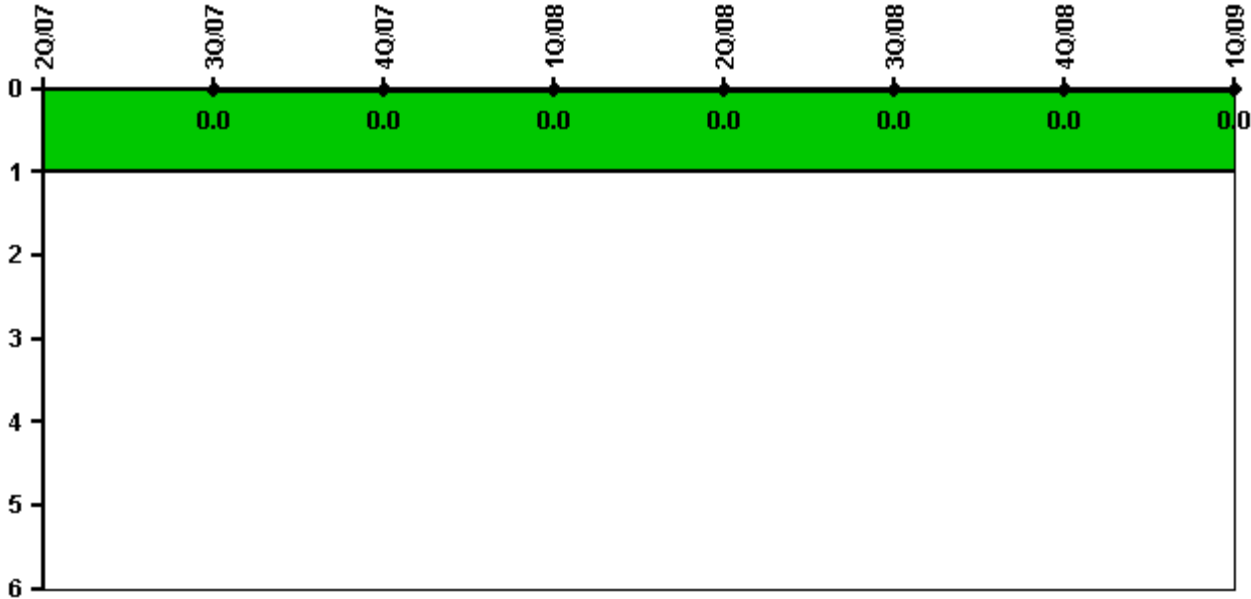
Thresholds: White > 6.0

### Notes

Unplanned Power Changes per 7000 Critical Hrs	2Q/07	3Q/07	4Q/07	1Q/08	2Q/08	3Q/08	4Q/08	1Q/09
Unplanned power changes	1.0	1.0	0	0	0	0	0	0
Critical hours	2184.0	2208.0	2069.1	2112.0	687.6	2208.0	1673.3	2160.0
Indicator value	2.8	3.7	3.3	1.6	1.0	0	0	0

Licensee Comments: none

# Unplanned Scrams with Complications



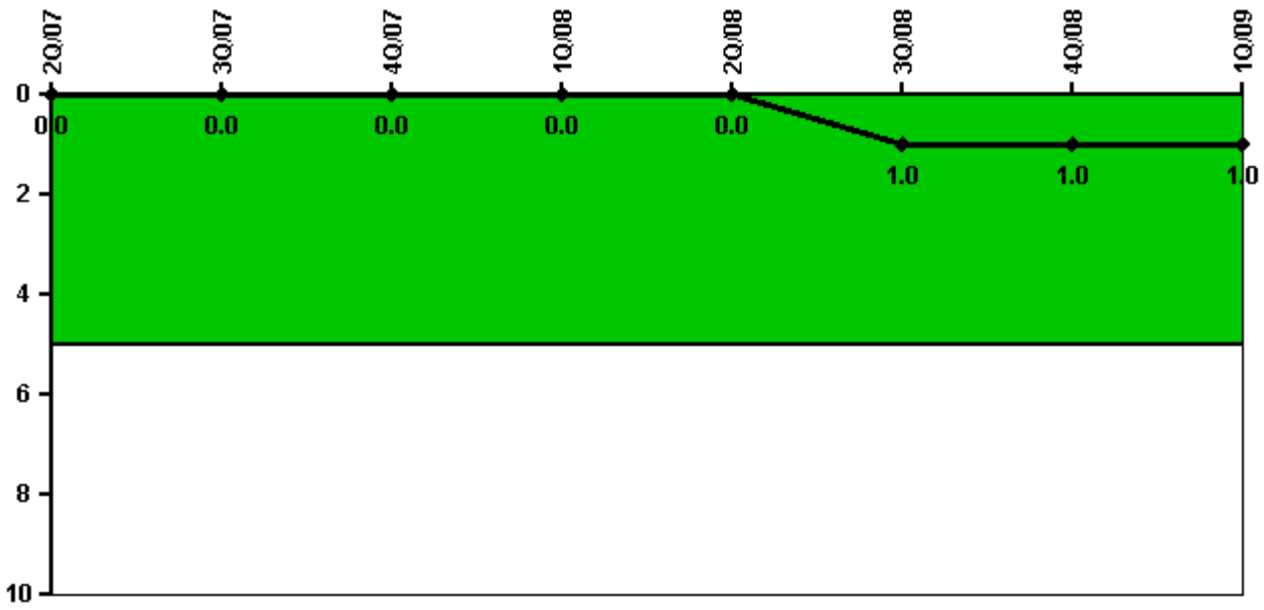
Thresholds: White > 1.0

**Notes**

Unplanned Scrams with Complications	2Q/07	3Q/07	4Q/07	1Q/08	2Q/08	3Q/08	4Q/08	1Q/09
Scrams with complications	0	0	0	0	0	0	0	0
Indicator value		0.0	0.0	0.0	0.0	0.0	0.0	0.0

Licensee Comments: none

## Safety System Functional Failures (PWR)



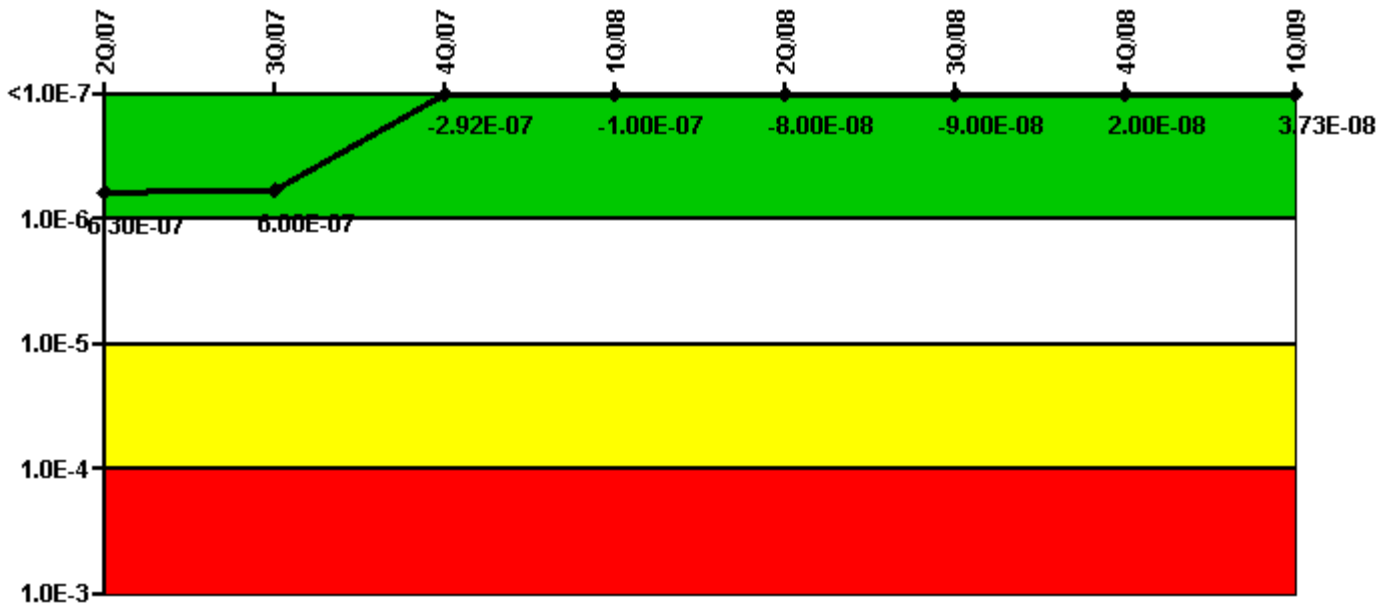
Thresholds: White > 5.0

### Notes

Safety System Functional Failures (PWR)	2Q/07	3Q/07	4Q/07	1Q/08	2Q/08	3Q/08	4Q/08	1Q/09
Safety System Functional Failures	0	0	0	0	0	1	0	0
Indicator value	0	0	0	0	0	1	1	1

Licensee Comments: none

# Mitigating Systems Performance Index, Emergency AC Power System



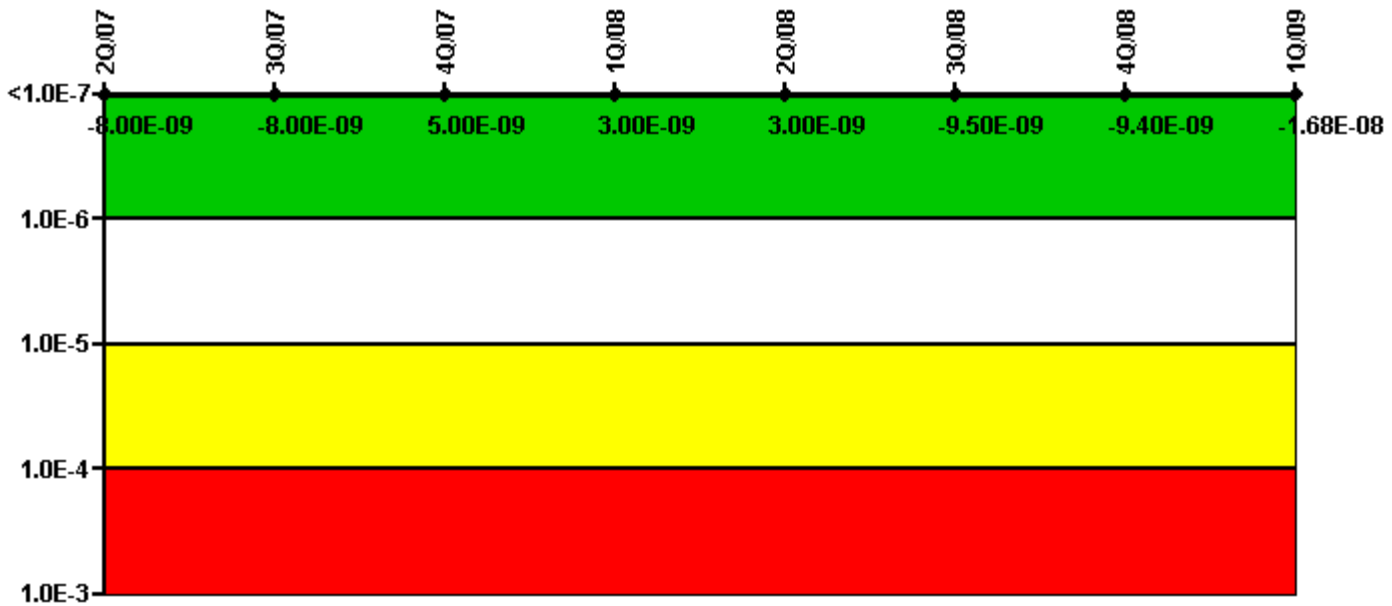
Thresholds: White > 1.00E-6 Yellow > 1.00E-5 Red > 1.00E-4

## Notes

Mitigating Systems Performance Index, Emergency AC Power System	2Q/07	3Q/07	4Q/07	1Q/08	2Q/08	3Q/08	4Q/08	1Q/09
UAI (ΔCDF)	1.60E-07	1.30E-07	7.80E-08	1.20E-07	1.40E-07	1.30E-07	1.60E-07	4.60E-08
URI (ΔCDF)	4.70E-07	4.70E-07	-3.70E-07	-2.20E-07	-2.20E-07	-2.20E-07	-1.40E-07	-8.70E-09
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	6.30E-07	6.00E-07	-2.92E-07	-1.00E-07	-8.00E-08	-9.00E-08	2.00E-08	3.73E-08

Licensee Comments: none

# Mitigating Systems Performance Index, High Pressure Injection System



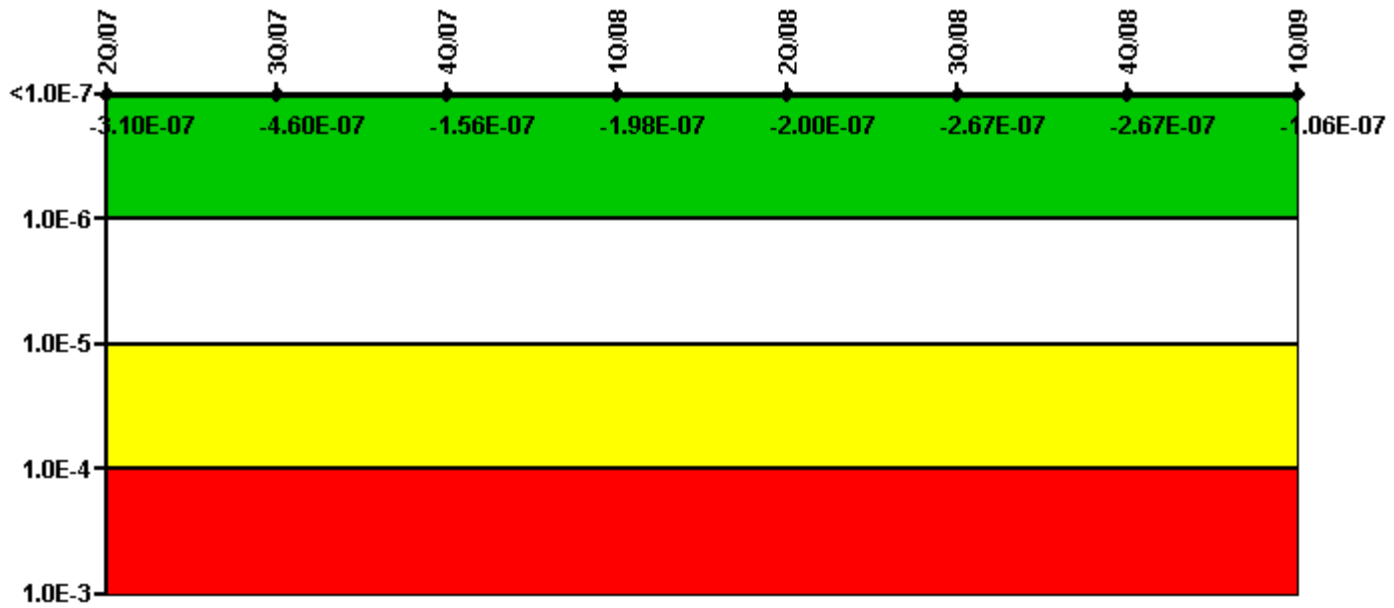
Thresholds: White >  $1.00E-6$  Yellow >  $1.00E-5$  Red >  $1.00E-4$

## Notes

Mitigating Systems Performance Index, High Pressure Injection System	2Q/07	3Q/07	4Q/07	1Q/08	2Q/08	3Q/08	4Q/08	1Q/09
UAI ( $\Delta$ CDF)	4.50E-08	4.50E-08	1.70E-08	1.50E-08	1.50E-08	2.50E-09	2.60E-09	1.20E-09
URI ( $\Delta$ CDF)	-5.30E-08	-5.30E-08	-1.20E-08	-1.20E-08	-1.20E-08	-1.20E-08	-1.20E-08	-1.80E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-8.00E-09	-8.00E-09	5.00E-09	3.00E-09	3.00E-09	-9.50E-09	-9.40E-09	-1.68E-08

Licensee Comments: none

# Mitigating Systems Performance Index, Heat Removal System



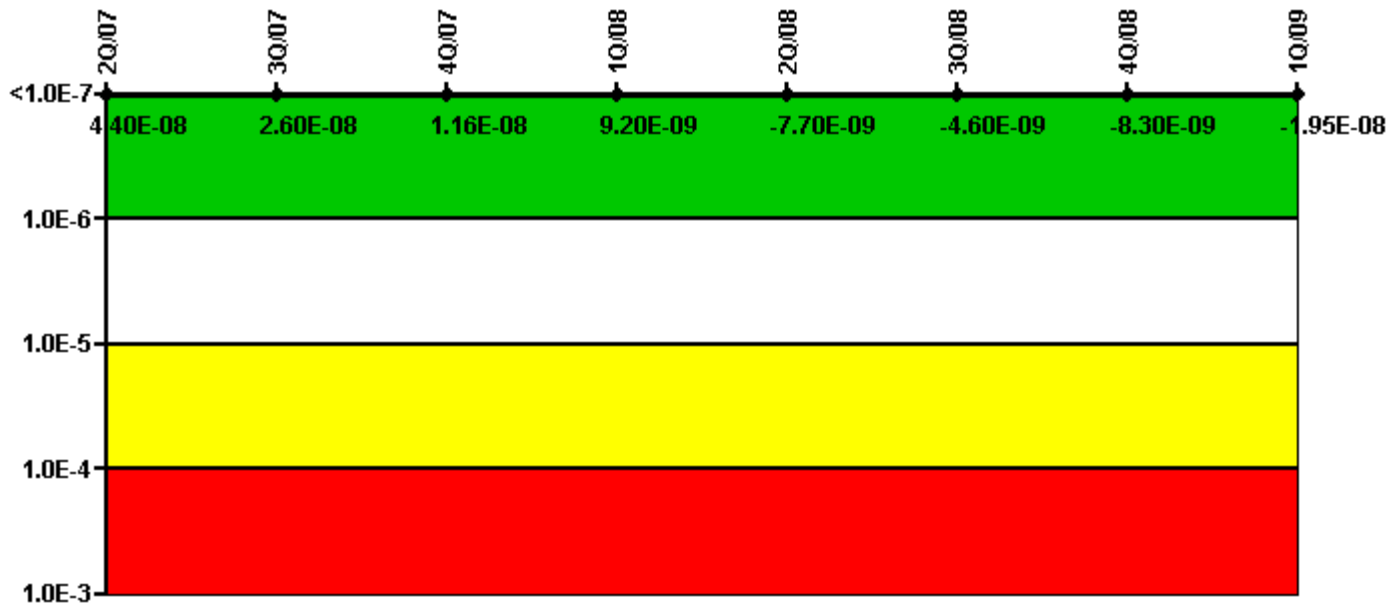
Thresholds: White > 1.00E-6 Yellow > 1.00E-5 Red > 1.00E-4

## Notes

Mitigating Systems Performance Index, Heat Removal System	2Q/07	3Q/07	4Q/07	1Q/08	2Q/08	3Q/08	4Q/08	1Q/09
UAI ( $\Delta$ CDF)	2.90E-07	1.40E-07	6.40E-08	2.20E-08	2.00E-08	-4.70E-08	-4.70E-08	-8.90E-09
URI ( $\Delta$ CDF)	-6.00E-07	-6.00E-07	-2.20E-07	-2.20E-07	-2.20E-07	-2.20E-07	-2.20E-07	-9.70E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-3.10E-07	-4.60E-07	-1.56E-07	-1.98E-07	-2.00E-07	-2.67E-07	-2.67E-07	-1.06E-07

Licensee Comments: none

# Mitigating Systems Performance Index, Residual Heat Removal System



Thresholds: White > 1.00E-6 Yellow > 1.00E-5 Red > 1.00E-4

## Notes

Mitigating Systems Performance Index, Residual Heat Removal System	2Q/07	3Q/07	4Q/07	1Q/08	2Q/08	3Q/08	4Q/08	1Q/09
UAI ( $\Delta$ CDF)	1.90E-08	9.90E-10	-4.40E-10	-2.80E-09	-1.00E-09	2.10E-09	-1.60E-09	5.40E-10
URI ( $\Delta$ CDF)	2.50E-08	2.50E-08	1.20E-08	1.20E-08	-6.70E-09	-6.70E-09	-6.70E-09	-2.00E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	4.40E-08	2.60E-08	1.16E-08	9.20E-09	-7.70E-09	-4.60E-09	-8.30E-09	-1.95E-08

## Licensee Comments:

1Q/09: Unavailability since April 2006 was revised to include time Containment Spray was unavailable while the Refueling Water Tanks was in full-flow recirculation. LER 05000528/529/530-2009-001. No color change occurred.

4Q/08: An adverse error was detected in Safety Injection valve group demand estimates since MSPI inception. The error was corrected and MSPI model updated. No color change resulted.



# Mitigating Systems Performance Index, Cooling Water Systems



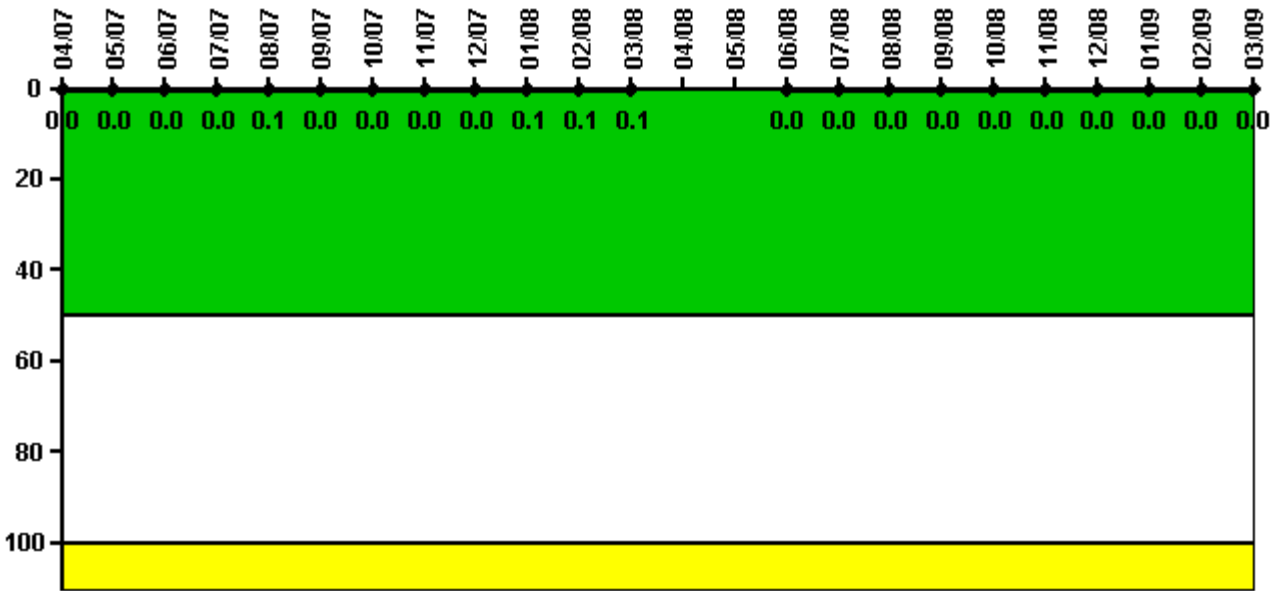
Thresholds: White > 1.00E-6 Yellow > 1.00E-5 Red > 1.00E-4

## Notes

Mitigating Systems Performance Index, Cooling Water Systems	2Q/07	3Q/07	4Q/07	1Q/08	2Q/08	3Q/08	4Q/08	1Q/09
UAI ( $\Delta$ CDF)	7.90E-09	7.90E-09	4.20E-09	4.20E-09	4.30E-09	4.30E-09	4.30E-09	1.30E-09
URI ( $\Delta$ CDF)	-3.80E-07	-3.80E-07	-1.60E-07	-1.60E-07	-1.60E-07	-1.60E-07	-1.60E-07	-1.90E-07
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-3.72E-07	-3.72E-07	-1.56E-07	-1.56E-07	-1.56E-07	-1.56E-07	-1.56E-07	-1.89E-07

Licensee Comments: none

## Reactor Coolant System Activity



Thresholds: White > 50.0 Yellow > 100.0

### Notes

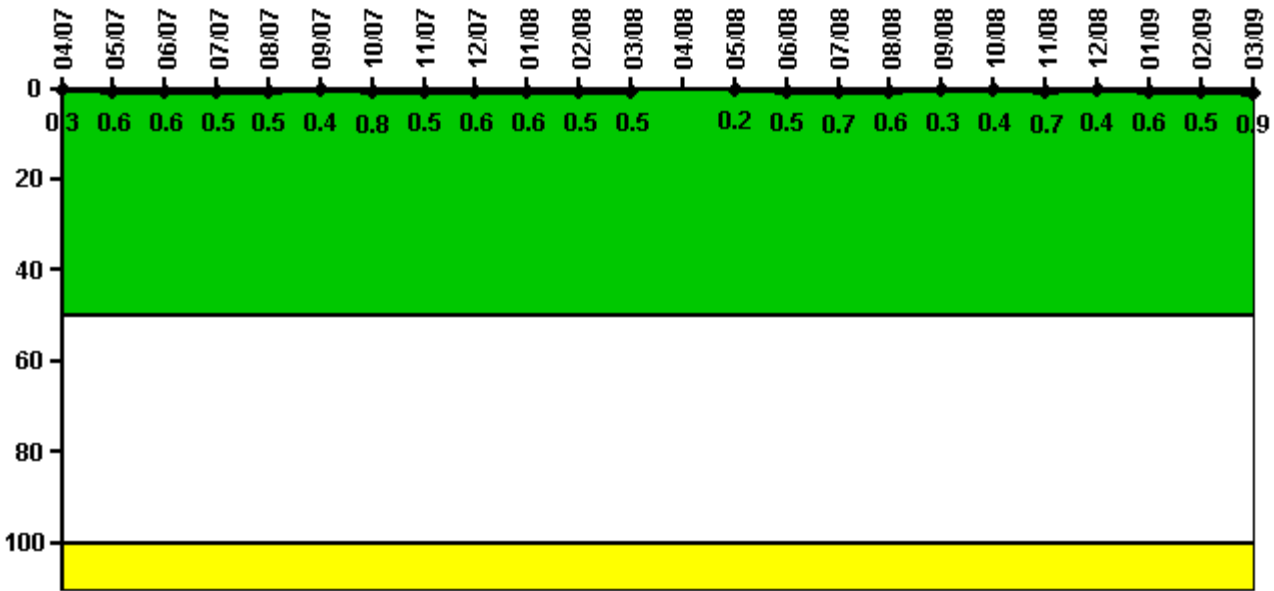
Reactor Coolant System Activity	4/07	5/07	6/07	7/07	8/07	9/07	10/07	11/07	12/07	1/08	2/08	3/08
Maximum activity	0.000226	0.000227	0.000235	0.000248	0.000711	0.000264	0.000484	0.000381	0.000443	0.000563	0.000739	0.000743
Technical specification limit	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Indicator value	0	0	0	0	0.1	0	0	0	0	0.1	0.1	0.1

Reactor Coolant System Activity	4/08	5/08	6/08	7/08	8/08	9/08	10/08	11/08	12/08	1/09	2/09	3/09
Maximum activity	N/A	N/A	0.000221	0.000238	0.000238	0.000234	0.000248	0.000250	0.000253	0.000265	0.000267	0.000267
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	N/A	N/A	0	0	0	0	0	0	0	0	0	0

Licensee Comments: none

## Reactor Coolant System Leakage



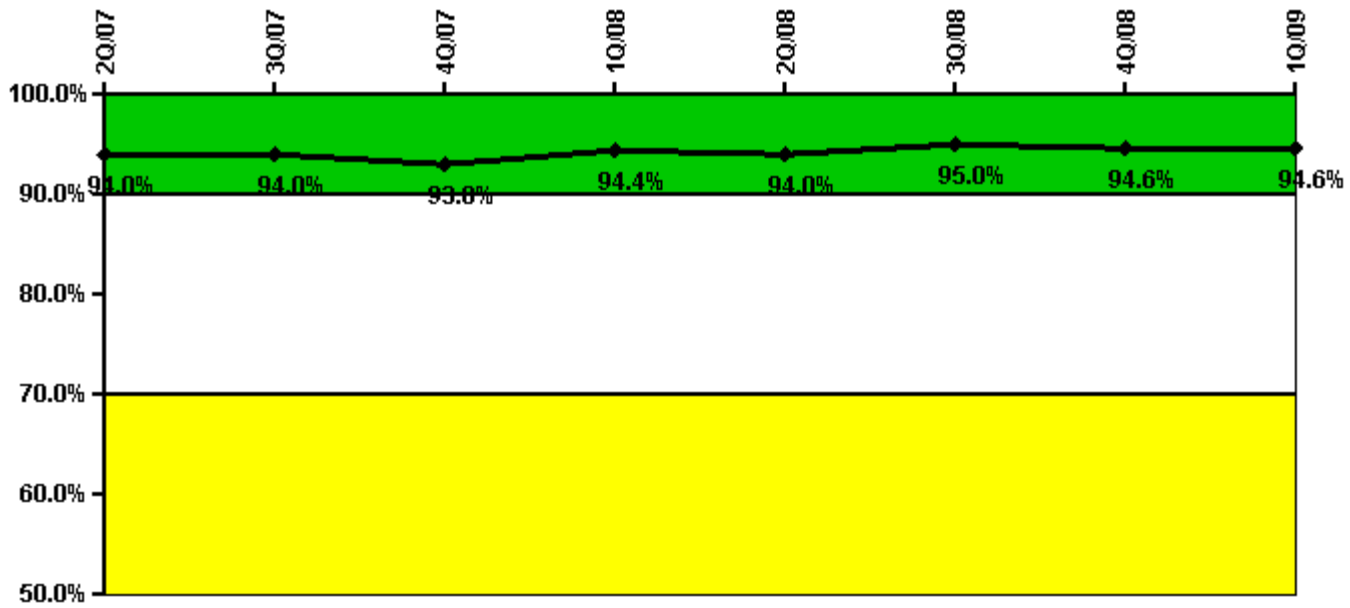
Thresholds: White > 50.0 Yellow > 100.0

### Notes

Reactor Coolant System Leakage	4/07	5/07	6/07	7/07	8/07	9/07	10/07	11/07	12/07	1/08	2/08	3/08
Maximum leakage	0.028	0.063	0.055	0.047	0.051	0.041	0.076	0.048	0.056	0.058	0.049	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	0.3	0.6	0.6	0.5	0.5	0.4	0.8	0.5	0.6	0.6	0.5	0.5
Reactor Coolant System Leakage	4/08	5/08	6/08	7/08	8/08	9/08	10/08	11/08	12/08	1/09	2/09	3/09
Maximum leakage	N/A	0.021	0.049	0.066	0.059	0.032	0.044	0.065	0.043	0.058	0.052	0.085
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	N/A	0.2	0.5	0.7	0.6	0.3	0.4	0.7	0.4	0.6	0.5	0.9

Licensee Comments: none

## Drill/Exercise Performance



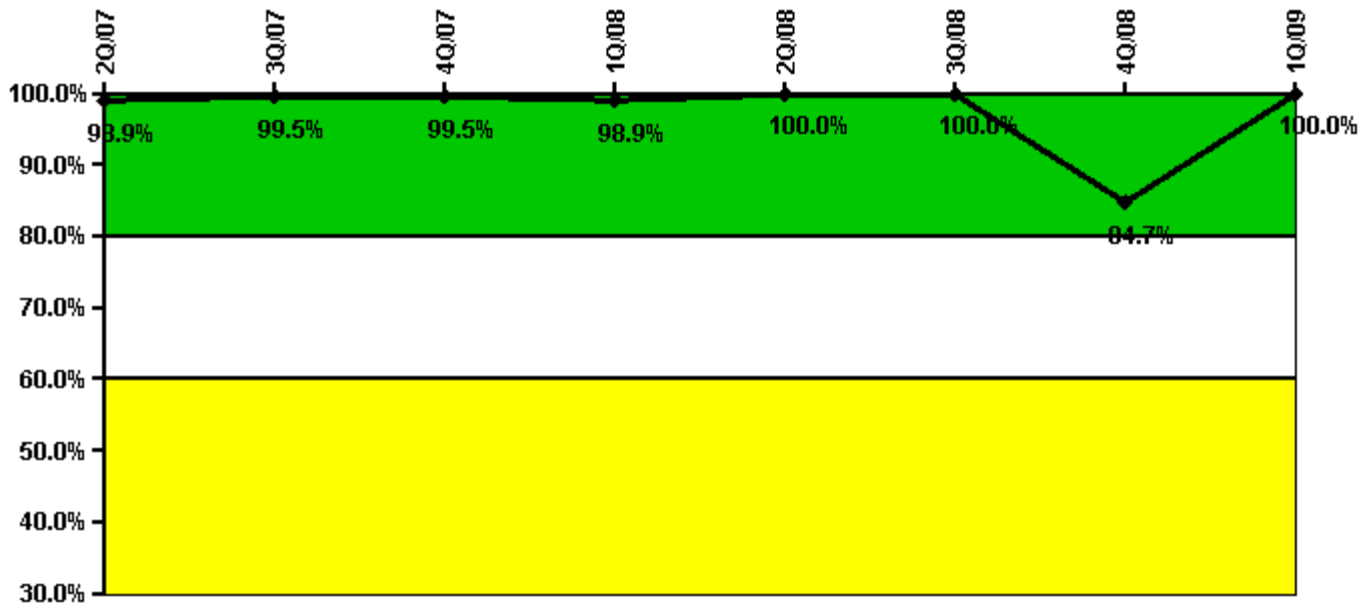
Thresholds: White < 90.0% Yellow < 70.0%

### Notes

Drill/Exercise Performance	2Q/07	3Q/07	4Q/07	1Q/08	2Q/08	3Q/08	4Q/08	1Q/09
Successful opportunities	13.0	188.0	12.0	129.0	35.0	43.0	35.0	75.0
Total opportunities	16.0	200.0	12.0	132.0	39.0	43.0	39.0	79.0
Indicator value	94.0%	94.0%	93.0%	94.4%	94.0%	95.0%	94.6%	94.6%

Licensee Comments: none

## ERO Drill Participation



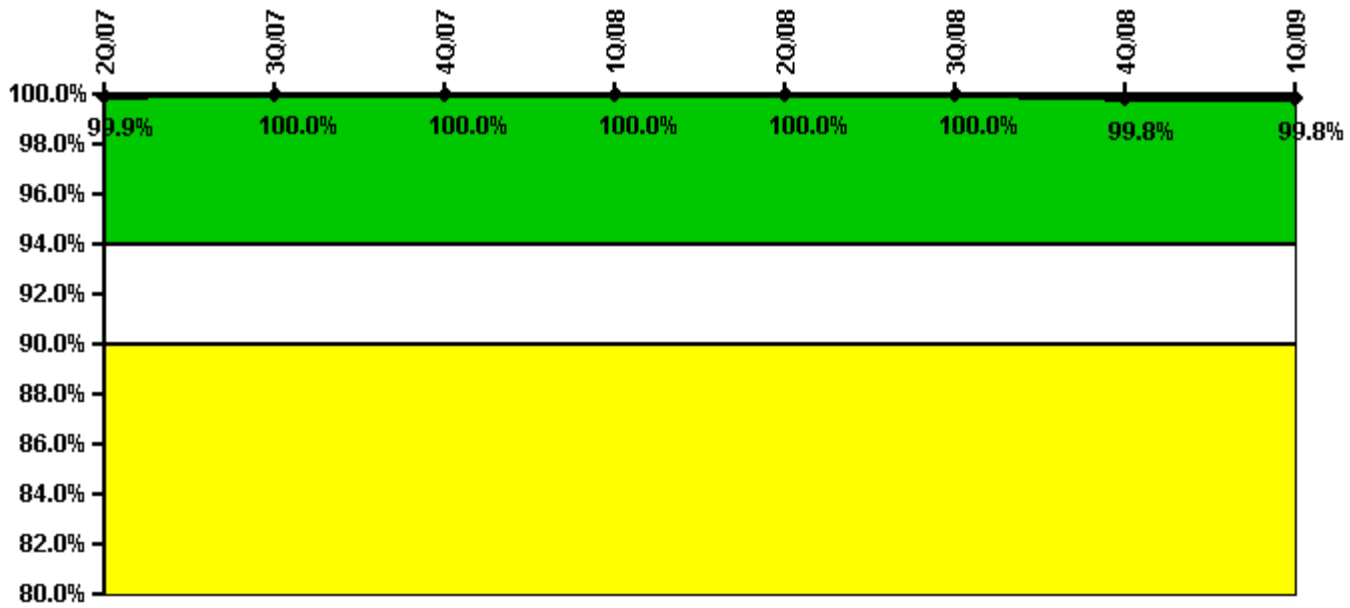
**Thresholds:** White < 80.0% Yellow < 60.0%

### Notes

ERO Drill Participation	2Q/07	3Q/07	4Q/07	1Q/08	2Q/08	3Q/08	4Q/08	1Q/09
Participating Key personnel	181.0	199.0	192.0	188.0	191.0	183.0	72.0	78.0
Total Key personnel	183.0	200.0	193.0	190.0	191.0	183.0	85.0	78.0
Indicator value	98.9%	99.5%	99.5%	98.9%	100.0%	100.0%	84.7%	100.0%

Licensee Comments: none

## Alert & Notification System



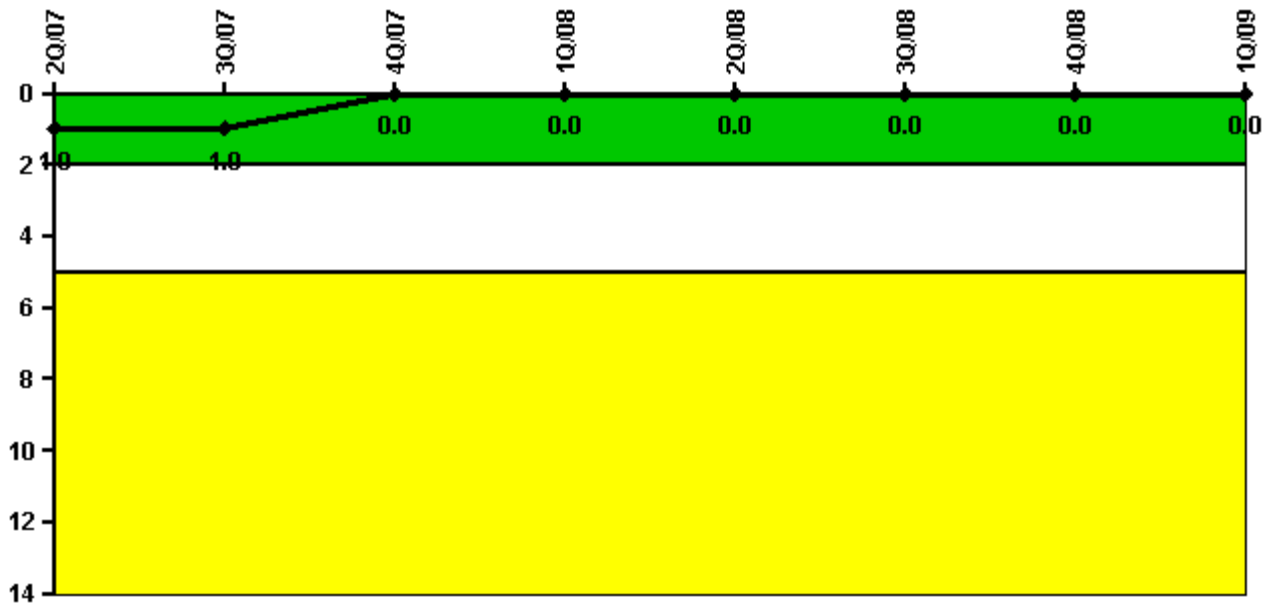
Thresholds: White < 94.0% Yellow < 90.0%

### Notes

Alert & Notification System	2Q/07	3Q/07	4Q/07	1Q/08	2Q/08	3Q/08	4Q/08	1Q/09
Successful siren-tests	798	756	882	296	296	296	331	296
Total sirens-tests	798	756	882	296	296	296	333	296
Indicator value	99.9%	100.0%	100.0%	100.0%	100.0%	100.0%	99.8%	99.8%

Licensee Comments: none

## Occupational Exposure Control Effectiveness



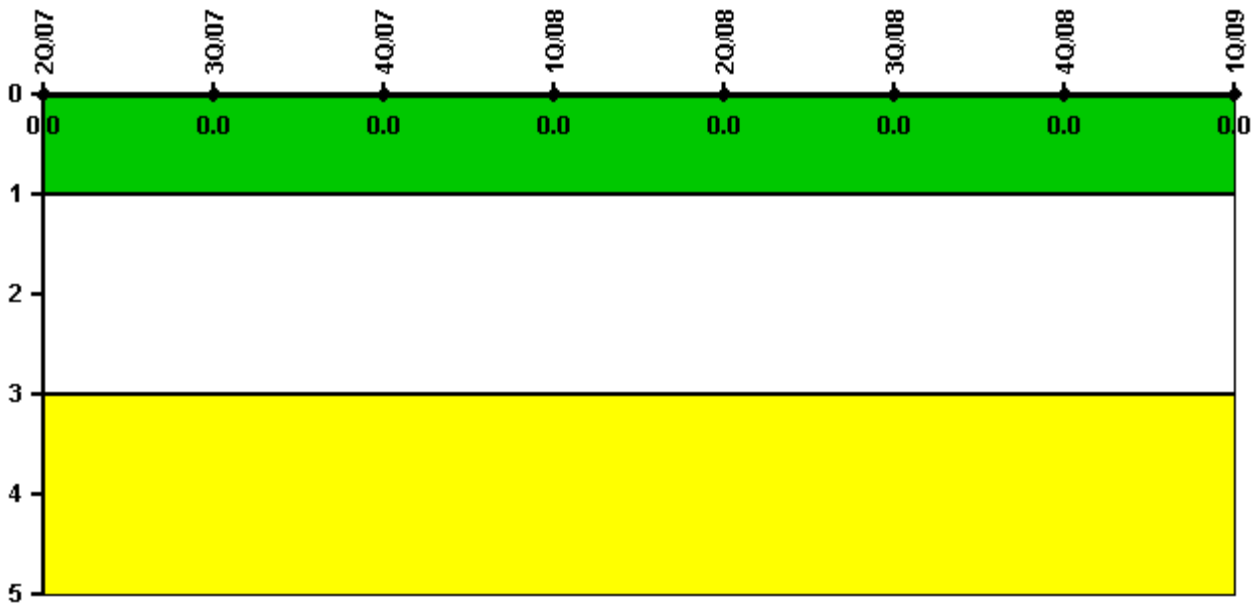
Thresholds: White > 2.0 Yellow > 5.0

### Notes

Occupational Exposure Control Effectiveness	2Q/07	3Q/07	4Q/07	1Q/08	2Q/08	3Q/08	4Q/08	1Q/09
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	1	1	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/07	3Q/07	4Q/07	1Q/08	2Q/08	3Q/08	4Q/08	1Q/09
RETS/ODCM occurrences	0	0	0	0	0	0	0	0
Indicator value	0	0	0	0	0	0	0	0

Licensee Comments: none

[Security](#) information not publicly available.