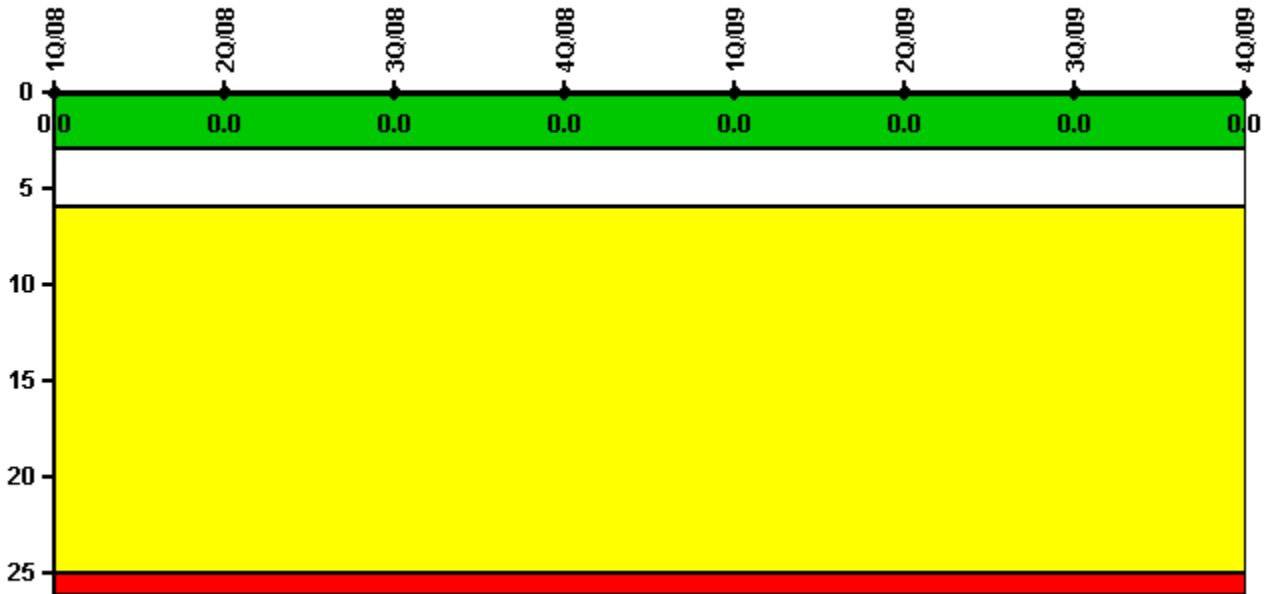


# Susquehanna 1

## 4Q/2009 Performance Indicators

Licensee's General Comments: none

### Unplanned Scrams per 7000 Critical Hrs



Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

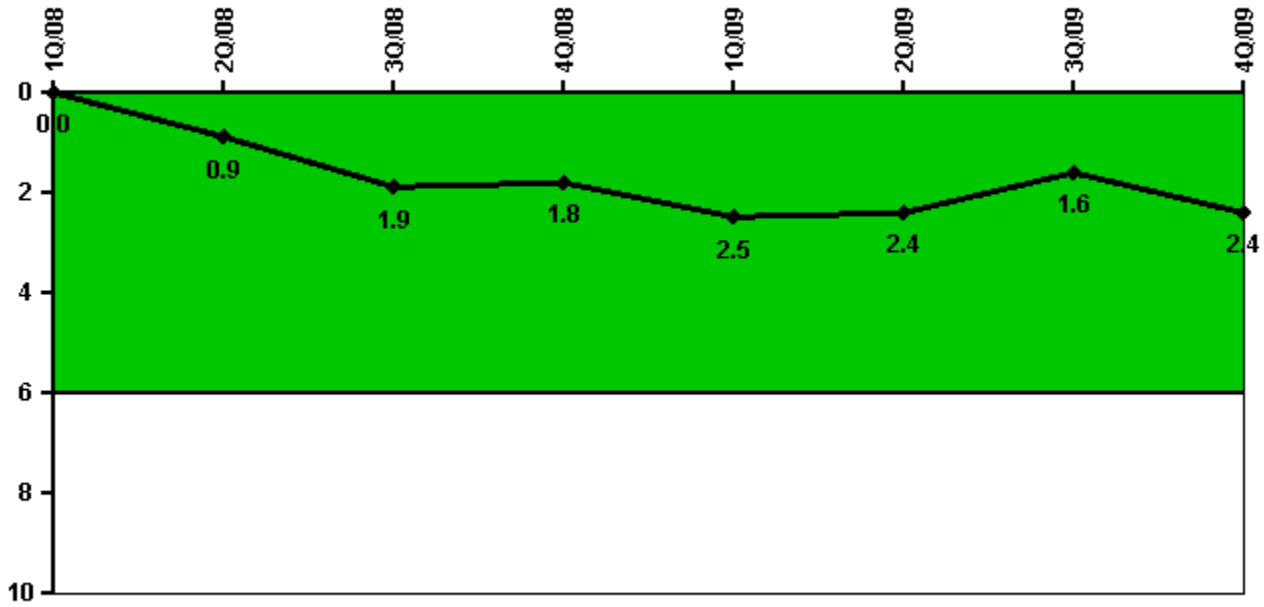
### Notes

Unplanned Scrams per 7000 Critical Hrs	1Q/08	2Q/08	3Q/08	4Q/08	1Q/09	2Q/09	3Q/09	4Q/09
Unplanned scrams	0	0	0	0	0	0	0	0
Critical hours	1518.3	1830.0	2208.0	2209.0	2159.0	2184.0	2208.0	2209.0
Indicator value	0	0	0	0	0	0	0	0

Licensee Comments: none

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## Unplanned Power Changes per 7000 Critical Hrs



Thresholds: White > 6.0

### Notes

Unplanned Power Changes per 7000 Critical Hrs	1Q/08	2Q/08	3Q/08	4Q/08	1Q/09	2Q/09	3Q/09	4Q/09
Unplanned power changes	0	1.0	1.0	0	1.0	1.0	0	1.0
Critical hours	1518.3	1830.0	2208.0	2209.0	2159.0	2184.0	2208.0	2209.0
Indicator value	0	0.9	1.9	1.8	2.5	2.4	1.6	2.4

Licensee Comments: none

# Unplanned Scrams with Complications



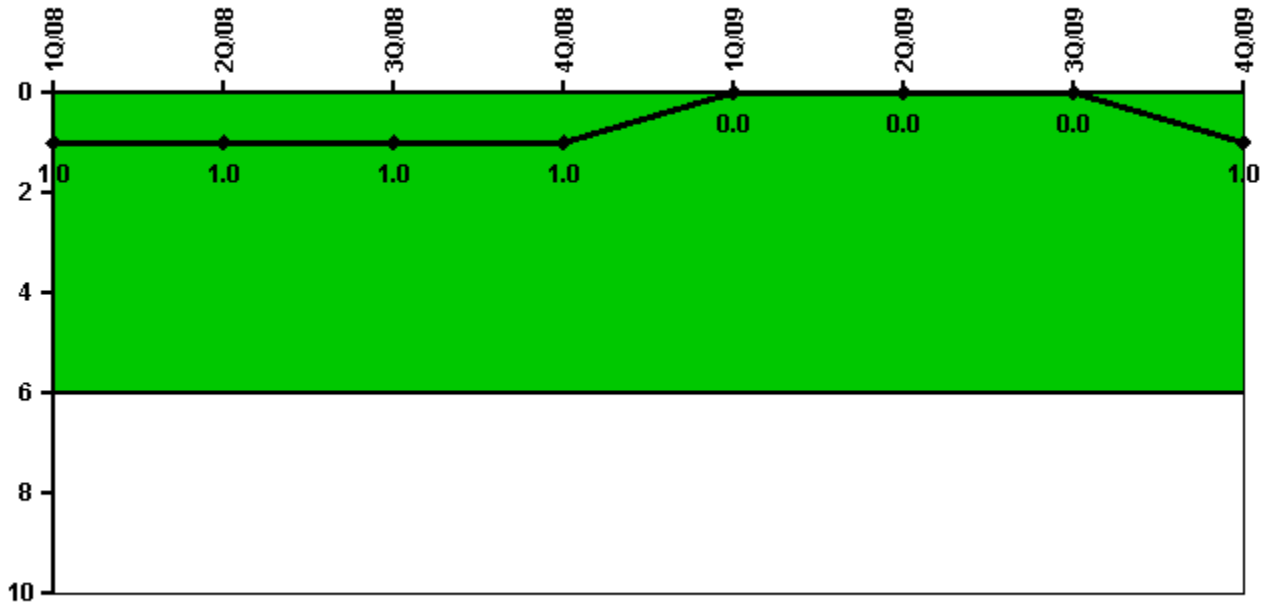
Thresholds: White > 1.0

## Notes

Unplanned Scrams with Complications	1Q/08	2Q/08	3Q/08	4Q/08	1Q/09	2Q/09	3Q/09	4Q/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	0.0

Licensee Comments: none

## Safety System Functional Failures (BWR)



Thresholds: White > 6.0

### Notes

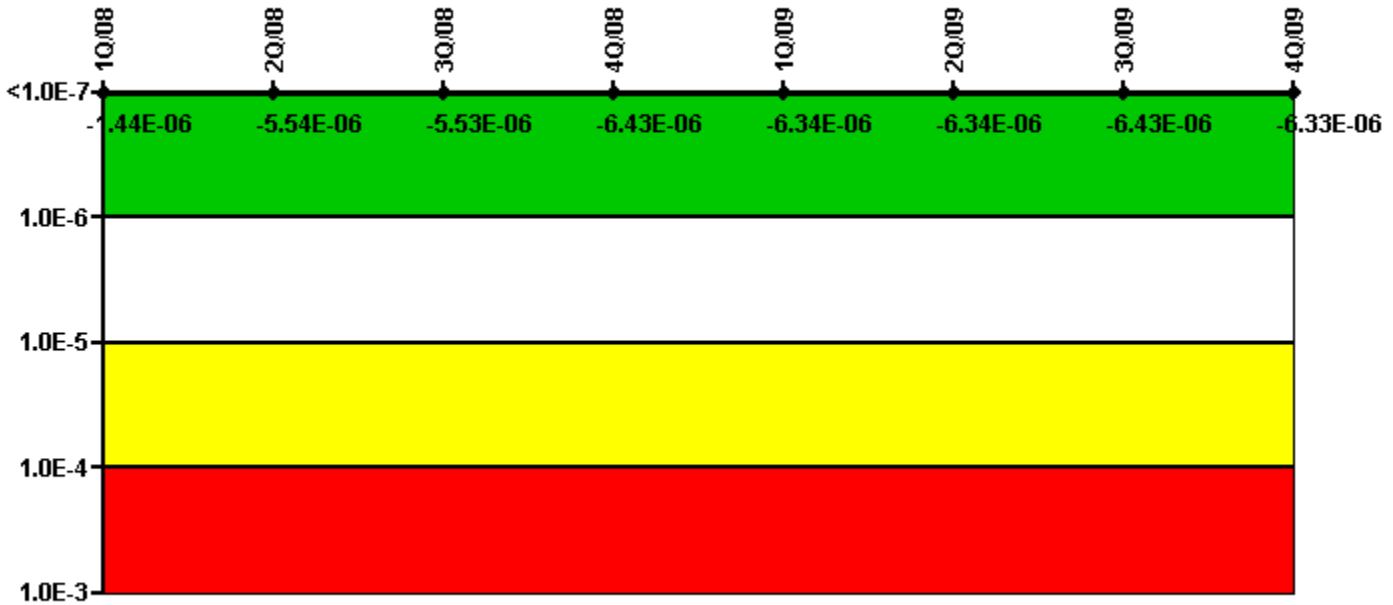
Safety System Functional Failures (BWR)	1Q/08	2Q/08	3Q/08	4Q/08	1Q/09	2Q/09	3Q/09	4Q/09
Safety System Functional Failures	1	0	0	0	0	0	0	1
Indicator value	1	1	1	1	0	0	0	1

Licensee Comments:

4Q/09: LER 50-387/2009-001-00 was submitted on 10/16/2009. The event involved an inoperable HPCI stop valve.

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# Mitigating Systems Performance Index, Emergency AC Power System



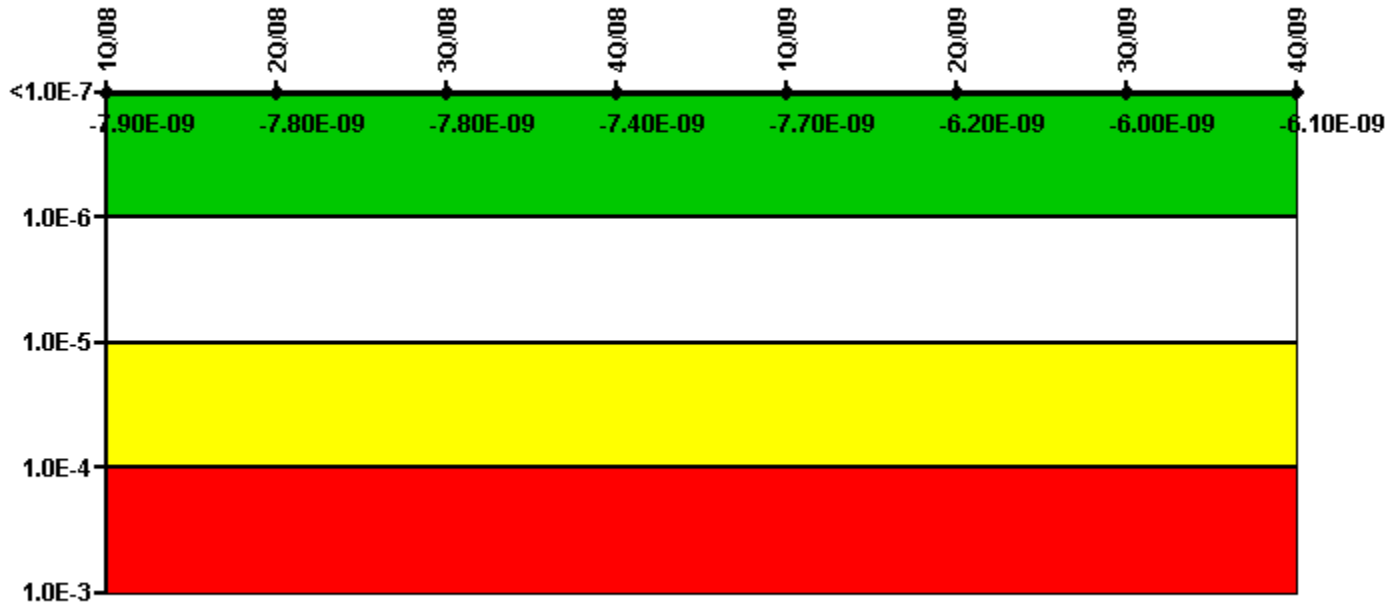
Thresholds: White > 1.00E-6 Yellow > 1.00E-5 Red > 1.00E-4

## Notes

Mitigating Systems Performance Index, Emergency AC Power System	1Q/08	2Q/08	3Q/08	4Q/08	1Q/09	2Q/09	3Q/09	4Q/09
UAI ( $\Delta$ CDF)	-3.80E-08	-3.60E-08	-2.90E-08	-3.40E-08	-3.90E-08	-4.20E-08	-3.30E-08	-3.00E-08
URI ( $\Delta$ CDF)	-1.40E-06	-5.50E-06	-5.50E-06	-6.40E-06	-6.30E-06	-6.30E-06	-6.40E-06	-6.30E-06
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-1.44E-06	-5.54E-06	-5.53E-06	-6.43E-06	-6.34E-06	-6.34E-06	-6.43E-06	-6.33E-06

Licensee Comments: none

# Mitigating Systems Performance Index, High Pressure Injection System



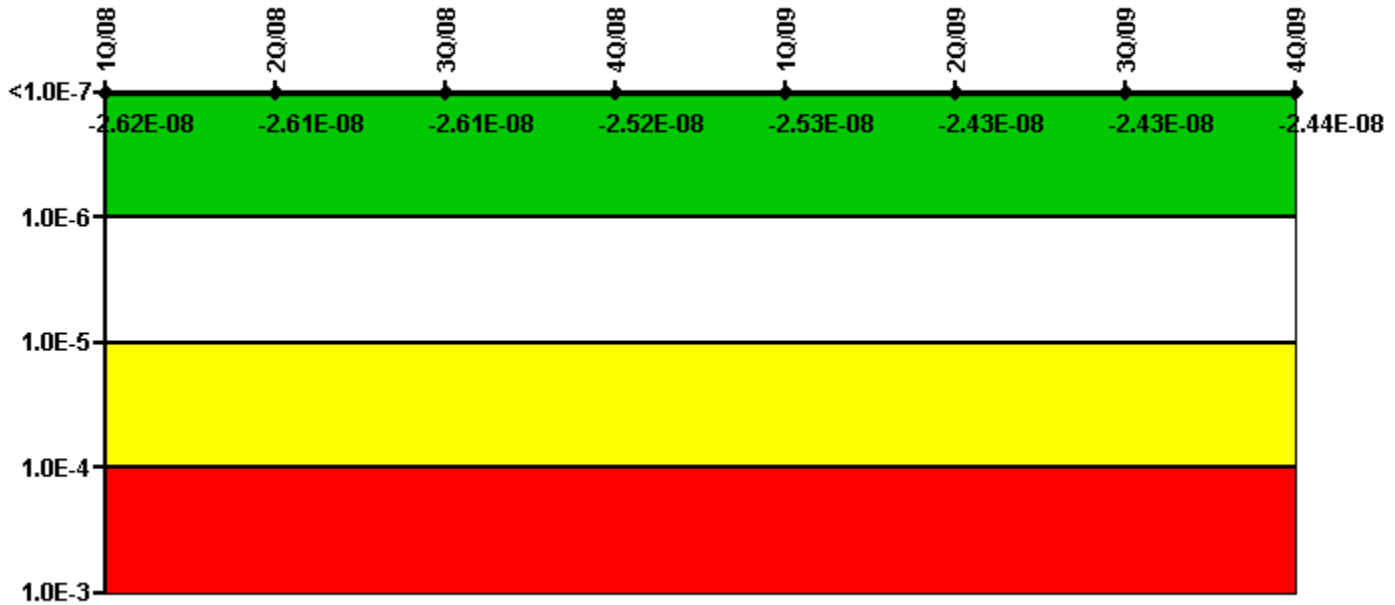
Thresholds: White > 1.00E-6 Yellow > 1.00E-5 Red > 1.00E-4

## Notes

Mitigating Systems Performance Index, High Pressure Injection System	1Q/08	2Q/08	3Q/08	4Q/08	1Q/09	2Q/09	3Q/09	4Q/09
UAI ( $\Delta$ CDF)	2.10E-09	2.20E-09	2.20E-09	2.10E-09	1.90E-09	1.80E-09	1.70E-09	1.60E-09
URI ( $\Delta$ CDF)	-1.00E-08	-1.00E-08	-1.00E-08	-9.50E-09	-9.60E-09	-8.00E-09	-7.70E-09	-7.70E-09
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-7.90E-09	-7.80E-09	-7.80E-09	-7.40E-09	-7.70E-09	-6.20E-09	-6.00E-09	-6.10E-09

Licensee Comments: none

# Mitigating Systems Performance Index, Heat Removal System



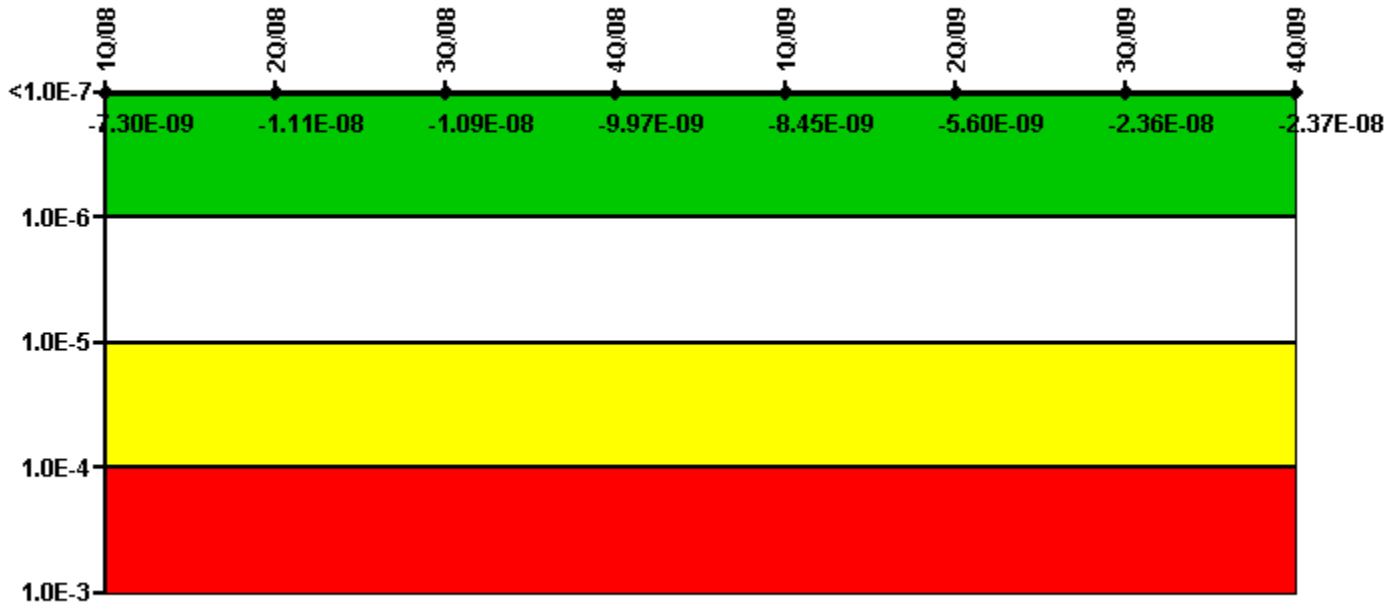
Thresholds: White > 1.00E-6 Yellow > 1.00E-5 Red > 1.00E-4

## Notes

Mitigating Systems Performance Index, Heat Removal System	1Q/08	2Q/08	3Q/08	4Q/08	1Q/09	2Q/09	3Q/09	4Q/09
UAI ( $\Delta$ CDF)	-7.20E-09	-7.10E-09	-7.10E-09	-7.20E-09	-7.30E-09	-7.30E-09	-7.30E-09	-7.40E-09
URI ( $\Delta$ CDF)	-1.90E-08	-1.90E-08	-1.90E-08	-1.80E-08	-1.80E-08	-1.70E-08	-1.70E-08	-1.70E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-2.62E-08	-2.61E-08	-2.61E-08	-2.52E-08	-2.53E-08	-2.43E-08	-2.43E-08	-2.44E-08

Licensee Comments: none

# Mitigating Systems Performance Index, Residual Heat Removal System



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

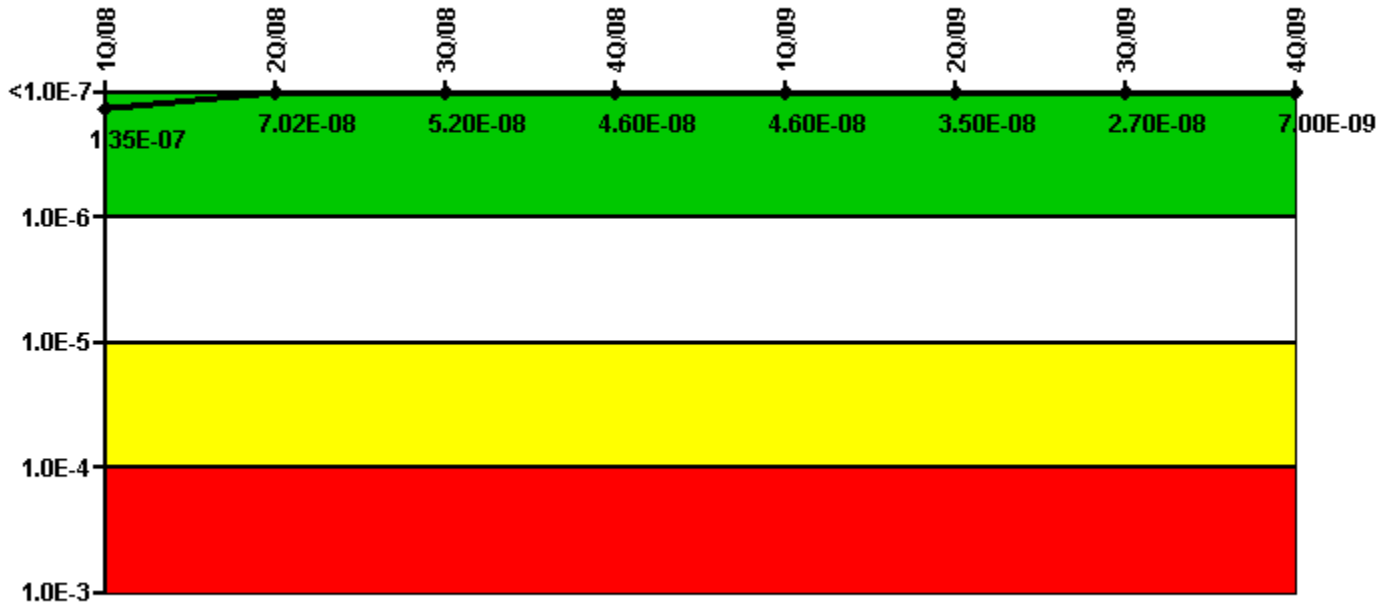
## Notes

Mitigating Systems Performance Index, Residual Heat Removal System	1Q/08	2Q/08	3Q/08	4Q/08	1Q/09	2Q/09	3Q/09	4Q/09
UAI ( $\Delta$ CDF)	3.70E-09	9.40E-10	5.10E-11	-8.70E-10	-9.50E-10	-1.10E-09	-6.10E-10	2.80E-10
URI ( $\Delta$ CDF)	-1.10E-08	-1.20E-08	-1.10E-08	-9.10E-09	-7.50E-09	-4.50E-09	-2.30E-08	-2.40E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-7.30E-09	-1.11E-08	-1.09E-08	-9.97E-09	-8.45E-09	-5.60E-09	-2.36E-08	-2.37E-08

Licensee Comments: none



# Mitigating Systems Performance Index, Cooling Water Systems



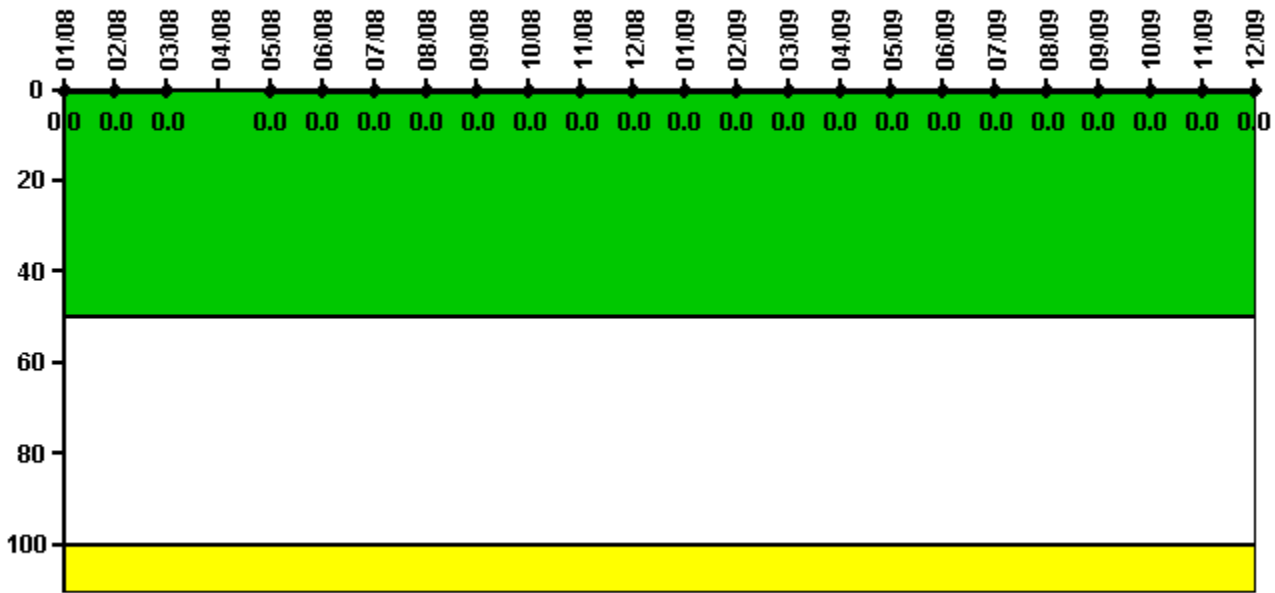
Thresholds: White > 1.00E-6 Yellow > 1.00E-5 Red > 1.00E-4

## Notes

Mitigating Systems Performance Index, Cooling Water Systems	1Q/08	2Q/08	3Q/08	4Q/08	1Q/09	2Q/09	3Q/09	4Q/09
UAI ( $\Delta$ CDF)	1.40E-07	7.60E-08	6.70E-08	6.00E-08	5.90E-08	5.90E-08	5.00E-08	4.90E-08
URI ( $\Delta$ CDF)	-5.50E-09	-5.80E-09	-1.50E-08	-1.40E-08	-1.30E-08	-2.40E-08	-2.30E-08	-4.20E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	1.35E-07	7.02E-08	5.20E-08	4.60E-08	4.60E-08	3.50E-08	2.70E-08	7.00E-09

Licensee Comments: none

# Reactor Coolant System Activity



Thresholds: White > 50.0 Yellow > 100.0

## Notes

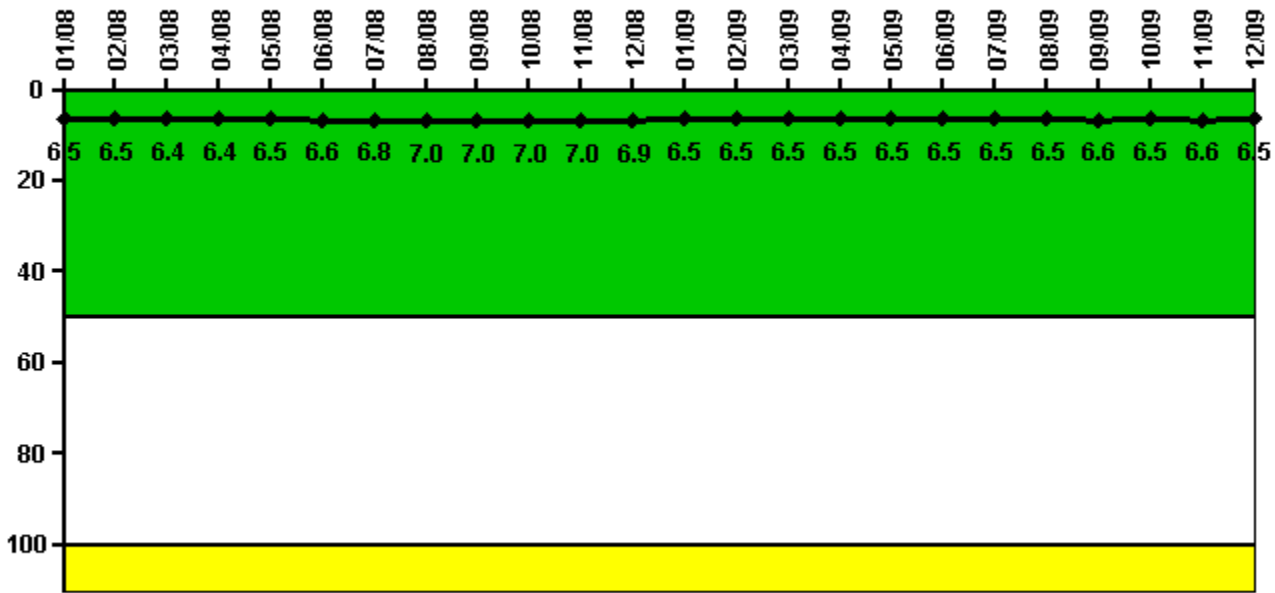
Reactor Coolant System Activity	1/08	2/08	3/08	4/08	5/08	6/08	7/08	8/08	9/08	10/08	11/08	12/08
Maximum activity	0.000013	0.000015	0.000015	N/A	0.000004	0.000005	0.000005	0.000006	0.000008	0.000007	0.000007	0.000007
Technical specification limit	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Indicator value	0	0	0	N/A	0	0	0	0	0	0	0	0

Reactor Coolant System Activity	1/09	2/09	3/09	4/09	5/09	6/09	7/09	8/09	9/09	10/09	11/09	12/09
Maximum activity	0.000007	0.000007	0.000007	0.000007	0.000007	0.000008	0.000009	0.000008	0.000009	0.000011	0.000009	0.000010
Technical specification limit	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Indicator value	0	0	0	0	0	0	0	0	0	0	0	0

Licensee Comments: none

## Reactor Coolant System Leakage



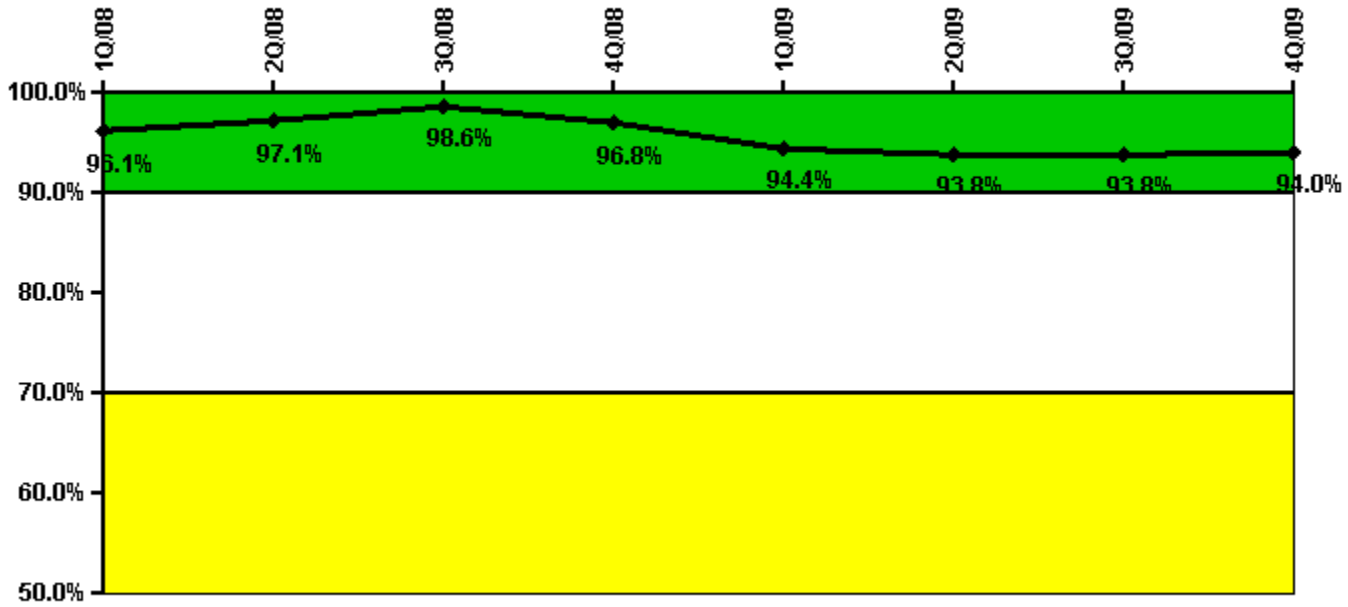
Thresholds: White > 50.0 Yellow > 100.0

### Notes

<b>Reactor Coolant System Leakage</b>	<b>1/08</b>	<b>2/08</b>	<b>3/08</b>	<b>4/08</b>	<b>5/08</b>	<b>6/08</b>	<b>7/08</b>	<b>8/08</b>	<b>9/08</b>	<b>10/08</b>	<b>11/08</b>	<b>12/08</b>
Maximum leakage	1.620	1.620	1.600	1.600	1.620	1.660	1.710	1.760	1.760	1.760	1.760	1.720
Technical specification limit	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
Indicator value	6.5	6.5	6.4	6.4	6.5	6.6	6.8	7.0	7.0	7.0	7.0	6.9
<b>Reactor Coolant System Leakage</b>	<b>1/09</b>	<b>2/09</b>	<b>3/09</b>	<b>4/09</b>	<b>5/09</b>	<b>6/09</b>	<b>7/09</b>	<b>8/09</b>	<b>9/09</b>	<b>10/09</b>	<b>11/09</b>	<b>12/09</b>
Maximum leakage	1.630	1.620	1.620	1.630	1.620	1.620	1.620	1.620	1.640	1.620	1.650	1.620
Technical specification limit	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
Indicator value	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.6	6.5	6.6	6.5

Licensee Comments: none

## Drill/Exercise Performance



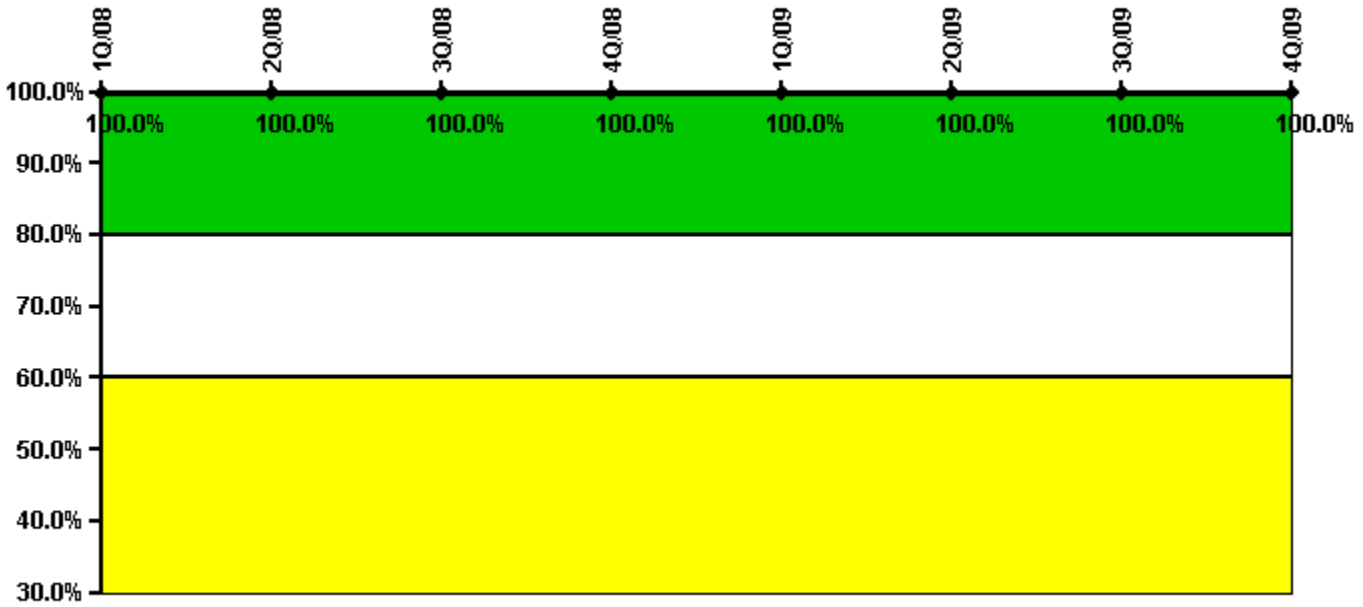
Thresholds: White < 90.0% Yellow < 70.0%

### Notes

Drill/Exercise Performance	1Q/08	2Q/08	3Q/08	4Q/08	1Q/09	2Q/09	3Q/09	4Q/09
Successful opportunities	17.0	18.0	25.0	20.0	9.0	19.0	31.0	17.0
Total opportunities	18.0	18.0	25.0	23.0	13.0	20.0	32.0	17.0
Indicator value	96.1%	97.1%	98.6%	96.8%	94.4%	93.8%	93.8%	94.0%

Licensee Comments: none

## ERO Drill Participation



Thresholds: White < 80.0% Yellow < 60.0%

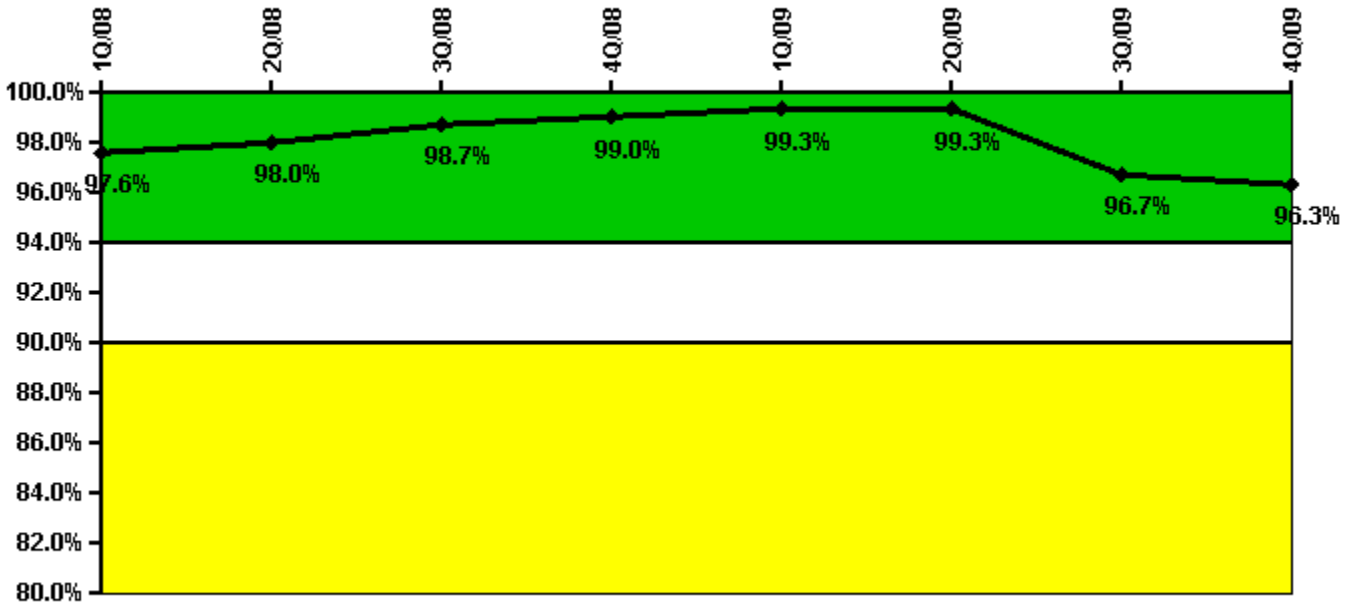
### Notes

ERO Drill Participation	1Q/08	2Q/08	3Q/08	4Q/08	1Q/09	2Q/09	3Q/09	4Q/09
Participating Key personnel	72.0	74.0	72.0	71.0	68.0	69.0	69.0	70.0
Total Key personnel	72.0	74.0	72.0	71.0	68.0	69.0	69.0	70.0
Indicator value	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Licensee Comments: none

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# Alert & Notification System



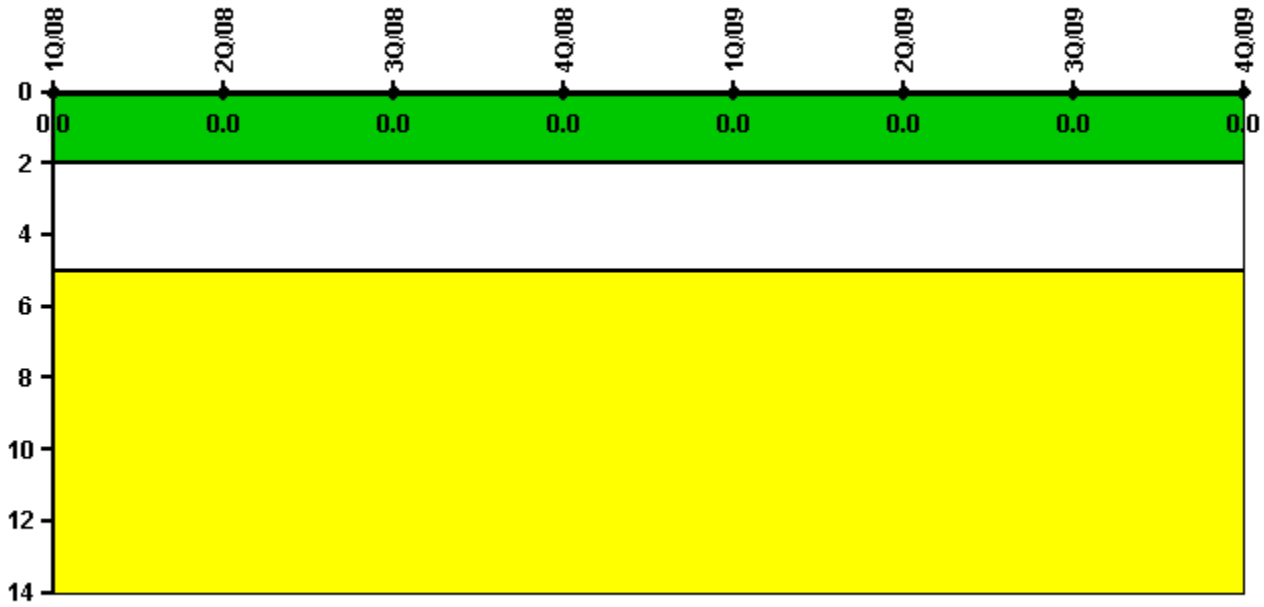
Thresholds: White < 94.0% Yellow < 90.0%

## Notes

Alert & Notification System	1Q/08	2Q/08	3Q/08	4Q/08	1Q/09	2Q/09	3Q/09	4Q/09
Successful siren-tests	883	777	994	786	532	603	531	602
Total sirens-tests	896	784	1008	788	532	608	608	608
Indicator value	97.6%	98.0%	98.7%	99.0%	99.3%	99.3%	96.7%	96.3%

Licensee Comments: none

# Occupational Exposure Control Effectiveness



**Thresholds: White > 2.0 Yellow > 5.0**

## Notes

Occupational Exposure Control Effectiveness	1Q/08	2Q/08	3Q/08	4Q/08	1Q/09	2Q/09	3Q/09	4Q/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
<b>Indicator value</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

Licensee Comments: none

## RETS/ODCM Radiological Effluent



Thresholds: White > 1.0 Yellow > 3.0

### Notes

RETS/ODCM Radiological Effluent	1Q/08	2Q/08	3Q/08	4Q/08	1Q/09	2Q/09	3Q/09	4Q/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.