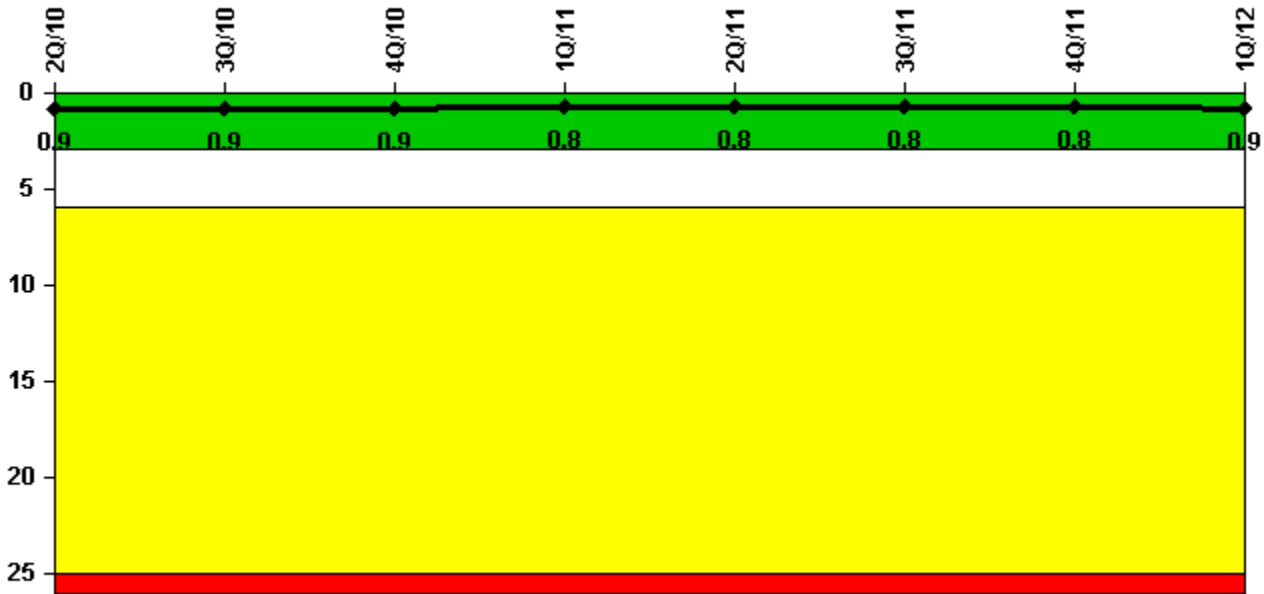


# Limerick 1

## 1Q/2012 Performance Indicators

Licensee's General Comments: none

### Unplanned Scrams per 7000 Critical Hrs



Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

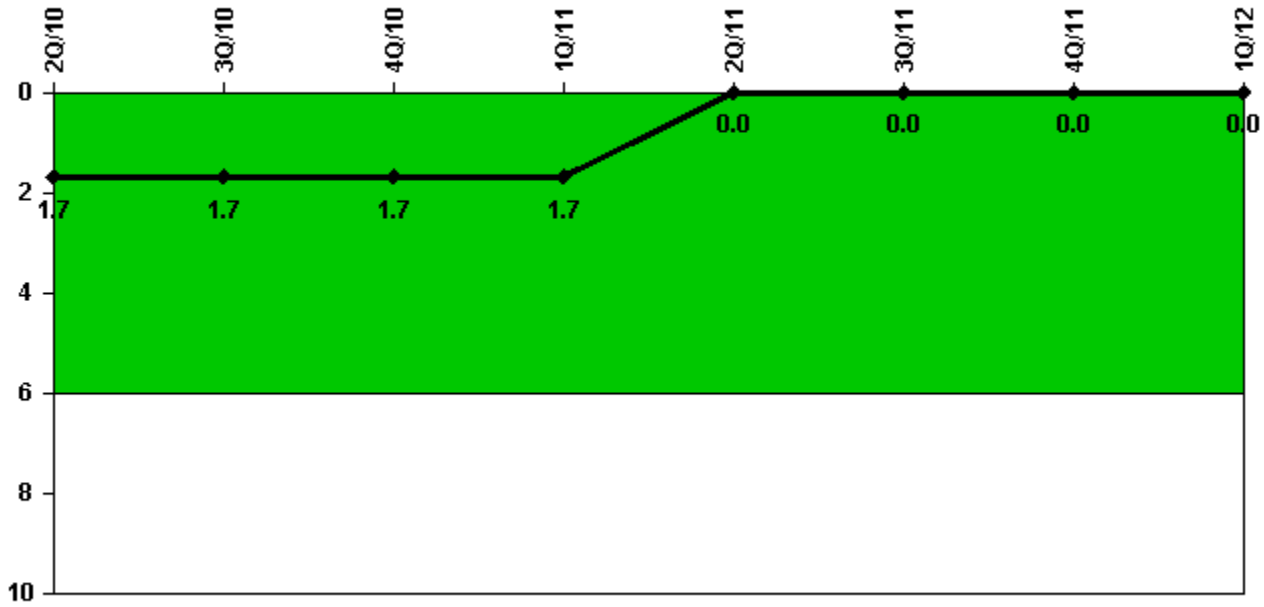
### Notes

Unplanned Scrams per 7000 Critical Hrs	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11	1Q/12
Unplanned scrams	1.0	0	0	0	1.0	0	0	0
Critical hours	1848.6	2208.0	2209.0	2159.0	2142.8	2208.0	2018.1	1463.3
Indicator value	0.9	0.9	0.9	0.8	0.8	0.8	0.8	0.9

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	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11	1Q/12
Unplanned power changes	2.0	0	0	0	0	0	0	0
Critical hours	1848.6	2208.0	2209.0	2159.0	2142.8	2208.0	2018.1	1463.3
Indicator value	1.7	1.7	1.7	1.7	0	0	0	0

Licensee Comments: none

# Unplanned Scrams with Complications



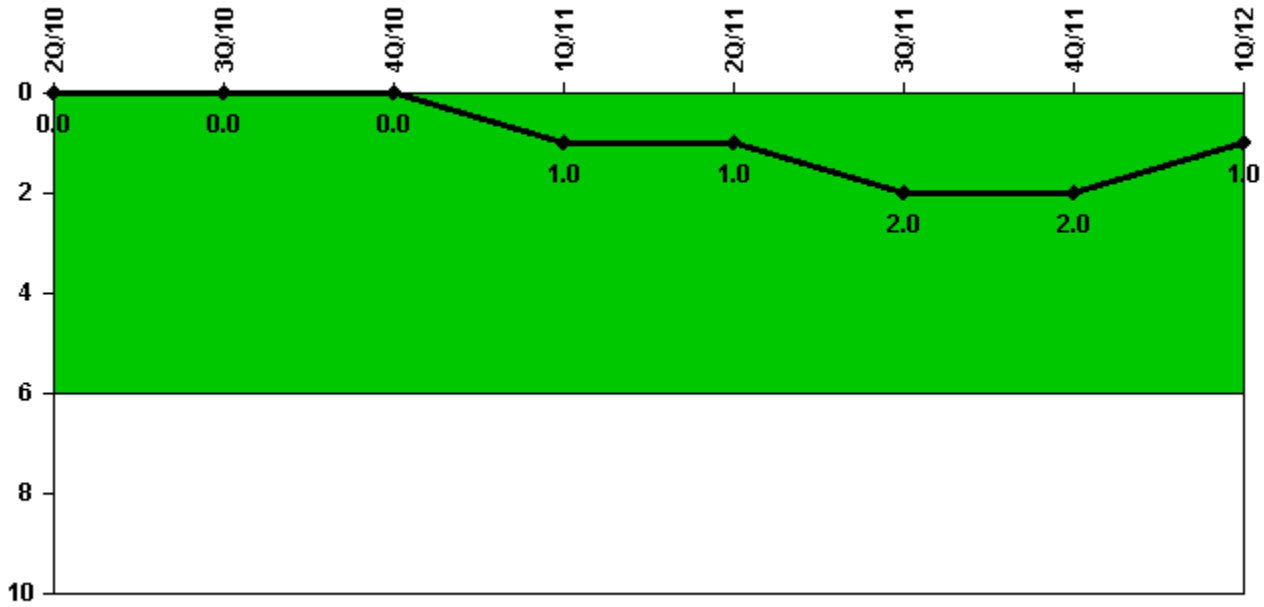
Thresholds: White > 1.0

## Notes

Unplanned Scrams with Complications	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11	1Q/12
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

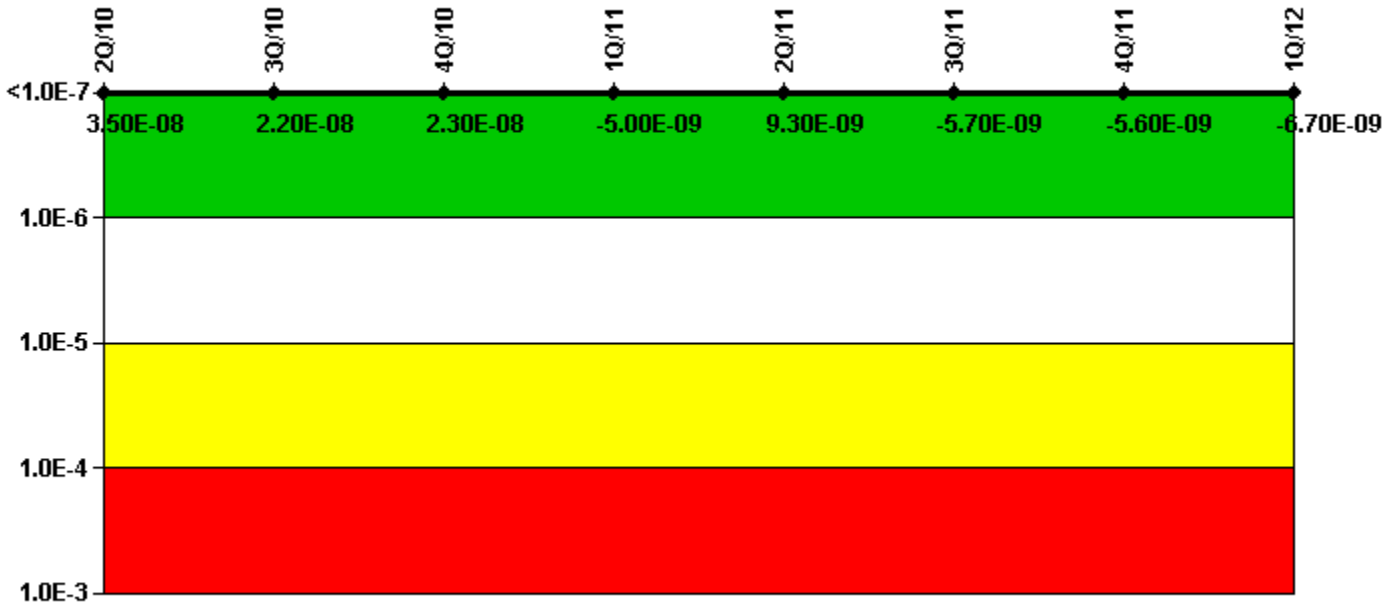
Safety System Functional Failures (BWR)	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11	1Q/12
Safety System Functional Failures	0	0	0	1	0	1	0	0
Indicator value	0	0	0	1	1	2	2	1

Licensee Comments:

3Q/11: LER 2011-003-00, High Pressure Coolant Injection System Turbine Control Valve failed to Fully Close After testing, Limerick Unit 1 issued 8/22/11.

1Q/11: LER 2010-002-00 issued 2/10/11 for Unit 1 HPCI Overspeed Test Trip Mechanism Failure. event date 12/12/10. This event does not result in any threshold or color change to the indicator.

# Mitigating Systems Performance Index, Emergency AC Power System



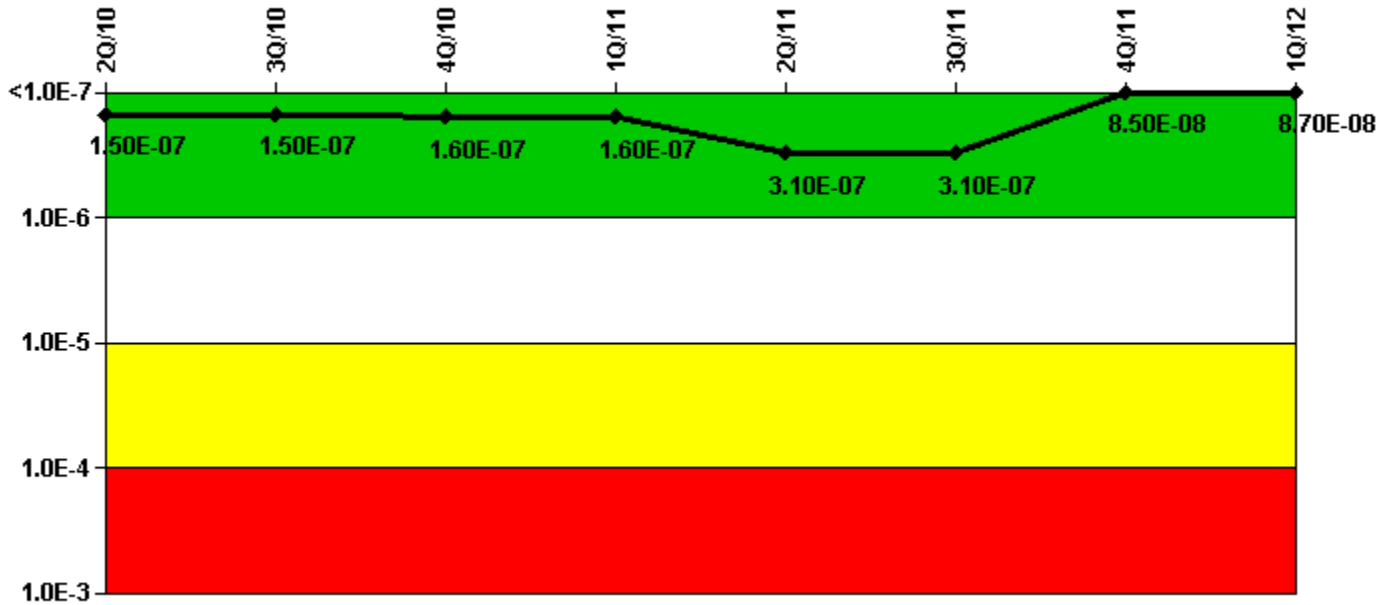
Thresholds: White > 1.00E-6 Yellow > 1.00E-5 Red > 1.00E-4

## Notes

Mitigating Systems Performance Index, Emergency AC Power System	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11	1Q/12
UAI ( $\Delta$ CDF)	5.71E-10	2.91E-09	3.18E-09	2.92E-09	2.21E-09	1.86E-09	8.48E-10	-1.66E-10
URI ( $\Delta$ CDF)	3.46E-08	1.88E-08	1.95E-08	-7.94E-09	7.10E-09	-7.58E-09	-6.45E-09	-6.58E-09
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	3.50E-08	2.20E-08	2.30E-08	-5.00E-09	9.30E-09	-5.70E-09	-5.60E-09	-6.70E-09

Licensee Comments: none

# Mitigating Systems Performance Index, High Pressure Injection System



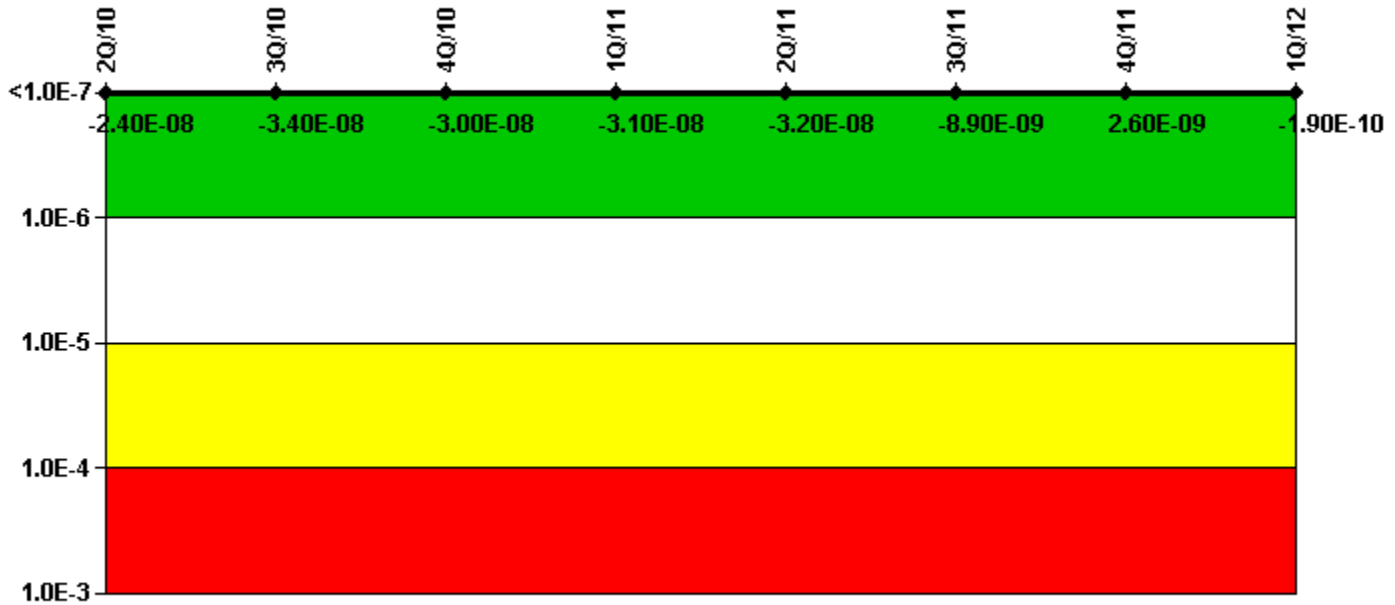
Thresholds: White > 1.00E-6 Yellow > 1.00E-5 Red > 1.00E-4

## Notes

Mitigating Systems Performance Index, High Pressure Injection System	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11	1Q/12
UAI ( $\Delta$ CDF)	-3.15E-08	-3.15E-08	-2.36E-08	-2.38E-08	2.44E-08	2.44E-08	2.26E-08	2.42E-08
URI ( $\Delta$ CDF)	1.81E-07	1.81E-07	1.81E-07	1.81E-07	2.90E-07	2.90E-07	6.26E-08	6.25E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	1.50E-07	1.50E-07	1.60E-07	1.60E-07	3.10E-07	3.10E-07	8.50E-08	8.70E-08

Licensee Comments: none

# Mitigating Systems Performance Index, Heat Removal System



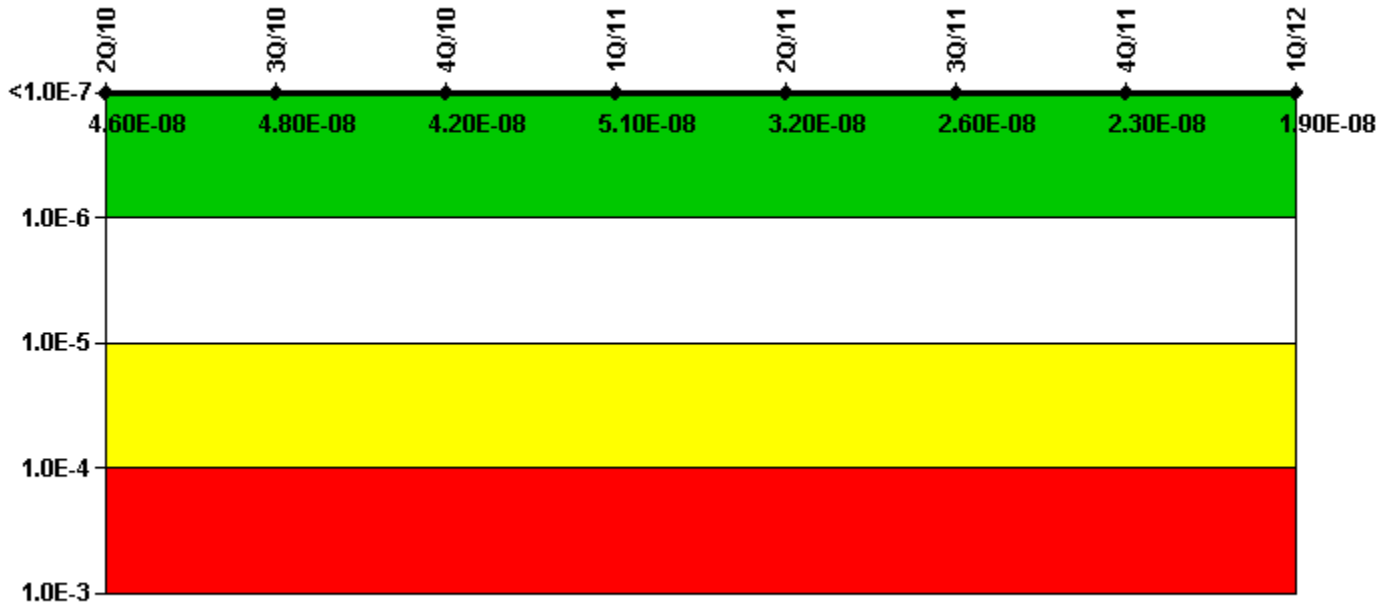
Thresholds: White > 1.00E-6 Yellow > 1.00E-5 Red > 1.00E-4

## Notes

Mitigating Systems Performance Index, Heat Removal System	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11	1Q/12
UAI ( $\Delta$ CDF)	3.73E-09	-6.17E-09	-3.13E-09	-3.78E-09	-4.17E-09	1.85E-08	3.00E-08	2.72E-08
URI ( $\Delta$ CDF)	-2.73E-08	-2.73E-08	-2.73E-08	-2.73E-08	-2.73E-08	-2.73E-08	-2.73E-08	-2.73E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	-2.40E-08	-3.40E-08	-3.00E-08	-3.10E-08	-3.20E-08	-8.90E-09	2.60E-09	-1.90E-10

Licensee Comments: none

# Mitigating Systems Performance Index, Residual Heat Removal System



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

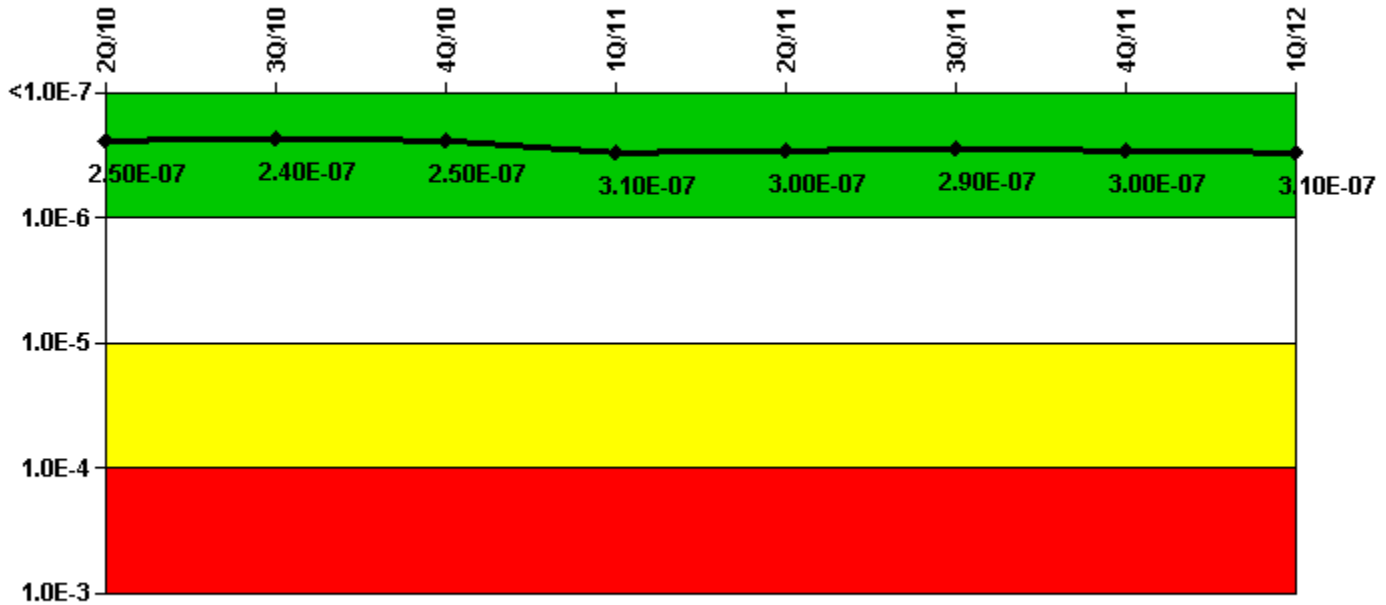
## Notes

Mitigating Systems Performance Index, Residual Heat Removal System	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11	1Q/12
UAI ( $\Delta$ CDF)	4.75E-08	4.93E-08	4.38E-08	5.24E-08	3.36E-08	2.71E-08	2.47E-08	2.06E-08
URI ( $\Delta$ CDF)	-1.35E-09	-1.36E-09	-1.36E-09	-1.16E-09	-1.13E-09	-1.11E-09	-1.76E-09	-1.99E-09
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	4.60E-08	4.80E-08	4.20E-08	5.10E-08	3.20E-08	2.60E-08	2.30E-08	1.90E-08

Licensee Comments: none



# Mitigating Systems Performance Index, Cooling Water Systems



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

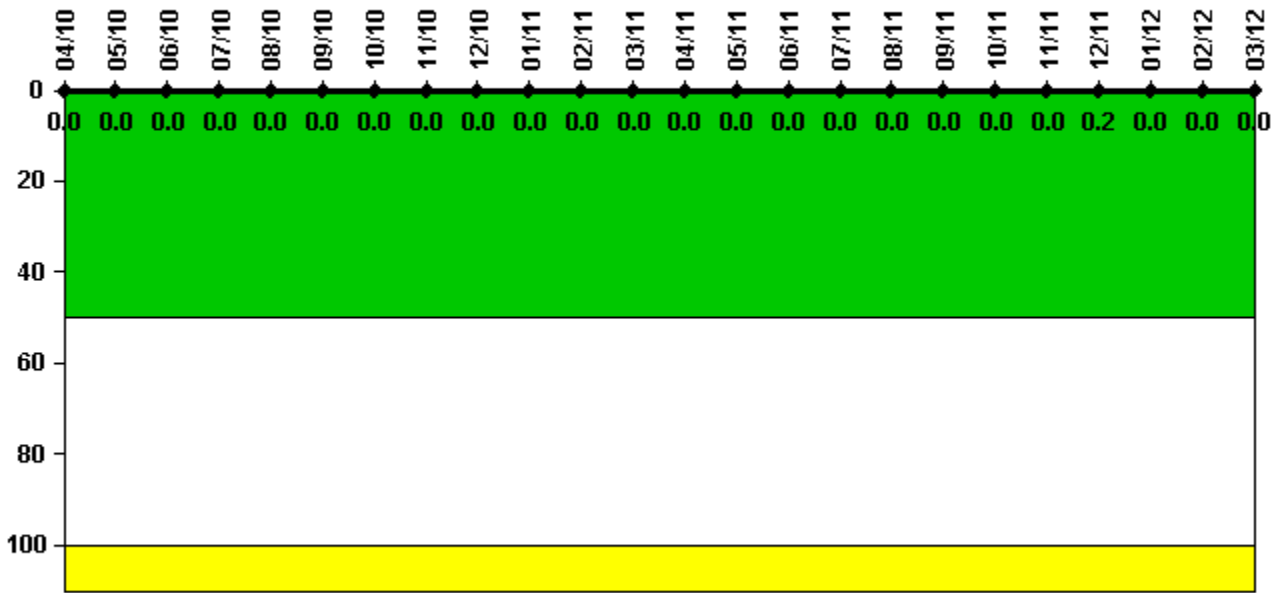
## Notes

Mitigating Systems Performance Index, Cooling Water Systems	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11	1Q/12
UAI (ΔCDF)	2.77E-07	2.64E-07	2.74E-07	3.36E-07	3.34E-07	3.23E-07	3.31E-07	3.41E-07
URI (ΔCDF)	-2.67E-08	-2.80E-08	-2.86E-08	-2.82E-08	-2.85E-08	-2.92E-08	-3.01E-08	-3.06E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	2.50E-07	2.40E-07	2.50E-07	3.10E-07	3.00E-07	2.90E-07	3.00E-07	3.10E-07

## Licensee Comments:

1Q/12: LGS MSPI Basis Document revision 4 was effective on 01/01/12. This was approved and issued on 12/15/11. This revision incorporated FAQs 11-01 (CW), 11-06, 11-07, 11-08 (EDGs) and other minor changes. No PRA data or factors were changed and there was no impact to historical PI data.

# Reactor Coolant System Activity



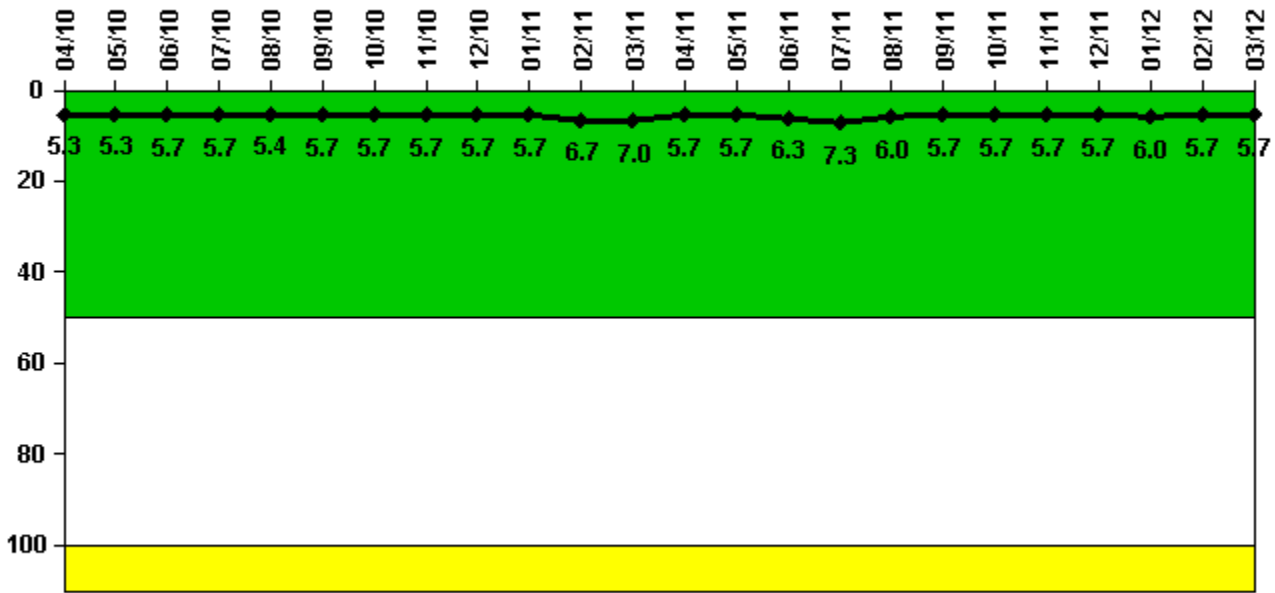
Thresholds: White > 50.0 Yellow > 100.0

## Notes

<b>Reactor Coolant System Activity</b>	4/10	5/10	6/10	7/10	8/10	9/10	10/10	11/10	12/10	1/11	2/11	3/11
Maximum activity	0.000002	0.000002	0.000005	0.000003	0.000003	0.000002	0.000002	0.000003	0.000003	0.000003	0.000003	0.000006
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
<b>Reactor Coolant System Activity</b>	4/11	5/11	6/11	7/11	8/11	9/11	10/11	11/11	12/11	1/12	2/12	3/12
Maximum activity	0.000002	0.000003	0.000020	0.000005	0.000004	0.000003	0.000003	0.000003	0.000311	0.000008	0.000004	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	0	0	0	0	0	0.2	0	0	0

Licensee Comments: none

## Reactor Coolant System Leakage



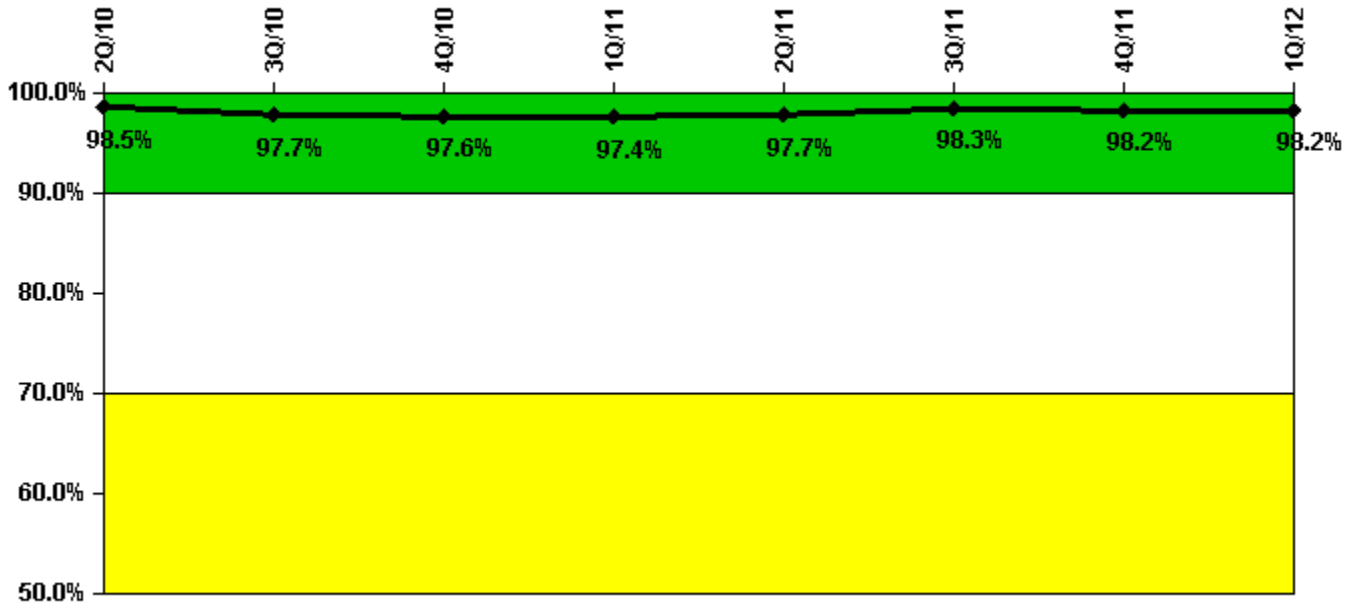
Thresholds: White > 50.0 Yellow > 100.0

### Notes

<b>Reactor Coolant System Leakage</b>	<b>4/10</b>	<b>5/10</b>	<b>6/10</b>	<b>7/10</b>	<b>8/10</b>	<b>9/10</b>	<b>10/10</b>	<b>11/10</b>	<b>12/10</b>	<b>1/11</b>	<b>2/11</b>	<b>3/11</b>
Maximum leakage	1.600	1.600	1.700	1.700	1.630	1.700	1.700	1.700	1.700	1.700	2.000	2.100
Technical specification limit	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0
Indicator value	5.3	5.3	5.7	5.7	5.4	5.7	5.7	5.7	5.7	5.7	6.7	7.0
<b>Reactor Coolant System Leakage</b>	<b>4/11</b>	<b>5/11</b>	<b>6/11</b>	<b>7/11</b>	<b>8/11</b>	<b>9/11</b>	<b>10/11</b>	<b>11/11</b>	<b>12/11</b>	<b>1/12</b>	<b>2/12</b>	<b>3/12</b>
Maximum leakage	1.700	1.700	1.900	2.200	1.800	1.700	1.700	1.700	1.700	1.800	1.700	1.700
Technical specification limit	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0
Indicator value	5.7	5.7	6.3	7.3	6.0	5.7	5.7	5.7	5.7	6.0	5.7	5.7

Licensee Comments: none

## Drill/Exercise Performance



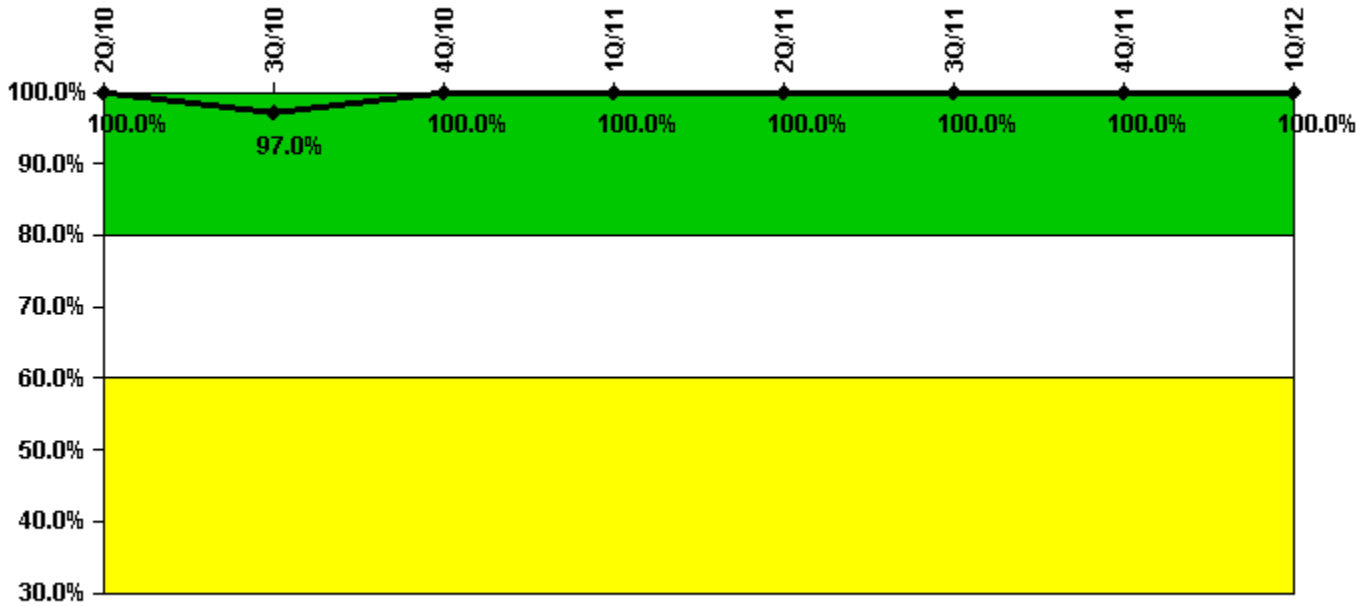
Thresholds: White < 90.0% Yellow < 70.0%

### Notes

Drill/Exercise Performance	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11	1Q/12
Successful opportunities	23.0	59.0	43.0	66.0	20.0	112.0	56.0	0
Total opportunities	24.0	61.0	43.0	68.0	20.0	113.0	57.0	0
Indicator value	98.5%	97.7%	97.6%	97.4%	97.7%	98.3%	98.2%	98.2%

Licensee Comments: none

## ERO Drill Participation



Thresholds: White < 80.0% Yellow < 60.0%

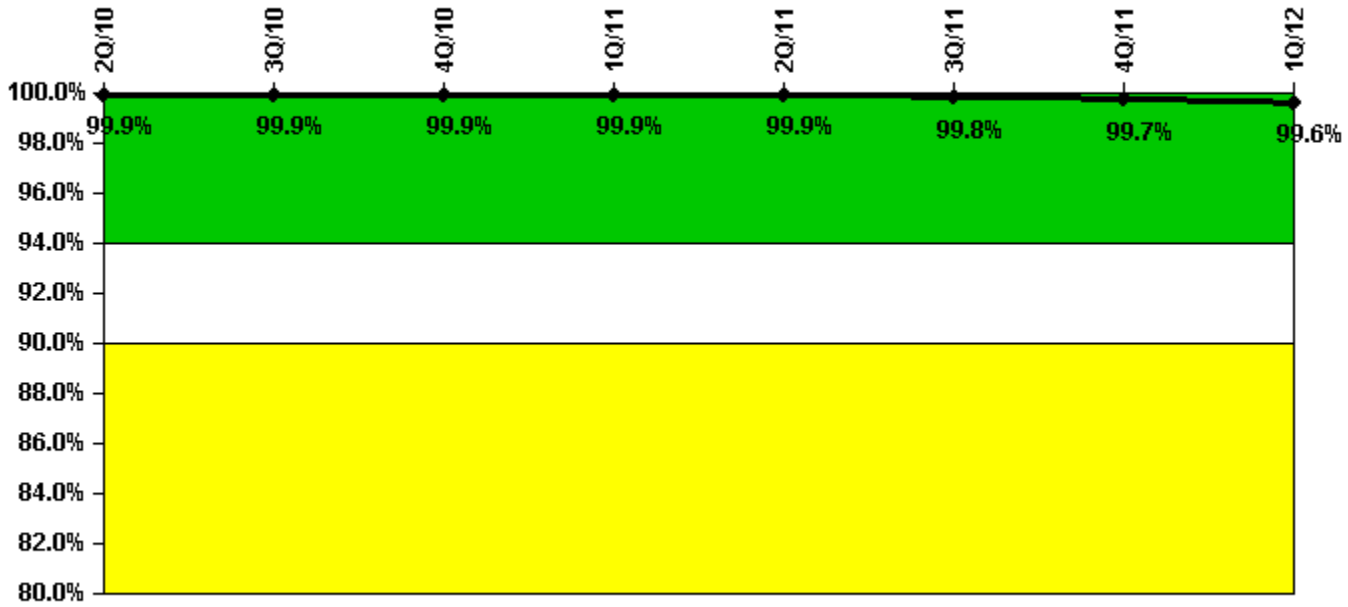
### Notes

ERO Drill Participation	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11	1Q/12
Participating Key personnel	65.0	64.0	65.0	65.0	64.0	63.0	65.0	64.0
Total Key personnel	65.0	66.0	65.0	65.0	64.0	63.0	65.0	64.0
Indicator value	100.0%	97.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Licensee Comments:

3Q/10: One Key ERO participant was not previously counted in Aug totals due to an error. The August and September data was revised from a total of 65 to 66 participants. The PI threshold was not impacted

# Alert & Notification System



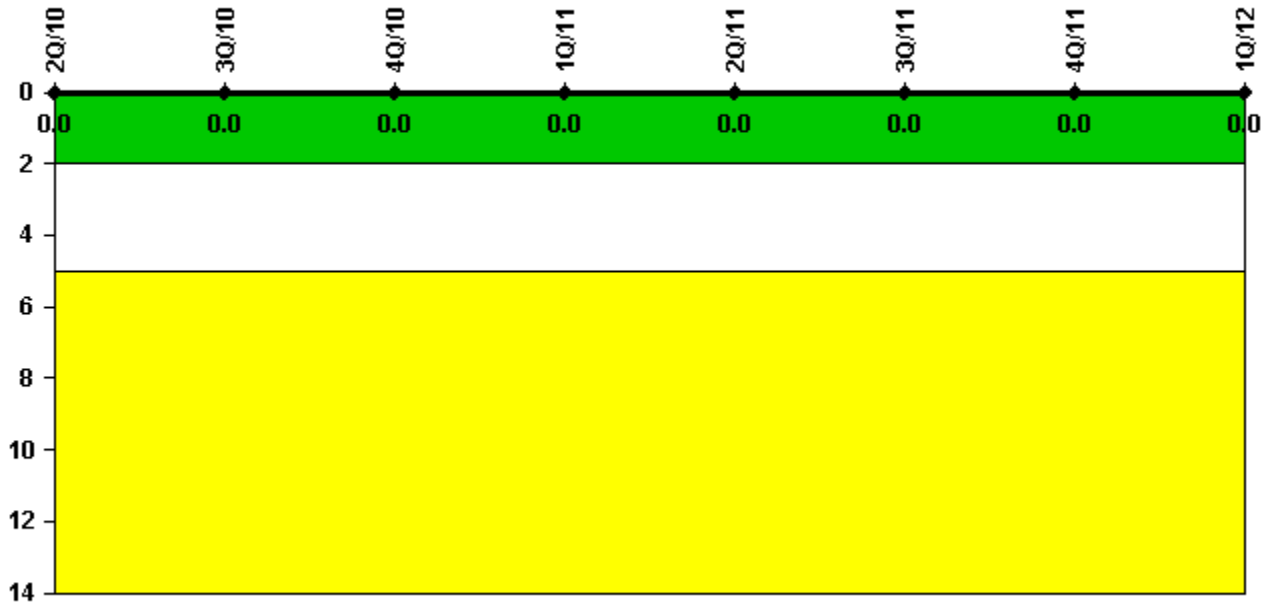
Thresholds: White < 94.0% Yellow < 90.0%

## Notes

Alert & Notification System	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11	1Q/12
Successful siren-tests	2140	2144	2143	2144	2144	2136	2128	2141
Total sirens-tests	2145	2145	2145	2145	2145	2145	2145	2145
Indicator value	99.9%	99.9%	99.9%	99.9%	99.9%	99.8%	99.7%	99.6%

Licensee Comments: none

## Occupational Exposure Control Effectiveness



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

### Notes

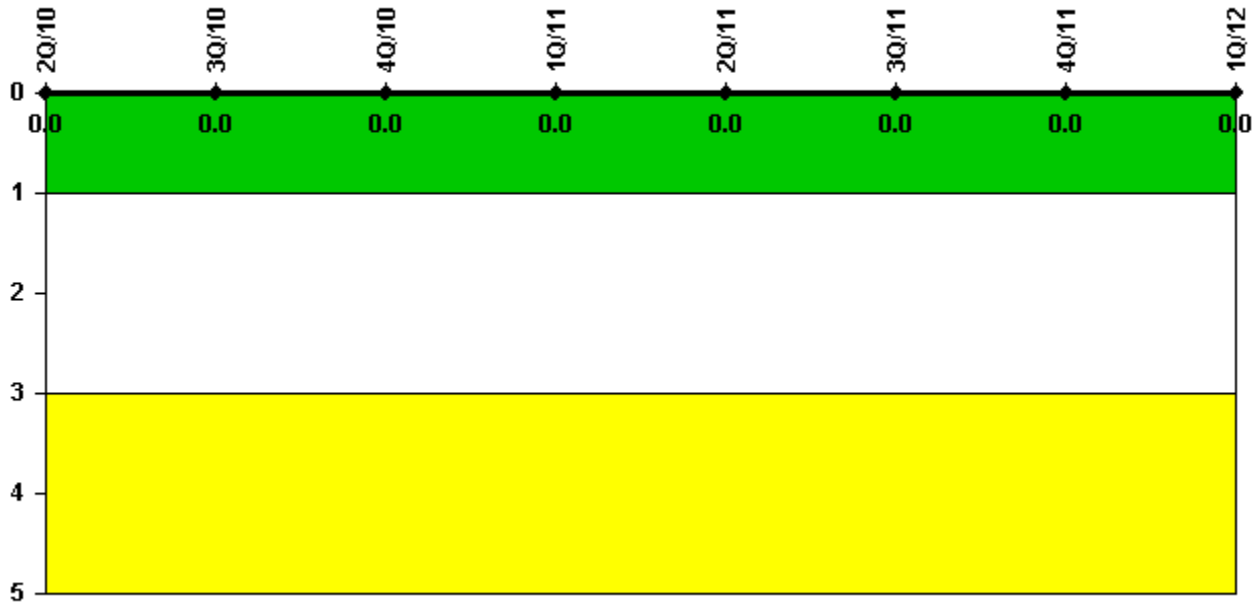
Occupational Exposure Control Effectiveness	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11	1Q/12
High radiation area occurrences	0	0	0	0	0	0	0	0
Very high radiation area occurrences	0	0	0	0	0	0	0	0
Unintended exposure occurrences	0	0	0	0	0	0	0	0
<b>Indicator value</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

Licensee Comments:

2Q/11: The NRC has determined that the event was not a performance indicator occurrence during the Limerick Radiation Instruments inspection from December 12-16, 2011. There is no Color Change associated with this event.

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# RETS/ODCM Radiological Effluent



Thresholds: White > 1.0 Yellow > 3.0

## Notes

RETS/ODCM Radiological Effluent	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11	1Q/12
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.