

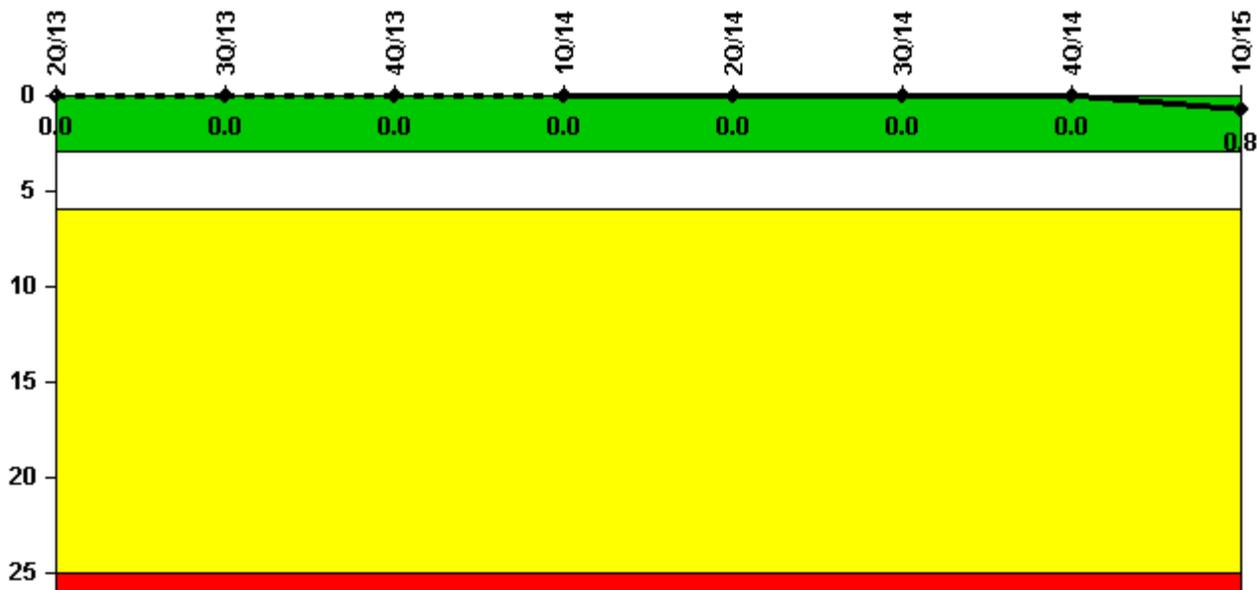
# Sequoyah 1

## 1Q/2015 Performance Indicators

The solid trend line represents the current reporting period.

Licensee's General Comments: none

### Unplanned Scrams per 7000 Critical Hrs



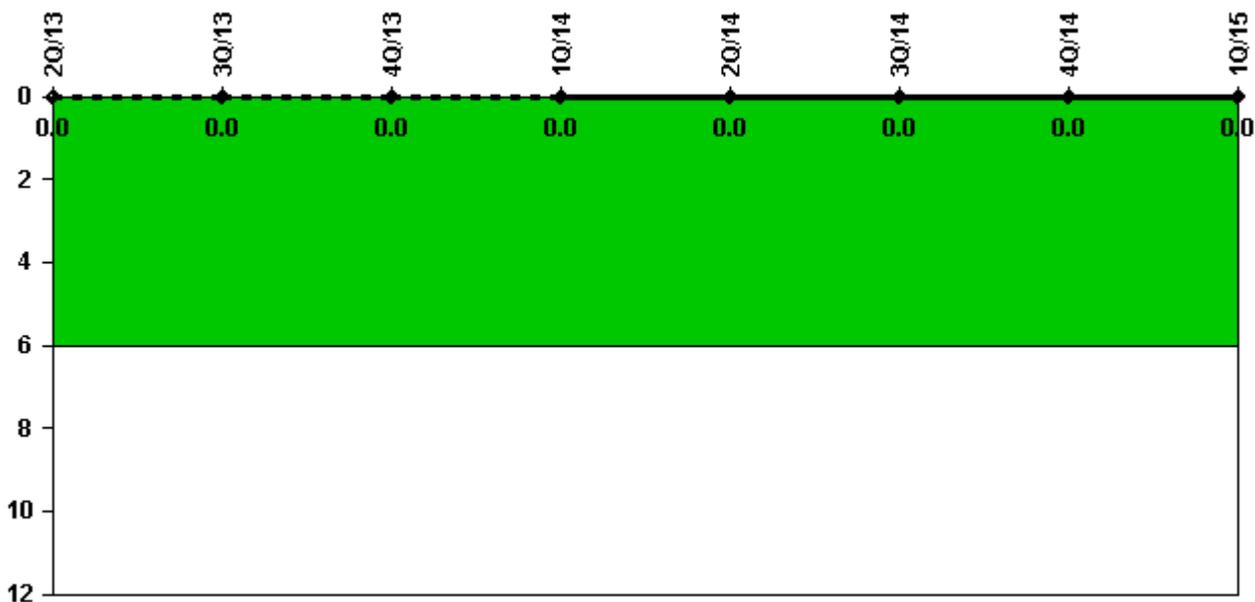
Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

### Notes

Unplanned Scrams per 7000 Critical Hrs	2Q/13	3Q/13	4Q/13	1Q/14	2Q/14	3Q/14	4Q/14	1Q/15
Unplanned scrams	0	0	0	0	0	0	0	1.0
Critical hours	2184.0	2208.0	1304.9	2159.0	2184.0	2208.0	2209.0	2086.6
Indicator value	0	0	0	0	0	0	0	0.8

Licensee Comments: none

### Unplanned Power Changes per 7000 Critical Hrs



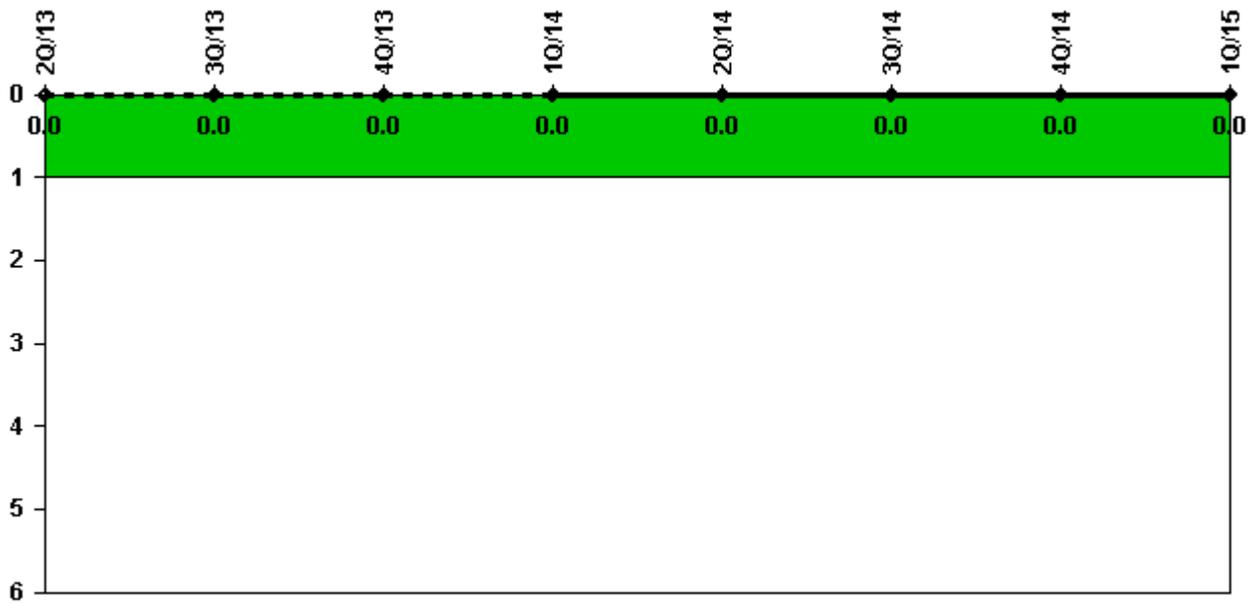
Thresholds: White > 6.0

#### Notes

Unplanned Power Changes per 7000 Critical Hrs	2Q/13	3Q/13	4Q/13	1Q/14	2Q/14	3Q/14	4Q/14	1Q/15
Unplanned power changes	0	0	0	0	0	0	0	0
Critical hours	2184.0	2208.0	1304.9	2159.0	2184.0	2208.0	2209.0	2086.6
<b>Indicator value</b>	<b>0</b>							

Licensee Comments: none

### Unplanned Scrams with Complications



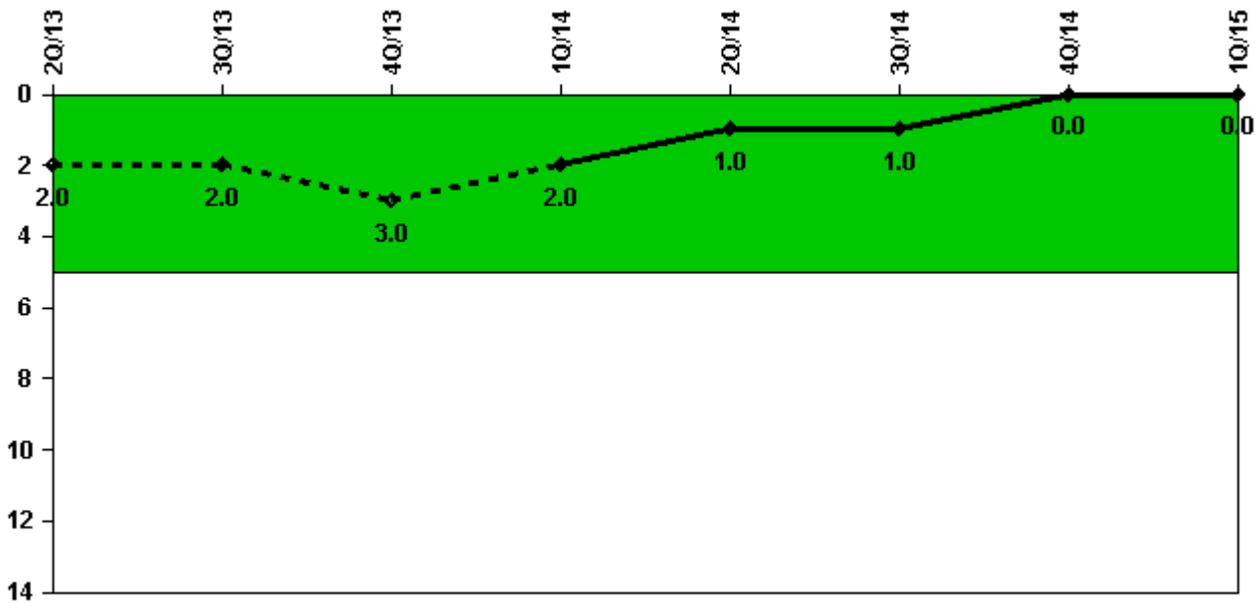
Thresholds: White > 1.0

#### Notes

Unplanned Scrams with Complications	2Q/13	3Q/13	4Q/13	1Q/14	2Q/14	3Q/14	4Q/14	1Q/15
Scrams with complications	0	0	0	0	0	0	0	0
<b>Indicator value</b>	<b>0.0</b>							

Licensee Comments: none

### Safety System Functional Failures (PWR)



Thresholds: White > 5.0

#### Notes

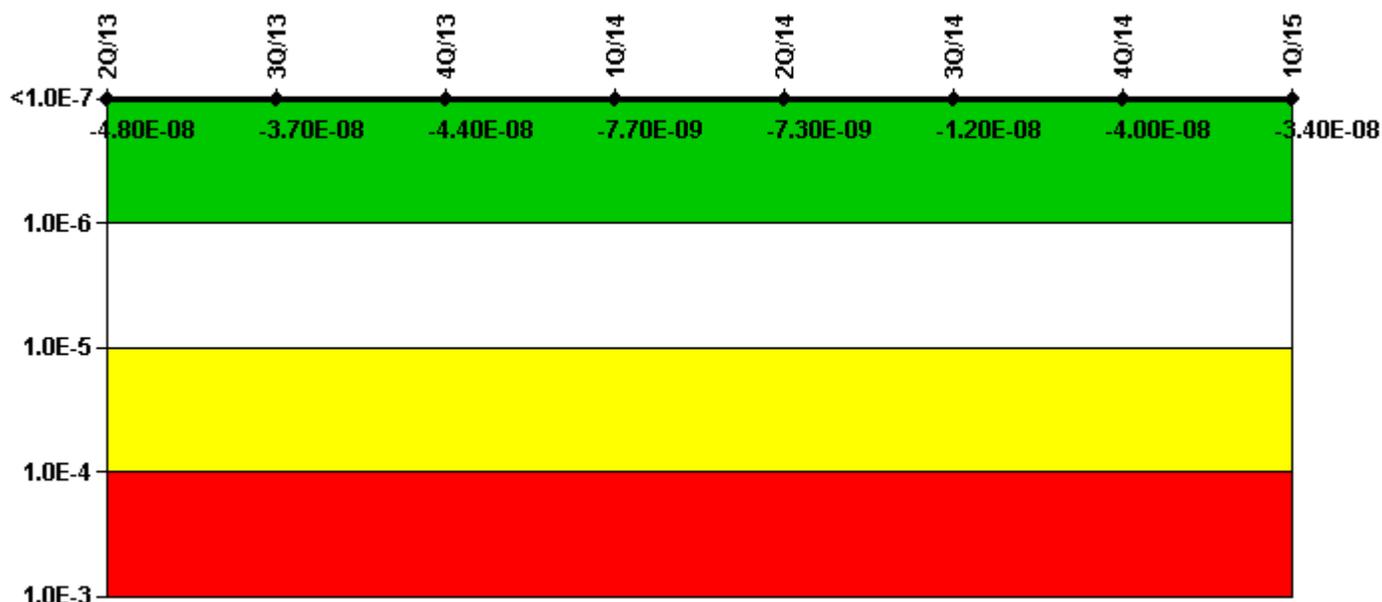
Safety System Functional Failures (PWR)	2Q/13	3Q/13	4Q/13	1Q/14	2Q/14	3Q/14	4Q/14	1Q/15
Safety System Functional Failures	1	0	1	0	0	0	0	0
<b>Indicator value</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>

Licensee Comments:

4Q/13: 03/27/2014 LER 1-2013-004-01 - Revised LER indicates safety system functional failure did not occur. Affected 4th Qtr 2013 and 1st Qtr 2014. No change to indicator color.

2Q/13: LER 327/328/2013-001-00

### Mitigating Systems Performance Index, Emergency AC Power System



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

#### Notes

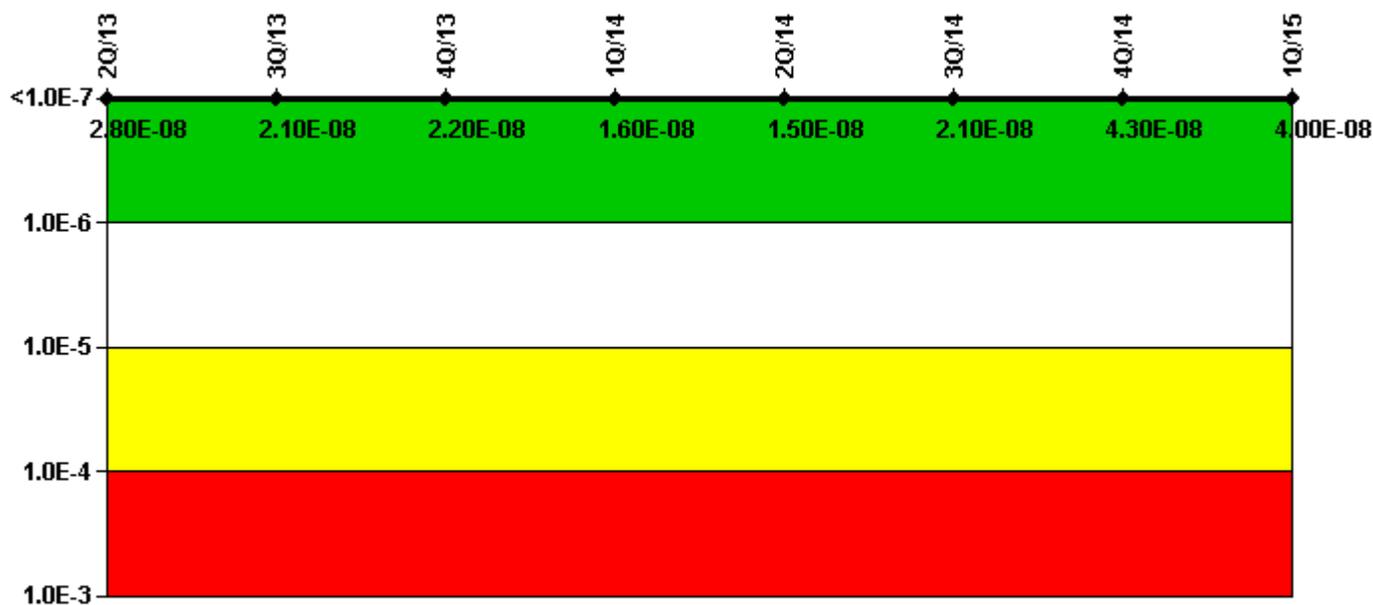
Mitigating Systems Performance Index, Emergency AC Power System	2Q/13	3Q/13	4Q/13	1Q/14	2Q/14	3Q/14	4Q/14	1Q/15
UAI (ΔCDF)	8.19E-08	9.71E-08	9.27E-08	1.26E-08	1.16E-08	7.89E-09	3.63E-09	8.49E-09
URI (ΔCDF)	-1.29E-07	-1.34E-07	-1.36E-07	-2.03E-08	-1.89E-08	-1.96E-08	-4.33E-08	-4.30E-08
PLE	NO							
Indicator value	-4.80E-08	-3.70E-08	-4.40E-08	-7.70E-09	-7.30E-09	-1.20E-08	-4.00E-08	-3.40E-08

#### Licensee Comments:

4Q/14: Changed PRA Parameter(s). The Sequoyah U1 and U2 PRA model Revision 3 was issued on August 5, 2014 with corresponding Revision 9 of MSPI Basis Document issued on 1-6-2015. The PRA model revision was periodic update to the model which made corrections to the Containment, CVCS, Electric Power (6900V, 480V 250V and Below, and Diesel Generators), ERCW, PORVs and Safeties, RCP Seals and Thermal Barrier, RPS and SI system models. As a result of the PRA model change, the CDF, Fussel-Vesely and Basic Event Probabilities for all monitored trains and components were revised

1Q/14: Changed PRA Parameter(s). The PRA Model of Record was revised 12/31/13, updating the PRA model using the CAFTA program. The base numbers used in the MSPI database were also updated in accordance with NEI 99-02. As a result of the PRA model change, the CDF, Fussel-Vesely and Basic Event Probabilities for all monitored trains and components were revised.

### Mitigating Systems Performance Index, High Pressure Injection System



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

#### Notes

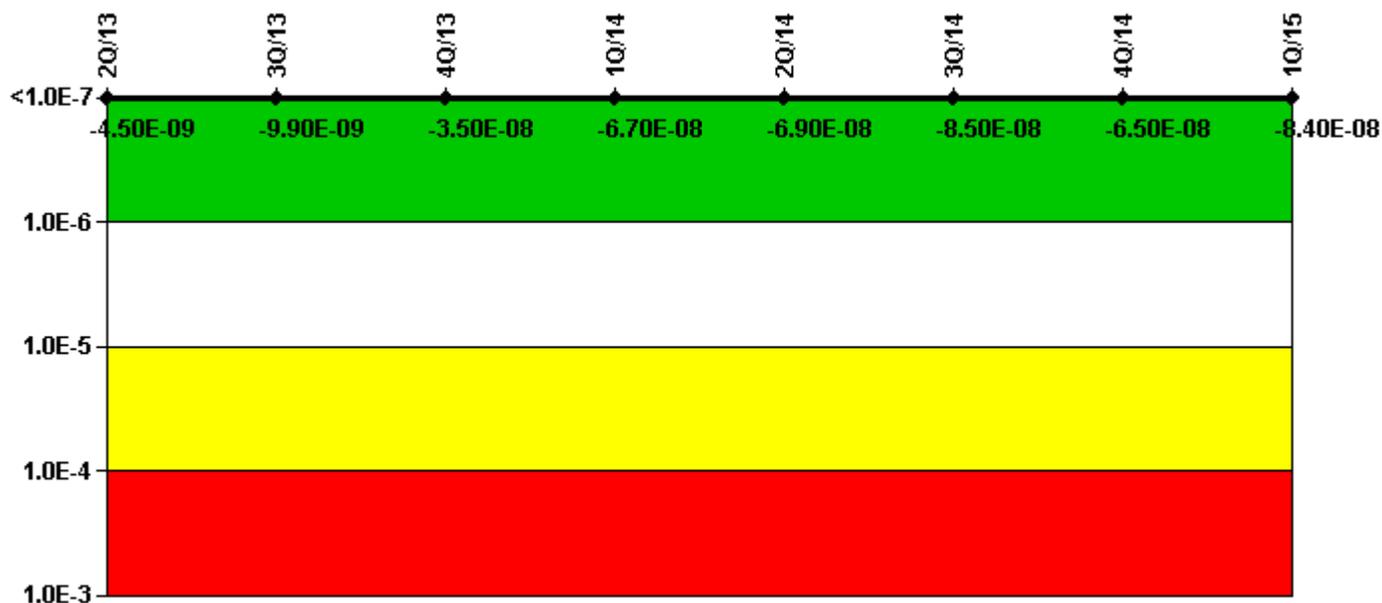
Mitigating Systems Performance Index, High Pressure Injection System	2Q/13	3Q/13	4Q/13	1Q/14	2Q/14	3Q/14	4Q/14	1Q/15
UAI ( $\Delta$ CDF)	2.86E-08	2.17E-08	2.22E-08	1.68E-08	1.51E-08	1.86E-08	3.61E-08	3.30E-08
URI ( $\Delta$ CDF)	-6.34E-10	-6.35E-10	-6.36E-10	-4.76E-10	-4.77E-10	1.99E-09	7.22E-09	7.22E-09
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	2.80E-08	2.10E-08	2.20E-08	1.60E-08	1.50E-08	2.10E-08	4.30E-08	4.00E-08

#### Licensee Comments:

4Q/14: Changed PRA Parameter(s). The Sequoyah U1 and U2 PRA model Revision 3 was issued on August 5, 2014 with corresponding Revision 9 of MSPI Basis Document issued on 1-6-2015. The PRA model revision was periodic update to the model which made corrections to the Containment, CVCS, Electric Power (6900V, 480V 250V and Below, and Diesel Generators), ERCW, PORVs and Safeties, RCP Seals and Thermal Barrier, RPS and SI system models. As a result of the PRA model change, the CDF, Fussel-Vesely and Basic Event Probabilities for all monitored trains and components were revised

1Q/14: Changed PRA Parameter(s). The PRA Model of Record was revised 12/31/13, updating the PRA model using the CAFTA program. The base numbers used in the MSPI database were also updated in accordance with NEI 99-02. As a result of the PRA model change, the CDF, Fussel-Vesely and Basic Event Probabilities for all monitored trains and components were revised.

### 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/13	3Q/13	4Q/13	1Q/14	2Q/14	3Q/14	4Q/14	1Q/15
UAI ( $\Delta$ CDF)	1.28E-07	1.22E-07	9.26E-08	8.77E-08	8.39E-08	6.29E-08	2.37E-08	6.79E-09
URI ( $\Delta$ CDF)	-1.32E-07	-1.32E-07	-1.27E-07	-1.55E-07	-1.53E-07	-1.48E-07	-8.91E-08	-9.08E-08
PLE	NO							
Indicator value	-4.50E-09	-9.90E-09	-3.50E-08	-6.70E-08	-6.90E-08	-8.50E-08	-6.50E-08	-8.40E-08

#### Licensee Comments:

4Q/14: Changed PRA Parameter(s). The Sequoyah U1 and U2 PRA model Revision 3 was issued on August 5, 2014 with corresponding Revision 9 of MSPI Basis Document issued on 1-6-2015. The PRA model revision was periodic update to the model which made corrections to the Containment, CVCS, Electric Power (6900V, 480V 250V and Below, and Diesel Generators), ERCW, PORVs and Safeties, RCP Seals and Thermal Barrier, RPS and SI system models. As a result of the PRA model change, the CDF, Fussel-Vesely and Basic Event Probabilities for all monitored trains and components were revised

2Q/14: Note in 1B (2) Removed 1:46 hours. Unavailability was previously counted against AFW due to one train of Auxiliary Compressed Air being out of service. Reference PER 913726 Note in 1A-S (3) Removed 1:46 hours. Unavailability was previously counted against AFW due to one train of Auxiliary Compressed Air being out of

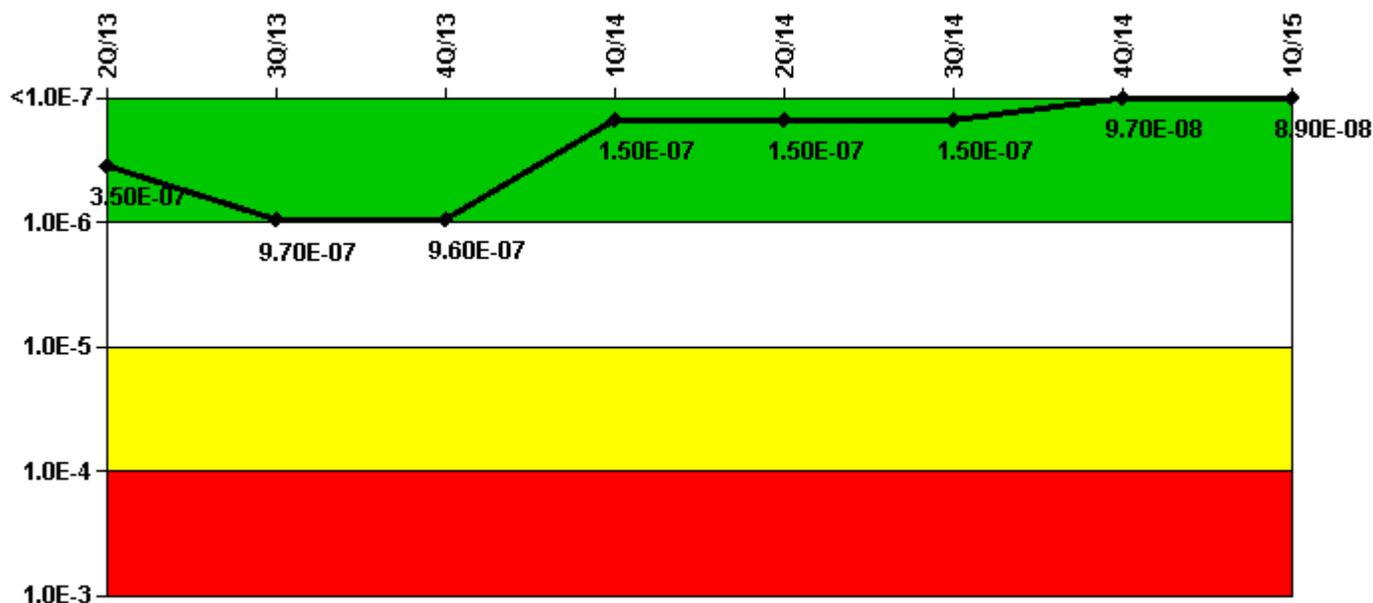
service. Reference PER 913726

1Q/14: The PRA Model of Record was revised 12/31/13, updating the PRA model using the CAFTA program. The base numbers used in the MSPI database were also updated in accordance with NEI 99-02. As a result of the PRA model change, the CDF, Fussel-Vesely and Basic Event Probabilities for all monitored trains and components were revised. Note in 1A (1) Removed 7:57 hours. Unavailability was previously counted against AFW due to one train of Auxiliary Compressed Air being out of service. Reference PER 913726 Note in 1A-S (3) Removed 7:57 hours. Unavailability was previously counted against AFW due to one train of Auxiliary Compressed Air being out of service. Reference PER 913726

1Q/14: Changed PRA Parameter(s). The PRA Model of Record was revised 12/31/13, updating the PRA model using the CAFTA program. The base numbers used in the MSPI database were also updated in accordance with NEI 99-02. As a result of the PRA model change, the CDF, Fussel-Vesely and Basic Event Probabilities for all monitored trains and components were revised.

3Q/13: Note in 1A (1) Removed 0:57 hours. Unavailability was previously counted against AFW due to one train of Auxiliary Compressed Air being out of service. Reference PER 913726 Note in 1A-S (3) Removed 0:57 hours. Unavailability was previously counted against AFW due to one train of Auxiliary Compressed Air being out of service. Reference PER 913726

### 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/13	3Q/13	4Q/13	1Q/14	2Q/14	3Q/14	4Q/14	1Q/15

UAI ( $\Delta$ CDF)	5.65E-07	6.91E-07	6.81E-07	3.59E-08	3.69E-08	3.89E-08	2.86E-08	2.17E-08
URI ( $\Delta$ CDF)	-2.17E-07	2.80E-07	2.77E-07	1.14E-07	1.12E-07	1.09E-07	6.88E-08	6.74E-08
PLE	NO							
<b>Indicator value</b>	<b>3.50E-07</b>	<b>9.70E-07</b>	<b>9.60E-07</b>	<b>1.50E-07</b>	<b>1.50E-07</b>	<b>1.50E-07</b>	<b>9.70E-08</b>	<b>8.90E-08</b>

## Licensee Comments:

4Q/14: Changed PRA Parameter(s). The Sequoyah U1 and U2 PRA model Revision 3 was issued on August 5, 2014 with corresponding Revision 9 of MSPI Basis Document issued on 1-6-2015. The PRA model revision was periodic update to the model which made corrections to the Containment, CVCS, Electric Power (6900V, 480V 250V and Below, and Diesel Generators), ERCW, PORVs and Safeties, RCP Seals and Thermal Barrier, RPS and SI system models. As a result of the PRA model change, the CDF, Fussel-Vesely and Basic Event Probabilities for all monitored trains and components were revised

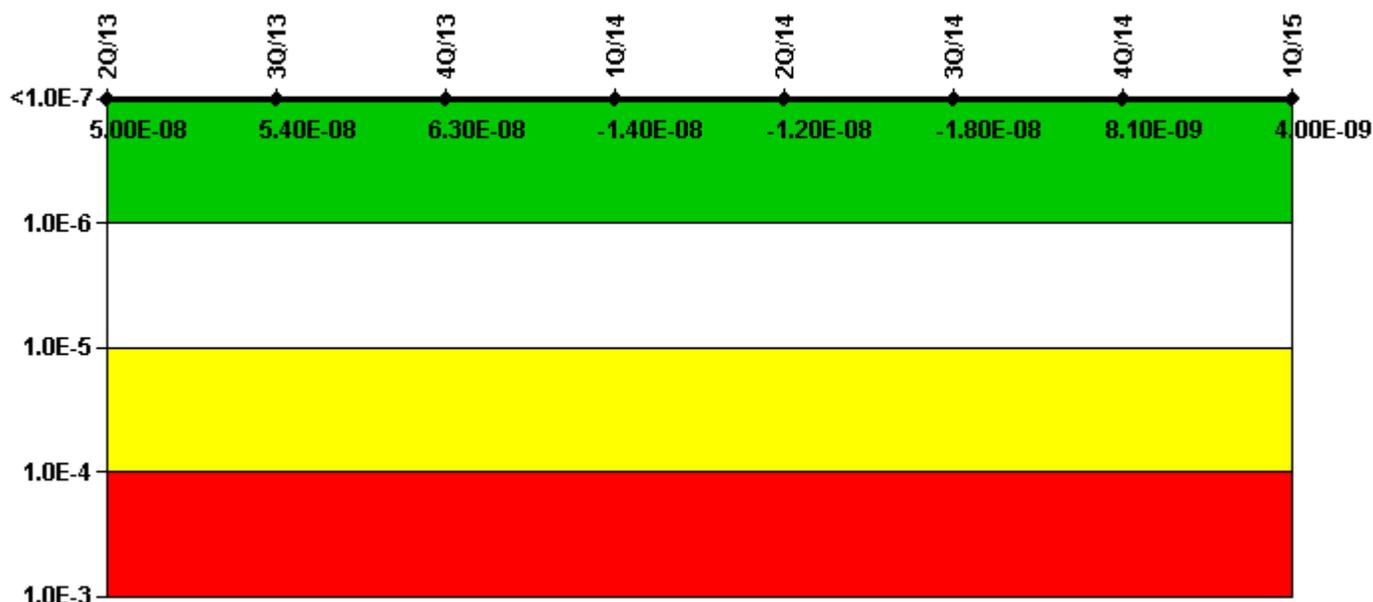
1Q/14: Changed PRA Parameter(s). The PRA Model of Record was revised 12/31/13, updating the PRA model using the CAFTA program. The base numbers used in the MSPI database were also updated in accordance with NEI 99-02. As a result of the PRA model change, the CDF, Fussel-Vesely and Basic Event Probabilities for all monitored trains and components were revised.

4Q/13: Risk Cap Invoked.

3Q/13: Risk Cap Invoked. The failure of 1-FCV-074-0003 to close was determined to be the starting time of this Unplanned Unavailability. The dual indication on 1-FCV-063-0072 was not classified as the initiating time from a MSPI point of view.

2Q/13: Note in 1A (1) Removed 0:01 hours. Unavailability was previously counted against AFW due to one train of Auxiliary Compressed Air being out of service. Reference PER 913726 Note in 1A-S (3) Removed 0:01 hours. Unavailability was previously counted against AFW due to one train of Auxiliary Compressed Air being out of service. Reference PER 913726

### 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/13	3Q/13	4Q/13	1Q/14	2Q/14	3Q/14	4Q/14	1Q/15
UAI ( $\Delta$ CDF)	1.78E-07	1.83E-07	1.91E-07	1.86E-08	1.90E-08	1.34E-08	1.58E-08	1.17E-08
URI ( $\Delta$ CDF)	-1.28E-07	-1.28E-07	-1.28E-07	-3.25E-08	-3.13E-08	-3.13E-08	-7.68E-09	-7.68E-09
PLE	NO							
Indicator value	5.00E-08	5.40E-08	6.30E-08	-1.40E-08	-1.20E-08	-1.80E-08	8.10E-09	4.00E-09

#### Licensee Comments:

4Q/14: Changed PRA Parameter(s). The Sequoyah U1 and U2 PRA model Revision 3 was issued on August 5, 2014 with corresponding Revision 9 of MSPI Basis Document issued on 1-6-2015. The PRA model revision was periodic update to the model which made corrections to the Containment, CVCS, Electric Power (6900V, 480V 250V and Below, and Diesel Generators), ERCW, PORVs and Safeties, RCP Seals and Thermal Barrier, RPS and SI system models. As a result of the PRA model change, the CDF, Fussel-Vesely and Basic Event Probabilities for all monitored trains and components were revised

3Q/14: Changed PRA Parameter(s).

2Q/14: Changed PRA Parameter(s). The planned unavailability baselines for 1 or more ERCW pumps were adjusted as needed to reflect past and current planned maintenance not performed every 3 years or less as specified by NEI 99-02.

1Q/14: Changed PRA Parameter(s). The PRA Model of Record was revised 12/31/13, updating the PRA model using the CAFTA program. The base numbers used in the MSPI database were also updated in accordance with

NEI 99-02. As a result of the PRA model change, the CDF, Fussel-Vesely and Basic Event Probabilities for all monitored trains and components were revised.

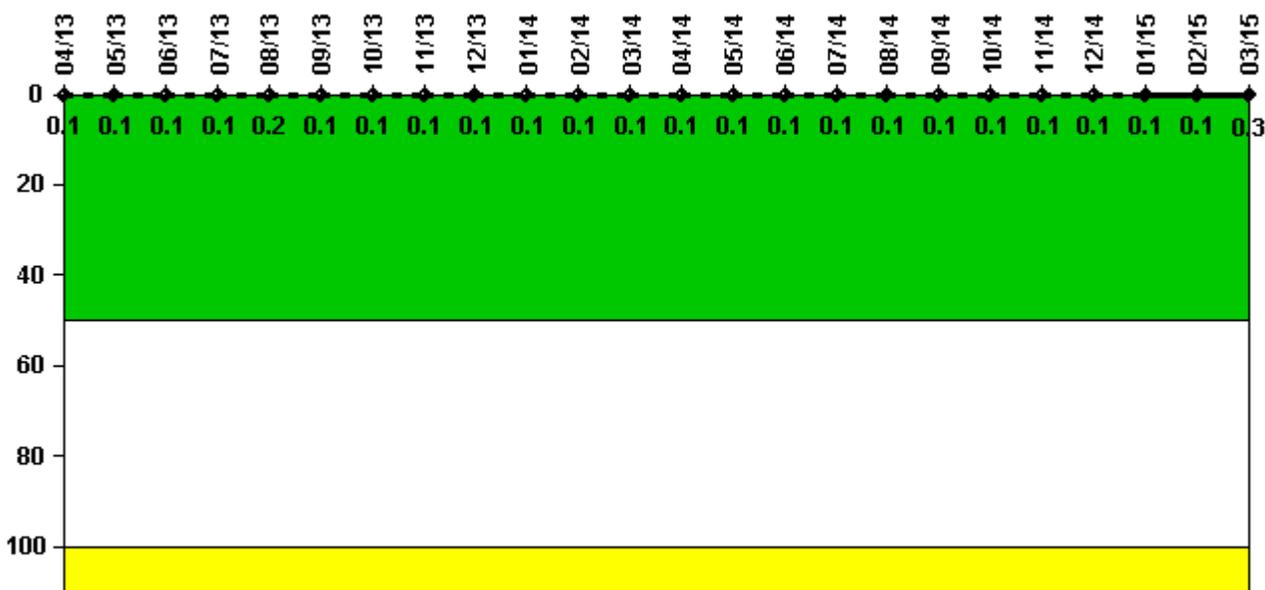
4Q/13: Changed PRA Parameter(s).

3Q/13: The planned unavailability baselines for all ERCW pumps were adjusted as needed to reflect past and current planned maintenance not performed every 3 years or less as specified by NEI 99-02.

3Q/13: Changed PRA Parameter(s). The planned unavailability baselines for all ERCW pumps were adjusted as needed to reflect past and current planned maintenance not performed every 3 years or less as specified by NEI 99-02.

2Q/13: Changed PRA Parameter(s). The planned unavailability baselines for all ERCW pumps were adjusted as needed to reflect past and current planned maintenance not performed every 3 years or less as specified by NEI 99-02.

### Reactor Coolant System Activity



Thresholds: White > 50.0 Yellow > 100.0

### Notes

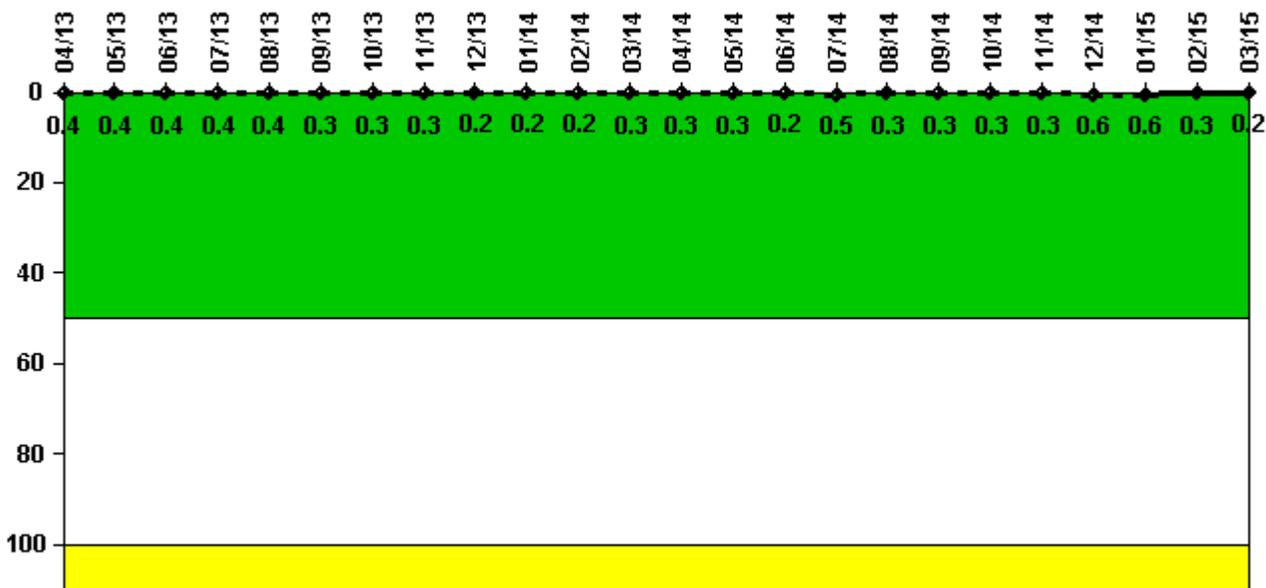
Reactor Coolant System Activity	4/13	5/13	6/13	7/13	8/13	9/13	10/13	11/13	12/13	1/14	2/14	3/14
Maximum activity	0.000465	0.000479	0.000491	0.000510	0.000566	0.000504	0.000405	0.000187	0.000232	0.000252	0.000277	0.000289
Technical												

specification limit	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
<b>Indicator value</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.2</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>
<b>Reactor Coolant System Activity</b>	<b>4/14</b>	<b>5/14</b>	<b>6/14</b>	<b>7/14</b>	<b>8/14</b>	<b>9/14</b>	<b>10/14</b>	<b>11/14</b>	<b>12/14</b>	<b>1/15</b>	<b>2/15</b>	<b>3/15</b>
Maximum activity	0.000315	0.000305	0.000343	0.000346	0.000365	0.000372	0.000398	0.000391	0.000455	0.000418	0.000460	0.001078
Technical specification limit	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
<b>Indicator value</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.3</b>						

Licensee Comments:

6/13: Revised May Maximum I-131 Activity. Only affected May 2013. No change in indicator color.

### Reactor Coolant System Leakage



Thresholds: White > 50.0 Yellow > 100.0

### Notes

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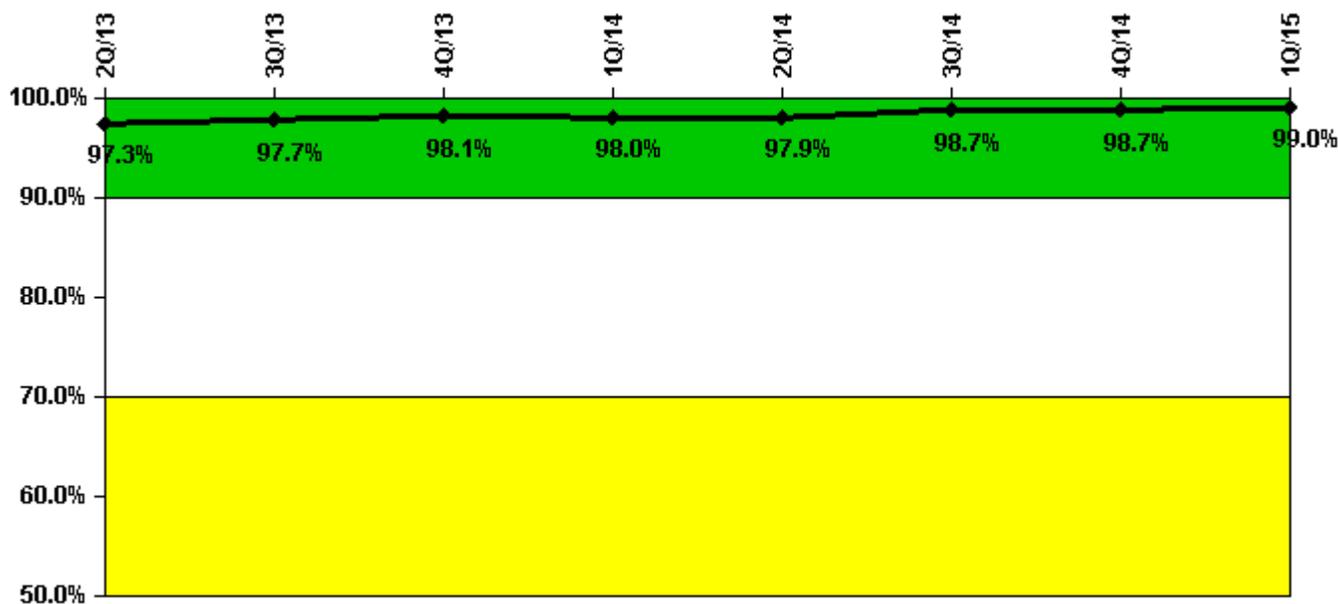
<b>Reactor Coolant System Leakage</b>	<b>4/13</b>	<b>5/13</b>	<b>6/13</b>	<b>7/13</b>	<b>8/13</b>	<b>9/13</b>	<b>10/13</b>	<b>11/13</b>	<b>12/13</b>	<b>1/14</b>	<b>2/14</b>	<b>3/14</b>
Maximum leakage	0.040	0.040	0.040	0.040	0.040	0.030	0.030	0.030	0.020	0.020	0.020	0.030
Technical specification limit	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
<b>Indicator value</b>	<b>0.4</b>	<b>0.4</b>	<b>0.4</b>	<b>0.4</b>	<b>0.4</b>	<b>0.3</b>	<b>0.3</b>	<b>0.3</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.3</b>

<b>Reactor Coolant System Leakage</b>	<b>4/14</b>	<b>5/14</b>	<b>6/14</b>	<b>7/14</b>	<b>8/14</b>	<b>9/14</b>	<b>10/14</b>	<b>11/14</b>	<b>12/14</b>	<b>1/15</b>	<b>2/15</b>	<b>3/15</b>
Maximum leakage	0.030	0.030	0.020	0.050	0.030	0.030	0.030	0.030	0.060	0.060	0.030	0.020
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
<b>Indicator value</b>	<b>0.3</b>	<b>0.3</b>	<b>0.2</b>	<b>0.5</b>	<b>0.3</b>	<b>0.3</b>	<b>0.3</b>	<b>0.3</b>	<b>0.6</b>	<b>0.6</b>	<b>0.3</b>	<b>0.2</b>

Licensee Comments: none

### Drill/Exercise Performance



Thresholds: White < 90.0% Yellow < 70.0%

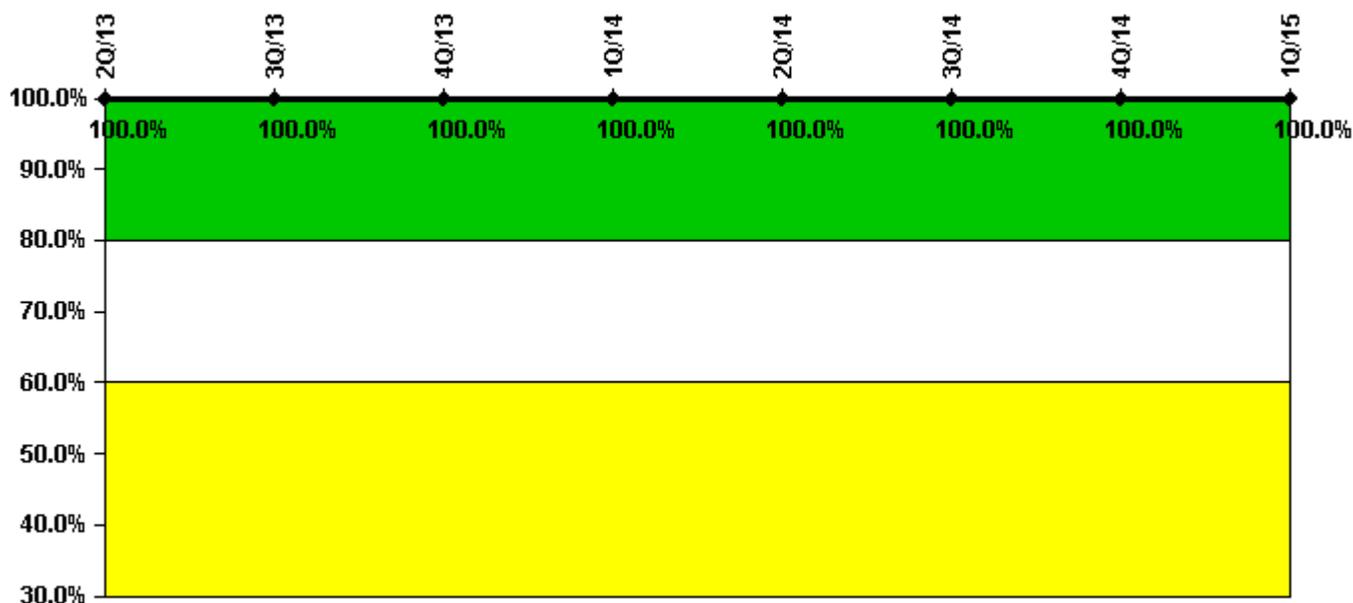
### Notes

<b>Drill/Exercise Performance</b>	<b>2Q/13</b>	<b>3Q/13</b>	<b>4Q/13</b>	<b>1Q/14</b>	<b>2Q/14</b>	<b>3Q/14</b>	<b>4Q/14</b>	<b>1Q/15</b>
Successful opportunities	50.0	84.0	0	41.0	18.0	52.0	85.0	58.0
Total opportunities	50.0	86.0	0	42.0	18.0	52.0	86.0	58.0
<b>Indicator value</b>	<b>97.3%</b>	<b>97.7%</b>	<b>98.1%</b>	<b>98.0%</b>	<b>97.9%</b>	<b>98.7%</b>	<b>98.7%</b>	<b>99.0%</b>

Licensee Comments:

3Q/13: During the Nov 2014 HAB inspection it was noted that the August 2013 Notifications and classifications count for the month had an error. This was found by the NRC inspector. Data has been changed to accurately reflect the appropriate count. PER 959227

### ERO Drill Participation



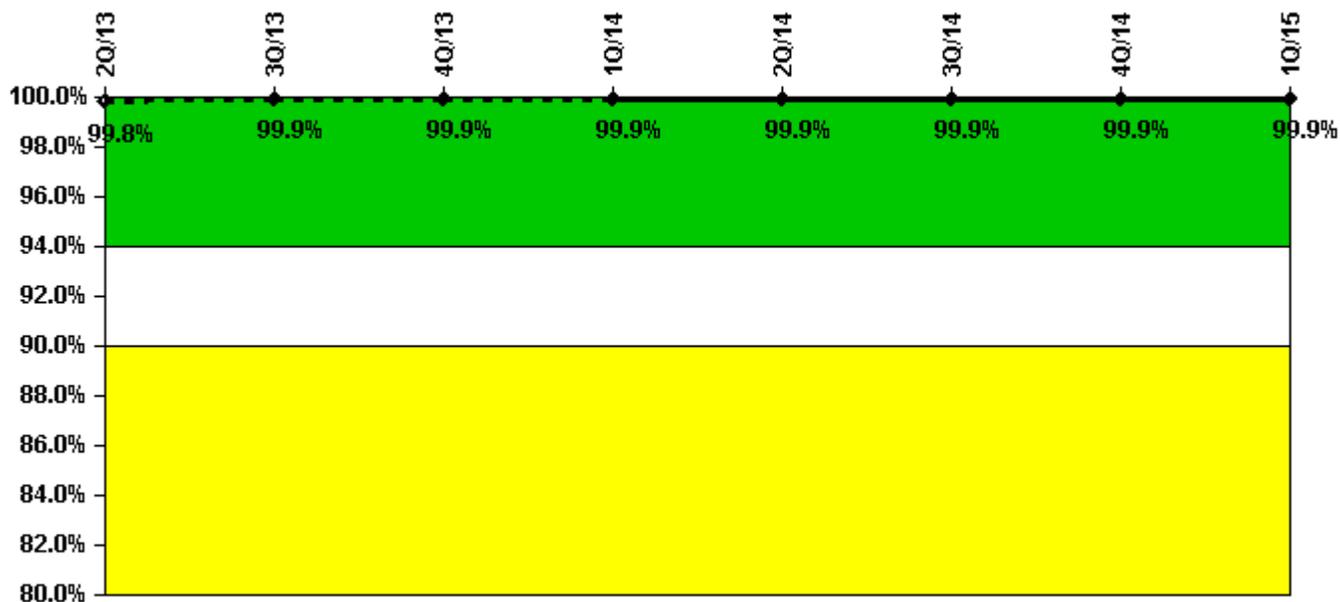
Thresholds: White < 80.0% Yellow < 60.0%

**Notes**

ERO Drill Participation	2Q/13	3Q/13	4Q/13	1Q/14	2Q/14	3Q/14	4Q/14	1Q/15
Participating Key personnel	98.0	97.0	92.0	89.0	101.0	89.0	92.0	95.0
Total Key personnel	98.0	97.0	92.0	89.0	101.0	89.0	92.0	95.0
<b>Indicator value</b>	<b>100.0%</b>							

Licensee Comments: none

### Alert & Notification System



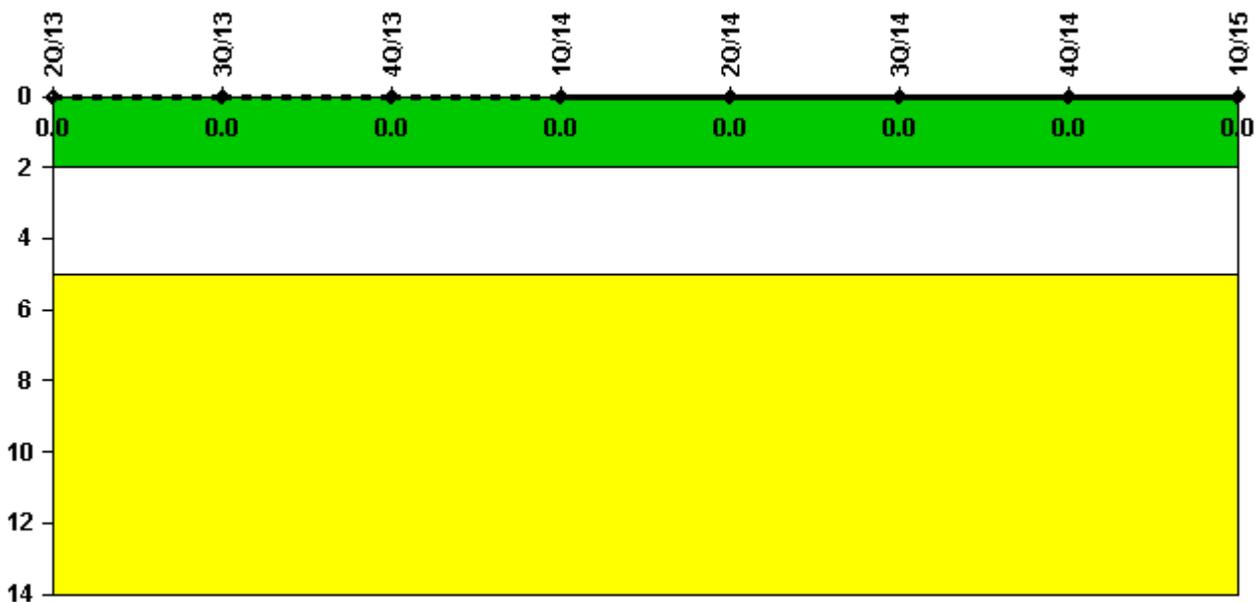
Thresholds: White < 94.0% Yellow < 90.0%

#### Notes

Alert & Notification System	2Q/13	3Q/13	4Q/13	1Q/14	2Q/14	3Q/14	4Q/14	1Q/15
Successful siren-tests	889	1014	790	1017	791	1016	903	1017
Total sirens-tests	890	1016	791	1017	791	1017	904	1017
Indicator value	99.8%	99.9%	99.9%	99.9%	99.9%	99.9%	99.9%	99.9%

Licensee Comments: none

### Occupational Exposure Control Effectiveness



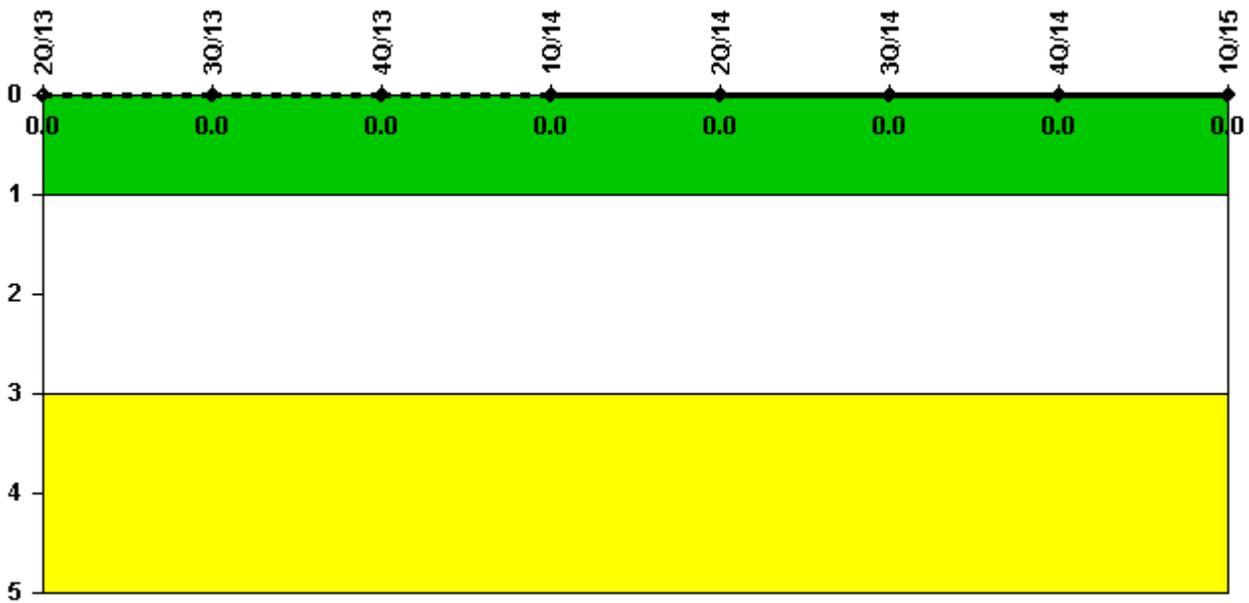
Thresholds: White > 2.0 Yellow > 5.0

#### Notes

Occupational Exposure Control Effectiveness	2Q/13	3Q/13	4Q/13	1Q/14	2Q/14	3Q/14	4Q/14	1Q/15
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>							

Licensee Comments: none

### RETS/ODCM Radiological Effluent



Thresholds: White > 1.0 Yellow > 3.0

#### Notes

RETS/ODCM Radiological Effluent	2Q/13	3Q/13	4Q/13	1Q/14	2Q/14	3Q/14	4Q/14	1Q/15
RETS/ODCM occurrences	0	0	0	0	0	0	0	0
<b>Indicator value</b>	<b>0</b>							

Licensee Comments: none

Although the Security Cornerstone is included in the Reactor Oversight Process assessment program, the Commission has decided that specific information related to findings and performance indicators pertaining to the Security Cornerstone will not be publicly available to ensure that security information is not provided to a possible adversary. Other than the fact that a finding or performance indicator is Green or Greater-Than-Green, security related information will not be displayed on the public web page.

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

*Last Modified: April 23, 2015*