Palo Verde 1

1Q/2000 Performance Indicators

Licensee's General Comments: none

Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

Notes

Unplanned Scrams per 7000 Critical Hrs	1Q/99	2Q/99	3Q/99	4Q/99	1Q/00
Unplanned scrams	1.0	0	0	0	0
Critical hours	2108.0	2184.0	2208.0	1339.1	2184.0
Indicator value	**0.8**	**0.8**	**0.8**	**0.9**	**0**

Licensee Comments: none

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/99	2Q/99	3Q/99	4Q/99	1Q/00
Scrams	1.0	0	0	0	0
Indicator value				**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	1Q/99	2Q/99	3Q/99	4Q/99	1Q/00
Unplanned power changes	0	0	0	0	0
Critical hours	2108.0	2184.0	2208.0	1339.1	2184.0
Indicator value	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Safety System Unavailability, Emergency AC Power

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

Notes

Safety System Unavailability, Emergency AC Power	1Q/99	2Q/99	3Q/99	4Q/99	1Q/00
Train 1					
Planned unavailable hours	0	0	0	0	35.35
Unplanned unavailable hours	0	24.47	0	0	0
Fault exposure hours	0	0	0	0	0
Effective Reset hours	0	0	0	0	0
Required hours	2160.00	2184.00	2208.00	2208.00	2184.00
Train 2					
Planned unavailable hours	0.23	24.45	5.03	0	22.28
Unplanned unavailable hours	0	0	10.05	0	10.34
Fault exposure hours	0	0	0	0	0
Effective Reset hours	0	0	0	0	0
Required hours	2160.00	2184.00	2208.00	2208.00	2184.00
Indicator value				**0.6%**	**0.7%**

Licensee Comments: none

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/99	2Q/99	3Q/99	4Q/99	1Q/00
Train 1					
Planned unavailable hours	0.88	32.98	38.31	2.09	21.12
Unplanned unavailable hours	3.63	0	0	6.80	0
Fault exposure hours	0	0	0	0	0
Effective Reset hours	0	0	0	0	0
Required hours	2107.80	2184.00	2208.00	1339.10	2184.00
Train 2					
Planned unavailable hours	11.35	33.82	21.07	10.84	16.75
Unplanned unavailable hours	3.61	0	0	13.28	0
Fault exposure hours	19.33	0	0	0	0
Effective Reset hours	0	0	0	0	0
Required hours	2107.80	2184.00	2208.00	1339.10	2184.00
Indicator value				**1.1%**	**1.1%**

Licensee Comments: none

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)	1Q/99	2Q/99	3Q/99	4Q/99	1Q/00
Train 1					
Planned unavailable hours	0	12.71	14.03	3.60	22.40
Unplanned unavailable hours	3.63	0	0	6.80	12.00
Fault exposure hours	0	0	0	0	0
Effective Reset hours	0	0	0	0	0
Required hours	2107.80	2184.00	2208.00	1339.10	2184.00
Train 2					
Planned unavailable hours	13.86	18.81	2.83	0	13.67
Unplanned unavailable hours	0	0	0	13.28	0
Fault exposure hours	19.33	0	0	0	0
Effective Reset hours	0	0	0	0	0
Required hours	2107.80	2184.00	2208.00	1339.10	2184.00
Train 3					
Planned unavailable hours	4.65	0	8.55	0.48	0.33
Unplanned unavailable hours	0	0	0	0	0
Fault exposure hours	0	0	0	0	0
Effective Reset hours	0	0	0	0	0
Required hours	2107.80	2184.00	2208.00	1339.10	2184.00
Indicator value				**0.5%**	**0.5%**

Licensee Comments: none

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	1Q/99	2Q/99	3Q/99	4Q/99	1Q/00
Train 1					
Planned unavailable hours	10.69	19.08	107.18	14.36	39.92
Unplanned unavailable hours	3.63	0	0	6.80	0
Fault exposure hours	0	0	0	0	0
Effective Reset hours	0	0	0	0	0
Required hours	2160.00	2184.00	2208.00	1386.70	2184.00
Train 2					
Planned unavailable hours	15.42	30.30	22.88	9.57	19.73
Unplanned unavailable hours	0	0	0	17.48	0
Fault exposure hours	19.33	0	0	0	0
Effective Reset hours	0	0	0	0	0
Required hours	2160.00	2184.00	2208.00	1386.70	2184.00
Train 3					
Planned unavailable hours	0	0	0	0	0
Unplanned unavailable hours	0	0	0	0	0
Fault exposure hours	0	0	0	0	0
Effective Reset hours	0	0	0	0	0
Required hours	0	0	0	474.75	0
Train 4					
Planned unavailable hours	0	0	0	0	0
Unplanned unavailable hours	0	0	0	0	0
Fault exposure hours	0	0	0	0	0
Effective Reset hours	0	0	0	0	0
Required hours	0	0	0	463.03	0
Indicator value					

Licensee Comments:

1Q/00: Data has been revised for the RHR PI in Quarters 3Q97 through 1Q00 to reflect the methodology specified by FAQ 172. The FAQ 172 methodology essentially split 2 trains of RHR, which were considered required for service at all times, into 4 MODE dependent RHR trains. No thresholds were crossed as a result of the changes. In accordance with the provisions of FAQ 172, Palo Verde collected actual unavailability and required hours for the historical period. In addition to the data revisions in 3Q97 through 1Q00, the RHR comment fields for 1Q97 and 2Q97 have been cleared.

1Q/00: Data has been revised for the RHR PI in Quarters 3Q97 through 1Q00 to reflect the methodology specified by FAQ 172. The FAQ 172 methodology essentially split 2 trains of RHR, which were considered required for service at all times, into 4 MODE dependent RHR trains. No thresholds were crossed as a result of the changes. In accordance with the provisions of FAQ 172, Palo Verde collected actual unavailability and required hours for the historical period. In addition to the data revisions in 3Q97 through 1Q00, the RHR comment fields for 1Q97 and 2Q97 have been cleared.

4Q/99: Palo Verde re-defined the RHR system to be more consistent with the RHR system function definitions and Frequently Asked Question number 146 in NEI 99-02 revision 0. As a result, the total number of unavailable hours changed.

3Q/99: Palo Verde re-defined the RHR system to be more consistent with the RHR system function definitions and Frequently Asked Question number 146 in NEI 99-02 revision 0. As a result, the total number of unavailable hours changed. Additionally, refinements in accounting methods resulted in a slight increase in the number of planned unavailable hours.

2Q/99: Palo Verde re-defined the RHR system to be more consistent with the RHR system function definitions and Frequently Asked Question number 146 in NEI 99-02 revision 0. As a result, the total number of unavailable hours changed.

1Q/99: Palo Verde re-defined the RHR system to be more consistent with the RHR system function definitions and Frequently Asked Question number 146 in NEI 99-02 revision 0. As a result, the total number of unavailable hours changed.

4Q/98: Palo Verde re-defined the RHR system to be more consistent with the RHR system function definitions and Frequently Asked Question number 146 in NEI 99-02 revision 0. As a result, the total number of unavailable hours changed.

3Q/98: Palo Verde re-defined the RHR system to be more consistent with the RHR system function definitions and Frequently Asked Question number 146 in NEI 99-02 revision 0. As a result, the total number of unavailable hours changed.

2Q/98: Palo Verde re-defined the RHR system to be more consistent with the RHR system function definitions and Frequently Asked Question number 146 in NEI 99-02 revision 0. As a result, the total number of unavailable hours changed.

1Q/98: Palo Verde re-defined the RHR system to be more consistent with the RHR system function definitions and Frequently Asked Question number 146 in NEI 99-02 revision 0. As a result, the total number of unavailable hours changed.

4Q/97: Palo Verde re-defined the RHR system to be more consistent with the RHR system function definitions and Frequently Asked Question number 146 in NEI 99-02 revision 0. As a result, the total number of unavailable hours changed.

3Q/97: Palo Verde re-defined the RHR system to be more consistent with the RHR system function definitions and Frequently Asked Question number 146 in NEI 99-02 revision 0. As a result, the total number of unavailable hours changed.

2Q/97: Palo Verde re-defined the RHR system to be more consistent with the RHR system function definitions and Frequently Asked Question number 146 in NEI 99-02 revision 0. As a result, the total number of unavailable hours changed.

1Q/97: Palo Verde re-defined the RHR system to be more consistent with the RHR system function definitions and Frequently Asked Question number 146 in NEI 99-02 revision 0. As a result, the total number of unavailable hours changed.

Safety System Functional Failures (PWR)

Thresholds: White > 5.0

Notes

Safety System Functional Failures (PWR)	1Q/99	2Q/99	3Q/99	4Q/99	1Q/00
Safety System Functional Failures	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Reactor Coolant System Activity

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Activity	4/99	5/99	6/99	7/99	8/99	9/99	10/99	11/99	12/99	1/00	2/00	3/00
Maximum activity	0.002000	0.002000	0.002000	0.002000	0.005000	0.003000	0.002000	0.001000	0.001000	0.001000	0.001000	0.001000
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	**0.2**	**0.2**	**0.2**	**0.2**	**0.5**	**0.3**	**0.2**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**

Licensee Comments: none

Reactor Coolant System Leakage

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Leakage	4/99	5/99	6/99	7/99	8/99	9/99	10/99	11/99	12/99	1/00	2/00	3/00
Maximum leakage	0.160	0.050	0.080	0.270	0.100	0.110	0.040	0.020	0.020	0.036	0.022	0.056
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	**1.6**	**0.5**	**0.8**	**2.7**	**1.0**	**1.1**	**0.4**	**0.2**	**0.2**	**0.4**	**0.2**	**0.6**

Licensee Comments: none

Drill/Exercise Performance

Thresholds: White < 90.0% Yellow < 70.0%

Notes

Drill/Exercise Performance	1Q/99	2Q/99	3Q/99	4Q/99	1Q/00
Successful opportunities	11.0	0	17.0	3.0	29.0
Total opportunities	11.0	0	18.0	3.0	32.0
Indicator value				**93.8%**	**92.5%**

Licensee Comments: none

ERO Drill Participation

Thresholds: White < 80.0% Yellow < 60.0%

Notes

ERO Drill Participation	1Q/99	2Q/99	3Q/99	4Q/99	1Q/00
Participating Key personnel				65.0	132.0
Total Key personnel				68.0	132.0
Indicator value				**95.6%**	**100.0%**

Licensee Comments:

1Q/00: The reduction in the total ERO count from the number reported in previous quarters is the result of removing some radiation protection positions from the key ERO member population.

Alert & Notification System

Thresholds: White < 94.0% Yellow < 90.0%

Notes

Alert & Notification System	1Q/99	2Q/99	3Q/99	4Q/99	1Q/00
Successful siren-tests	350	390	351	426	390
Total sirens-tests	354	390	351	429	390
Indicator value	**98.8%**	**99.0%**	**99.6%**	**99.5%**	**99.8%**

Licensee Comments: none

Occupational Exposure Control Effectiveness

Thresholds: White > 2.0 Yellow > 5.0

Notes

Occupational Exposure Control Effectiveness	1Q/99	2Q/99	3Q/99	4Q/99	1Q/00
High radiation area occurrences	0	0	0	1	0
Very high radiation area occurrences	0	0	0	0	0
Unintended exposure occurrences	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**1**	**1**

Licensee Comments: none

RETS/ODCM Radiological Effluent

Thresholds: White > 1.0 Yellow > 3.0

Notes

RETS/ODCM Radiological Effluent	1Q/99	2Q/99	3Q/99	4Q/99	1Q/00
RETS/ODCM occurrences	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Protected Area Security Performance Index

Thresholds: White > 0.080

Notes

Protected Area Security Performance Index	1Q/99	2Q/99	3Q/99	4Q/99	1Q/00
IDS compensatory hours	81.70	76.70	55.20	220.10	326.60
CCTV compensatory hours	0	0	17.8	225.3	35.2
IDS normalization factor	1.85	1.85	1.85	1.85	1.85
CCTV normalization factor	1.4	1.4	1.4	1.4	1.2
Index Value	**0.017**	**0.014**	**0.011**	**0.024**	**0.034**

Licensee Comments:

4Q/99: Historical security compensatory hours prior to October 1999 was a best estimate based on the information and resources used to collect the data. Previous records did not log enough information to accurately reconstruct this PI. In the fourth quarter of 1999, a clarification on IDS compensatory hours resulted in a change to counted hours. To correct data prior to October 1999, an average of the additional hours counted during the fourth quarter was applied to data collected prior to October 1999. As a result of a recent self-assessment (April 2000), refinements in accounting methods resulted in a very slight increase in the number of IDS compensatory hours.

Personnel Screening Program

Thresholds: White > 2.0 Yellow > 5.0

Notes

Personnel Screening Program	1Q/99	2Q/99	3Q/99	4Q/99	1Q/00
Program failures	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

FFD/Personnel Reliability

Thresholds: White > 2.0 Yellow > 5.0

Notes

FFD/Personnel Reliability	1Q/99	2Q/99	3Q/99	4Q/99	1Q/00
Program Failures	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

PI Summary | Inspection Findings Summary | Reactor Oversight Process

Last Modified: April 1, 2002

Palo Verde 1

2Q/2000 Performance Indicators

Licensee's General Comments: none

Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

Notes

Unplanned Scrams per 7000 Critical Hrs	2Q/99	3Q/99	4Q/99	1Q/00	2Q/00
Unplanned scrams	0	0	0	0	0
Critical hours	2184.0	2208.0	1339.1	2184.0	2184.0
Indicator value	**0.8**	**0.8**	**0.9**	**0**	**0**

Licensee Comments: none

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	2Q/99	3Q/99	4Q/99	1Q/00	2Q/00
Scrams	0	0	0	0	0
Indicator value			**1.0**	**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/99	3Q/99	4Q/99	1Q/00	2Q/00
Unplanned power changes	0	0	0	0	1.0
Critical hours	2184.0	2208.0	1339.1	2184.0	2184.0
Indicator value	**0**	**0**	**0**	**0**	**0.9**

Licensee Comments: none

Safety System Unavailability, Emergency AC Power

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

Notes

Safety System Unavailability, Emergency AC Power	2Q/99	3Q/99	4Q/99	1Q/00	2Q/00
Train 1					
Planned unavailable hours	0	0	0	35.35	1.32
Unplanned unavailable hours	24.47	0	0	0	0
Fault exposure hours	0	0	0	0	0
Effective Reset hours	0	0	0	0	0
Required hours	2184.00	2208.00	2208.00	2184.00	2184.00
Train 2					
Planned unavailable hours	24.45	5.03	0	22.28	0
Unplanned unavailable hours	0	10.05	0	10.34	0
Fault exposure hours	0	0	0	0	0
Effective Reset hours	0	0	0	0	0
Required hours	2184.00	2208.00	2208.00	2184.00	2184.00
Indicator value			**0.6%**	**0.7%**	**0.6%**

Licensee Comments: none

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)	2Q/99	3Q/99	4Q/99	1Q/00	2Q/00
Train 1					
Planned unavailable hours	32.98	38.31	2.09	21.12	15.34
Unplanned unavailable hours	0	0	6.80	0	0
Fault exposure hours	0	0	0	0	0
Effective Reset hours	0	0	0	0	0
Required hours	2184.00	2208.00	1339.10	2184.00	2184.00
Train 2					
Planned unavailable hours	33.82	21.07	10.84	16.75	3.53
Unplanned unavailable hours	0	0	13.28	0	0
Fault exposure hours	0	0	0	0	0
Effective Reset hours	0	0	0	0	0
Required hours	2184.00	2208.00	1339.10	2184.00	2184.00
Indicator value			**1.1%**	**1.1%**	**1.1%**

Licensee Comments: none

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)	2Q/99	3Q/99	4Q/99	1Q/00	2Q/00
Train 1					
Planned unavailable hours	12.71	14.03	3.60	22.40	9.20
Unplanned unavailable hours	0	0	6.80	12.00	4.85
Fault exposure hours	0	0	0	0	0
Effective Reset hours	0	0	0	0	0
Required hours	2184.00	2208.00	1339.10	2184.00	2184.00
Train 2					
Planned unavailable hours	18.81	2.83	0	13.67	0
Unplanned unavailable hours	0	0	13.28	0	0
Fault exposure hours	0	0	0	0	0
Effective Reset hours	0	0	0	0	0
Required hours	2184.00	2208.00	1339.10	2184.00	2184.00
Train 3					
Planned unavailable hours	0	8.55	0.48	0.33	11.43
Unplanned unavailable hours	0	0	0	0	0
Fault exposure hours	0	0	0	0	0
Effective Reset hours	0	0	0	0	0
Required hours	2184.00	2208.00	1339.10	2184.00	2184.00
Indicator value			**0.5%**	**0.5%**	**0.5%**

Licensee Comments: none

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	2Q/99	3Q/99	4Q/99	1Q/00	2Q/00
Train 1					
Planned unavailable hours	19.08	107.18	14.36	39.92	5.82
Unplanned unavailable hours	0	0	6.80	0	0
Fault exposure hours	0	0	0	0	0
Effective Reset hours	0	0	0	0	0
Required hours	2184.00	2208.00	1386.70	2184.00	2184.00
Train 2					
Planned unavailable hours	30.30	22.88	9.57	19.73	4.31
Unplanned unavailable hours	0	0	17.48	0	0
Fault exposure hours	0	0	0	0	0
Effective Reset hours	0	0	0	0	0
Required hours	2184.00	2208.00	1386.70	2184.00	2184.00
Train 3					
Planned unavailable hours	0	0	0	0	0
Unplanned unavailable hours	0	0	0	0	0
Fault exposure hours	0	0	0	0	0
Effective Reset hours	0	0	0	0	0
Required hours	0	0	474.75	0	0
Train 4					
Planned unavailable hours	0	0	0	0	0
Unplanned unavailable hours	0	0	0	0	0
Fault exposure hours	0	0	0	0	0
Effective Reset hours	0	0	0	0	0
Required hours	0	0	463.03	0	0
Indicator value					**0.7%**

Licensee Comments:

1Q/00: Data has been revised for the RHR PI in Quarters 3Q97 through 1Q00 to reflect the methodology specified by FAQ 172. The FAQ 172 methodology essentially split 2 trains of RHR, which were considered required for service at all times, into 4 MODE dependent RHR trains. No thresholds were crossed as a result of the changes. In accordance with the provisions of FAQ 172, Palo Verde collected actual unavailability and required hours for the historical period. In addition to the data revisions in 3Q97 through 1Q00, the RHR comment fields for 1Q97 and 2Q97 have been cleared.

1Q/00: Data has been revised for the RHR PI in Quarters 3Q97 through 1Q00 to reflect the methodology specified by FAQ 172. The FAQ 172 methodology essentially split 2 trains of RHR, which were considered required for service at all times, into 4 MODE dependent RHR trains. No thresholds were crossed as a result of the changes. In accordance with the provisions of FAQ 172, Palo Verde collected actual unavailability and required hours for the historical period. In addition to the data revisions in 3Q97 through 1Q00, the RHR comment fields for 1Q97 and 2Q97 have been cleared.

Safety System Functional Failures (PWR)

Thresholds: White > 5.0

Notes

Safety System Functional Failures (PWR)	2Q/99	3Q/99	4Q/99	1Q/00	2Q/00
Safety System Functional Failures	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Reactor Coolant System Activity

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Activity	7/99	8/99	9/99	10/99	11/99	12/99	1/00	2/00	3/00	4/00	5/00	6/00
Maximum activity	0.002000	0.005000	0.003000	0.002000	0.001000	0.001000	0.001000	0.001000	0.001000	0.002000	0.002000	0.002000
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	**0.2**	**0.5**	**0.3**	**0.2**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.2**	**0.2**	**0.2**

Licensee Comments: none

Reactor Coolant System Leakage

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Leakage	7/99	8/99	9/99	10/99	11/99	12/99	1/00	2/00	3/00	4/00	5/00	6/00
Maximum leakage	0.270	0.100	0.110	0.040	0.020	0.020	0.036	0.022	0.056	0.024	0.066	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	**2.7**	**1.0**	**1.1**	**0.4**	**0.2**	**0.2**	**0.4**	**0.2**	**0.6**	**0.2**	**0.7**	**0.5**

Licensee Comments: none

Drill/Exercise Performance

Thresholds: White < 90.0% Yellow < 70.0%

Notes

Drill/Exercise Performance	2Q/99	3Q/99	4Q/99	1Q/00	2Q/00
Successful opportunities	0	17.0	3.0	29.0	22.0
Total opportunities	0	18.0	3.0	32.0	22.0
Indicator value			**93.8%**	**92.5%**	**94.4%**

Licensee Comments: none

Thresholds: White < 80.0% Yellow < 60.0%

Notes

ERO Drill Participation	2Q/99	3Q/99	4Q/99	1Q/00	2Q/00
Participating Key personnel			65.0	132.0	166.0
Total Key personnel			68.0	132.0	167.0
Indicator value			**95.6%**	**100.0%**	**99.4%**

Licensee Comments: none

Alert & Notification System

Thresholds: White < 94.0% Yellow < 90.0%

Notes

Alert & Notification System	2Q/99	3Q/99	4Q/99	1Q/00	2Q/00
Successful siren-tests	390	351	426	390	385
Total sirens-tests	390	351	429	390	390
Indicator value	**99.0%**	**99.6%**	**99.5%**	**99.8%**	**99.5%**

Licensee Comments: none

Occupational Exposure Control Effectiveness

Thresholds: White > 2.0 Yellow > 5.0

Notes

Occupational Exposure Control Effectiveness	2Q/99	3Q/99	4Q/99	1Q/00	2Q/00
High radiation area occurrences	0	0	1	0	1
Very high radiation area occurrences	0	0	0	0	0
Unintended exposure occurrences	0	0	0	0	0
Indicator value	**0**	**0**	**1**	**1**	**2**

Licensee Comments:

2Q/00: During a routine tour of the Unit 3 "B" LPSI Pump Room on 5/4/00, a hot spot was identified on a cyclone separator reading 1,200 mrem/hr at one foot. The event was documented and placed in the corrective action system. The associated corrective action documents were subsequently reviewed during an NRC inspection and the event was characterized by the NRC as a failure to perform adequate surveys of the cyclone separator resulting in untimely LHRA posting of this area. A PI data change is being made to acknowledge the NRC finding. The data change did not affect the color of the performance indicator.

RETS/ODCM Radiological Effluent

Thresholds: White > 1.0 Yellow > 3.0

Notes

RETS/ODCM Radiological Effluent	2Q/99	3Q/99	4Q/99	1Q/00	2Q/00
RETS/ODCM occurrences	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Protected Area Security Performance Index

Thresholds: White > 0.080

Notes

Protected Area Security Performance Index	2Q/99	3Q/99	4Q/99	1Q/00	2Q/00
IDS compensatory hours	76.70	55.20	220.10	326.60	79.20
CCTV compensatory hours	0	17.8	225.3	35.2	76.7
IDS normalization factor	1.85	1.85	1.85	1.85	1.85
CCTV normalization factor	1.4	1.4	1.4	1.2	1.2
Index Value	**0.014**	**0.011**	**0.024**	**0.034**	**0.038**

Licensee Comments:

2Q/00: Due to a self-assessment finding, the number of cameras used in the CCTV Normalization Factor has been conservatively reduced from 41 to 36 and a FAQ has been submitted to clarify the correct value. The previous use of 41 cameras in the CCTV Normalization Factor was not willful, has minimal effect on the calculated PA Security Equipment Performance Index and would not have caused the PI to change color. (1Q2000 & 2Q2000)

Personnel Screening Program

Thresholds: White > 2.0 Yellow > 5.0

Notes

Personnel Screening Program	2Q/99	3Q/99	4Q/99	1Q/00	2Q/00
Program failures	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

FFD/Personnel Reliability

Thresholds: White > 2.0 Yellow > 5.0

Notes

FFD/Personnel Reliability	2Q/99	3Q/99	4Q/99	1Q/00	2Q/00
Program Failures	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

PI Summary | Inspection Findings Summary | Reactor Oversight Process

Last Modified: April 1, 2002

Palo Verde 1

3Q/2000 Performance Indicators

Licensee's General Comments: none

Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

Notes

Unplanned Scrams per 7000 Critical Hrs	3Q/99	4Q/99	1Q/00	2Q/00	3Q/00
Unplanned scrams	0	0	0	0	0
Critical hours	2208.0	1339.1	2184.0	2184.0	2208.0
Indicator value	**0.8**	**0.9**	**0**	**0**	**0**

Licensee Comments: none

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	3Q/99	4Q/99	1Q/00	2Q/00	3Q/00
Scrams	0	0	0	0	0
Indicator value		**1.0**	**1.0**	**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	3Q/99	4Q/99	1Q/00	2Q/00	3Q/00
Unplanned power changes	0	0	0	1.0	0
Critical hours	2208.0	1339.1	2184.0	2184.0	2208.0
Indicator value	**0**	**0**	**0**	**0.9**	**0.9**

Licensee Comments: none

Safety System Unavailability, Emergency AC Power

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

Notes

Safety System Unavailability, Emergency AC Power	3Q/99	4Q/99	1Q/00	2Q/00	3Q/00
Train 1					
Planned unavailable hours	0	0	35.35	1.32	17.37
Unplanned unavailable hours	0	0	0	0	0
Fault exposure hours	0	0	0	0	0
Effective Reset hours	0	0	0	0	0
Required hours	2208.00	2208.00	2184.00	2184.00	2208.00
Train 2					
Planned unavailable hours	5.03	0	22.28	0	20.62
Unplanned unavailable hours	10.05	0	10.34	0	0
Fault exposure hours	0	0	0	0	0
Effective Reset hours	0	0	0	0	0
Required hours	2208.00	2208.00	2184.00	2184.00	2208.00
Indicator value		**0.6%**	**0.7%**	**0.6%**	**0.6%**

Licensee Comments: none

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)	3Q/99	4Q/99	1Q/00	2Q/00	3Q/00
Train 1					
Planned unavailable hours	38.31	2.09	21.12	15.34	11.85
Unplanned unavailable hours	0	6.80	0	0	0
Fault exposure hours	0	0	0	0	0
Effective Reset hours	0	0	0	0	0
Required hours	2208.00	1339.10	2184.00	2184.00	2208.00
Train 2					
Planned unavailable hours	21.07	10.84	16.75	3.53	17.08
Unplanned unavailable hours	0	13.28	0	0	0
Fault exposure hours	0	0	0	0	0
Effective Reset hours	0	0	0	0	0
Required hours	2208.00	1339.10	2184.00	2184.00	2208.00
Indicator value		**1.1%**	**1.1%**	**1.1%**	**1.1%**

Licensee Comments: none

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)	3Q/99	4Q/99	1Q/00	2Q/00	3Q/00
Train 1					
Planned unavailable hours	14.03	3.60	22.40	9.20	16.05
Unplanned unavailable hours	0	6.80	12.00	4.85	0
Fault exposure hours	0	0	0	0	0
Effective Reset hours	0	0	0	0	0
Required hours	2208.00	1339.10	2184.00	2184.00	2208.00
Train 2					
Planned unavailable hours	2.83	0	13.67	0	10.45
Unplanned unavailable hours	0	13.28	0	0	0
Fault exposure hours	0	0	0	0	0
Effective Reset hours	0	0	0	0	0
Required hours	2208.00	1339.10	2184.00	2184.00	2208.00
Train 3					
Planned unavailable hours	8.55	0.48	0.33	11.43	0.43
Unplanned unavailable hours	0	0	0	0	0
Fault exposure hours	0	0	0	0	0
Effective Reset hours	0	0	0	0	0
Required hours	2208.00	1339.10	2184.00	2184.00	2208.00
Indicator value		**0.5%**	**0.5%**	**0.5%**	**0.5%**

Licensee Comments: none

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	3Q/99	4Q/99	1Q/00	2Q/00	3Q/00
Train 1					
Planned unavailable hours	107.18	14.36	39.92	5.82	12.13
Unplanned unavailable hours	0	6.80	0	0	0
Fault exposure hours	0	0	0	0	0
Effective Reset hours	0	0	0	0	0
Required hours	2208.00	1386.70	2184.00	2184.00	2208.00
Train 2					
Planned unavailable hours	22.88	9.57	19.73	4.31	11.57
Unplanned unavailable hours	0	17.48	0	0	0
Fault exposure hours	0	0	0	0	0
Effective Reset hours	0	0	0	0	0
Required hours	2208.00	1386.70	2184.00	2184.00	2208.00
Train 3					
Planned unavailable hours	0	0	0	0	0
Unplanned unavailable hours	0	0	0	0	0
Fault exposure hours	0	0	0	0	0
Effective Reset hours	0	0	0	0	0
Required hours	0	474.75	0	0	0
Train 4					
Planned unavailable hours	0	0	0	0	0
Unplanned unavailable hours	0	0	0	0	0
Fault exposure hours	0	0	0	0	0
Effective Reset hours	0	0	0	0	0
Required hours	0	463.03	0	0	0
Indicator value				**0.7%**	**0.7%**

Licensee Comments:

1Q/00: Data has been revised for the RHR PI in Quarters 3Q97 through 1Q00 to reflect the methodology specified by FAQ 172. The FAQ 172 methodology essentially split 2 trains of RHR, which were considered required for service at all times, into 4 MODE dependent RHR trains. No thresholds were crossed as a result of the changes. In accordance with the provisions of FAQ 172, Palo Verde collected actual unavailability and required hours for the historical period. In addition to the data revisions in 3Q97 through 1Q00, the RHR comment fields for 1Q97 and 2Q97 have been cleared.

Safety System Functional Failures (PWR)

Thresholds: White > 5.0

Notes

Safety System Functional Failures (PWR)	3Q/99	4Q/99	1Q/00	2Q/00	3Q/00
Safety System Functional Failures	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Reactor Coolant System Activity

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Activity	10/99	11/99	12/99	1/00	2/00	3/00	4/00	5/00	6/00	7/00	8/00	9/00
Maximum activity	0.002000	0.001000	0.001000	0.001000	0.001000	0.001000	0.002000	0.002000	0.002000	0.002000	0.002000	0.002000
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	**0.2**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**

Licensee Comments: none

Reactor Coolant System Leakage

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Leakage	10/99	11/99	12/99	1/00	2/00	3/00	4/00	5/00	6/00	7/00	8/00	9/00
Maximum leakage	0.040	0.020	0.020	0.036	0.022	0.056	0.024	0.066	0.050	0.068	0.040	0.097
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	**0.4**	**0.2**	**0.2**	**0.4**	**0.2**	**0.6**	**0.2**	**0.7**	**0.5**	**0.7**	**0.4**	**1.0**

Licensee Comments: none

Thresholds: White < 90.0% Yellow < 70.0%

Notes

Drill/Exercise Performance	3Q/99	4Q/99	1Q/00	2Q/00	3Q/00
Successful opportunities	17.0	3.0	29.0	22.0	95.0
Total opportunities	18.0	3.0	32.0	22.0	100.0
Indicator value		**93.8%**	**92.5%**	**94.4%**	**95.2%**

Licensee Comments: none

Thresholds: White < 80.0% Yellow < 60.0%

Notes

ERO Drill Participation	3Q/99	4Q/99	1Q/00	2Q/00	3Q/00
Participating Key personnel		65.0	132.0	166.0	165.0
Total Key personnel		68.0	132.0	167.0	167.0
Indicator value		**95.6%**	**100.0%**	**99.4%**	**98.8%**

Licensee Comments: none

Alert & Notification System

Thresholds: White < 94.0% Yellow < 90.0%

Notes

Alert & Notification System	3Q/99	4Q/99	1Q/00	2Q/00	3Q/00
Successful siren-tests	351	426	390	385	347
Total sirens-tests	351	429	390	390	351
Indicator value	**99.6%**	**99.5%**	**99.8%**	**99.5%**	**99.2%**

Licensee Comments: none

Occupational Exposure Control Effectiveness

Thresholds: White > 2.0 Yellow > 5.0

Notes

Occupational Exposure Control Effectiveness	3Q/99	4Q/99	1Q/00	2Q/00	3Q/00
High radiation area occurrences	0	1	0	1	0
Very high radiation area occurrences	0	0	0	0	0
Unintended exposure occurrences	0	0	0	0	0
Indicator value	**0**	**1**	**1**	**2**	**2**

Licensee Comments:

2Q/00: During a routine tour of the Unit 3 "B" LPSI Pump Room on 5/4/00, a hot spot was identified on a cyclone separator reading 1,200 mrem/hr at one foot. The event was documented and placed in the corrective action system. The associated corrective action documents were subsequently reviewed during an NRC inspection and the event was characterized by the NRC as a failure to perform adequate surveys of the cyclone separator resulting in untimely LHRA posting of this area. A PI data change is being made to acknowledge the NRC finding. The data change did not affect the color of the performance indicator.

RETS/ODCM Radiological Effluent

Thresholds: White > 1.0 Yellow > 3.0

Notes

RETS/ODCM Radiological Effluent	3Q/99	4Q/99	1Q/00	2Q/00	3Q/00
RETS/ODCM occurrences	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Protected Area Security Performance Index

Thresholds: White > 0.080

Notes

Protected Area Security Performance Index	3Q/99	4Q/99	1Q/00	2Q/00	3Q/00
IDS compensatory hours	55.20	220.10	326.60	79.20	85.60
CCTV compensatory hours	17.8	225.3	35.2	76.7	8.5
IDS normalization factor	1.85	1.85	1.85	1.85	1.85
CCTV normalization factor	1.4	1.4	1.2	1.2	1.2
Index Value	**0.011**	**0.024**	**0.034**	**0.038**	**0.038**

Licensee Comments:

2Q/00: Due to a self-assessment finding, the number of cameras used in the CCTV Normalization Factor has been conservatively reduced from 41 to 36 and a FAQ has been submitted to clarify the correct value. The previous use of 41 cameras in the CCTV Normalization Factor was not willful, has minimal effect on the calculated PA Security Equipment Performance Index and would not have caused the PI to change color. (1Q2000 & 2Q2000)

Personnel Screening Program

Thresholds: White > 2.0 Yellow > 5.0

Notes

Personnel Screening Program	3Q/99	4Q/99	1Q/00	2Q/00	3Q/00
Program failures	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

FFD/Personnel Reliability

Thresholds: White > 2.0 Yellow > 5.0

Notes

FFD/Personnel Reliability	3Q/99	4Q/99	1Q/00	2Q/00	3Q/00
Program Failures	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

PI Summary | Inspection Findings Summary | Reactor Oversight Process

Last Modified: March 29, 2002

Palo Verde 1

4Q/2000 Performance Indicators

Licensee's General Comments: none

Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

Notes

Unplanned Scrams per 7000 Critical Hrs	4Q/99	1Q/00	2Q/00	3Q/00	4Q/00
Unplanned scrams	0	0	0	0	0
Critical hours	1339.1	2184.0	2184.0	2208.0	2208.0
Indicator value	**0.9**	**0**	**0**	**0**	**0**

Licensee Comments: none

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	4Q/99	1Q/00	2Q/00	3Q/00	4Q/00
Scrams	0	0	0	0	0
Indicator value	**1.0**	**1.0**	**1.0**	**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	4Q/99	1Q/00	2Q/00	3Q/00	4Q/00
Unplanned power changes	0	0	1.0	0	0
Critical hours	1339.1	2184.0	2184.0	2208.0	2208.0
Indicator value	**0**	**0**	**0.9**	**0.9**	**0.8**

Licensee Comments: none

Safety System Unavailability, Emergency AC Power

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

Notes

Safety System Unavailability, Emergency AC Power	4Q/99	1Q/00	2Q/00	3Q/00	4Q/00
Train 1					
Planned unavailable hours	0	35.35	1.32	17.37	0
Unplanned unavailable hours	0	0	0	0	0
Fault exposure hours	0	0	0	0	0
Effective Reset hours	0	0	0	0	0
Required hours	2208.00	2184.00	2184.00	2208.00	2208.00
Train 2					
Planned unavailable hours	0	22.28	0	20.62	6.30
Unplanned unavailable hours	0	10.34	0	0	0
Fault exposure hours	0	0	0	0	0
Effective Reset hours	0	0	0	0	0
Required hours	2208.00	2184.00	2184.00	2208.00	2208.00
Indicator value	**0.6%**	**0.7%**	**0.6%**	**0.6%**	**0.5%**

Licensee Comments: none

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)	4Q/99	1Q/00	2Q/00	3Q/00	4Q/00
Train 1					
Planned unavailable hours	2.09	21.12	15.34	11.85	7.54
Unplanned unavailable hours	6.80	0	0	0	0
Fault exposure hours	0	0	0	0	0
Effective Reset hours	0	0	0	0	0
Required hours	1339.10	2184.00	2184.00	2208.00	2208.00
Train 2					
Planned unavailable hours	10.84	16.75	3.53	17.08	18.21
Unplanned unavailable hours	13.28	0	0	0	0
Fault exposure hours	0	0	0	0	0
Effective Reset hours	0	0	0	0	0
Required hours	1339.10	2184.00	2184.00	2208.00	2208.00
Indicator value	**1.1%**	**1.1%**	**1.1%**	**1.1%**	**1.1%**

Licensee Comments: none

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)	4Q/99	1Q/00	2Q/00	3Q/00	4Q/00
Train 1					
Planned unavailable hours	3.60	22.40	9.20	16.05	1.41
Unplanned unavailable hours	6.80	12.00	4.85	0	1.45
Fault exposure hours	0	0	0	0	0
Effective Reset hours	0	0	0	0	0
Required hours	1339.10	2184.00	2184.00	2208.00	2208.00
Train 2					
Planned unavailable hours	0	13.67	0	10.45	6.30
Unplanned unavailable hours	13.28	0	0	0	0
Fault exposure hours	0	0	0	0	0
Effective Reset hours	0	0	0	0	0
Required hours	1339.10	2184.00	2184.00	2208.00	2208.00
Train 3					
Planned unavailable hours	0.48	0.33	11.43	0.43	0.25
Unplanned unavailable hours	0	0	0	0	0
Fault exposure hours	0	0	0	0	0
Effective Reset hours	0	0	0	0	0
Required hours	1339.10	2184.00	2184.00	2208.00	2208.00
Indicator value	**0.5%**	**0.5%**	**0.5%**	**0.5%**	**0.5%**

Licensee Comments: none

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	4Q/99	1Q/00	2Q/00	3Q/00	4Q/00
Train 1					
Planned unavailable hours	14.36	39.92	5.82	12.13	9.64
Unplanned unavailable hours	6.80	0	0	0	0
Fault exposure hours	0	0	0	0	0
Effective Reset hours	0	0	0	0	0
Required hours	1386.70	2184.00	2184.00	2208.00	2208.00
Train 2					
Planned unavailable hours	9.57	19.73	4.31	11.57	13.91
Unplanned unavailable hours	17.48	0	0	0	0
Fault exposure hours	0	0	0	0	0
Effective Reset hours	0	0	0	0	0
Required hours	1386.70	2184.00	2184.00	2208.00	2208.00
Train 3					
Planned unavailable hours	0	0	0	0	0
Unplanned unavailable hours	0	0	0	0	0
Fault exposure hours	0	0	0	0	0
Effective Reset hours	0	0	0	0	0
Required hours	474.75	0	0	0	0
Train 4					
Planned unavailable hours	0	0	0	0	0
Unplanned unavailable hours	0	0	0	0	0
Fault exposure hours	0	0	0	0	0
Effective Reset hours	0	0	0	0	0
Required hours	463.03	0	0	0	0
Indicator value			**0.7%**	**0.7%**	**0.6%**

Licensee Comments:

4Q/00: A correction in the accounting method used to calculate planned unavailability resulted in the need to revise data previously reported for the RHR PI. A total of 2.14 planned unavailability hours were added to quarters 2Q98 through 3Q00. No PI thresholds were crossed as a result of the added unavailability.

1Q/00: Data has been revised for the RHR PI in Quarters 3Q97 through 1Q00 to reflect the methodology specified by FAQ 172. The FAQ 172 methodology essentially split 2 trains of RHR, which were considered required for service at all times, into 4 MODE dependent RHR trains. No thresholds were crossed as a result of the changes. In accordance with the provisions of FAQ 172, Palo Verde collected actual unavailability and required hours for the historical period. In addition to the data revisions in 3Q97 through 1Q00, the RHR comment fields for 1Q97 and 2Q97 have been cleared.

Safety System Functional Failures (PWR)

Thresholds: White > 5.0

Notes

Safety System Functional Failures (PWR)	4Q/99	1Q/00	2Q/00	3Q/00	4Q/00
Safety System Functional Failures	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Reactor Coolant System Activity

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Activity	1/00	2/00	3/00	4/00	5/00	6/00	7/00	8/00	9/00	10/00	11/00	12/00
Maximum activity	0.001000	0.001000	0.001000	0.002000	0.002000	0.002000	0.002000	0.002000	0.002000	0.002000	0.002000	0.004000
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	**0.1**	**0.1**	**0.1**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.4**

Licensee Comments: none

Reactor Coolant System Leakage

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Leakage	1/00	2/00	3/00	4/00	5/00	6/00	7/00	8/00	9/00	10/00	11/00	12/00
Maximum leakage	0.036	0.022	0.056	0.024	0.066	0.050	0.068	0.040	0.097	0.030	0.038	0.028
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	**0.4**	**0.2**	**0.6**	**0.2**	**0.7**	**0.5**	**0.7**	**0.4**	**1.0**	**0.3**	**0.4**	**0.3**

Licensee Comments: none

Thresholds: White < 90.0% Yellow < 70.0%

Notes

Drill/Exercise Performance	4Q/99	1Q/00	2Q/00	3Q/00	4Q/00
Successful opportunities	3.0	29.0	22.0	95.0	0
Total opportunities	3.0	32.0	22.0	100.0	0
Indicator value	**93.8%**	**92.5%**	**94.4%**	**95.2%**	**95.2%**

Licensee Comments:

4Q/00: A counting error was discovered in the ERO performance data reported in 3Q00. The error resulted in lowering both the total numbers of opportunities and successes by 4. No PI thresholds were crossed as a result of the revised data.

ERO Drill Participation

Thresholds: White < 80.0% Yellow < 60.0%

Notes

ERO Drill Participation	4Q/99	1Q/00	2Q/00	3Q/00	4Q/00
Participating Key personnel	65.0	132.0	166.0	165.0	163.0
Total Key personnel	68.0	132.0	167.0	167.0	174.0
Indicator value	**95.6%**	**100.0%**	**99.4%**	**98.8%**	**93.7%**

Licensee Comments:

4Q/00: An individual was incorrectly classified as an ERO member. The incorrect classification resulted in an incorrect total number of key ERO members and key ERO members who participated in a drill reported in the 3Q00 submittal. The 3Q00 data has been revised to reflect the correct numbers. No PI thresholds were crossed as a result of the revised data.

Alert & Notification System

Thresholds: White < 94.0% Yellow < 90.0%

Notes

Alert & Notification System	4Q/99	1Q/00	2Q/00	3Q/00	4Q/00
Successful siren-tests	426	390	385	347	467
Total sirens-tests	429	390	390	351	468
Indicator value	**99.5%**	**99.8%**	**99.5%**	**99.2%**	**99.4%**

Licensee Comments: none

Occupational Exposure Control Effectiveness

Thresholds: White > 2.0 Yellow > 5.0

Notes

Occupational Exposure Control Effectiveness	4Q/99	1Q/00	2Q/00	3Q/00	4Q/00
High radiation area occurrences	1	0	1	0	0
Very high radiation area occurrences	0	0	0	0	0
Unintended exposure occurrences	0	0	0	0	0
Indicator value	**1**	**1**	**2**	**2**	**1**

Licensee Comments:

2Q/00: During a routine tour of the Unit 3 "B" LPSI Pump Room on 5/4/00, a hot spot was identified on a cyclone separator reading 1,200 mrem/hr at one foot. The event was documented and placed in the corrective action system. The associated corrective action documents were subsequently reviewed during an NRC inspection and the event was characterized by the NRC as a failure to perform adequate surveys of the cyclone separator resulting in untimely LHRA posting of this area. A PI data change is being made to acknowledge the NRC finding. The data change did not affect the color of the performance indicator.

RETS/ODCM Radiological Effluent

Thresholds: White > 1.0 Yellow > 3.0

Notes

RETS/ODCM Radiological Effluent	4Q/99	1Q/00	2Q/00	3Q/00	4Q/00
RETS/ODCM occurrences	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Protected Area Security Performance Index

Thresholds: White > 0.080

Notes

Protected Area Security Performance Index	4Q/99	1Q/00	2Q/00	3Q/00	4Q/00
IDS compensatory hours	220.10	326.60	79.20	85.60	95.20
CCTV compensatory hours	225.3	35.2	76.7	8.5	1.3
IDS normalization factor	1.85	1.85	1.85	1.85	1.85
CCTV normalization factor	1.4	1.2	1.2	1.2	1.2
Index Value	**0.024**	**0.034**	**0.038**	**0.038**	**0.024**

Licensee Comments: none

Personnel Screening Program

Thresholds: White > 2.0 Yellow > 5.0

Notes

Personnel Screening Program	4Q/99	1Q/00	2Q/00	3Q/00	4Q/00
Program failures	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

FFD/Personnel Reliability

Thresholds: White > 2.0 Yellow > 5.0

Notes

FFD/Personnel Reliability	4Q/99	1Q/00	2Q/00	3Q/00	4Q/00
Program Failures	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Last Modified: March 28, 2002

Palo Verde 1

1Q/2001 Performance Indicators

Licensee's General Comments: none

Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

Notes

Unplanned Scrams per 7000 Critical Hrs	4Q/99	1Q/00	2Q/00	3Q/00	4Q/00	1Q/01
Unplanned scrams	0	0	0	0	0	0
Critical hours	1339.1	2184.0	2184.0	2208.0	2208.0	2136.0
Indicator value	**0.9**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

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	4Q/99	1Q/00	2Q/00	3Q/00	4Q/00	1Q/01
Scrams	0	0	0	0	0	0
Indicator value	**1.0**	**1.0**	**1.0**	**1.0**	**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	4Q/99	1Q/00	2Q/00	3Q/00	4Q/00	1Q/01
Unplanned power changes	0	0	1.0	0	0	0
Critical hours	1339.1	2184.0	2184.0	2208.0	2208.0	2136.0
Indicator value	**0**	**0**	**0.9**	**0.9**	**0.8**	**0.8**

Licensee Comments: none

Safety System Unavailability, Emergency AC Power

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

Notes

Safety System Unavailability, Emergency AC Power	4Q/99	1Q/00	2Q/00	3Q/00	4Q/00	1Q/01
Train 1						
Planned unavailable hours	0	35.35	1.32	17.37	0	18.63
Unplanned unavailable hours	0	0	0	0	0	0
Fault exposure hours	0	0	0	0	0	0
Effective Reset hours	0	0	0	0	0	0
Required hours	2208.00	2184.00	2184.00	2208.00	2208.00	2160.00
Train 2						
Planned unavailable hours	0	22.28	0	20.62	6.30	15.20
Unplanned unavailable hours	0	10.34	0	0	0	0
Fault exposure hours	0	0	0	0	0	0
Effective Reset hours	0	0	0	0	0	0
Required hours	2208.00	2184.00	2184.00	2208.00	2208.00	2160.00
Indicator value	**0.6%**	**0.7%**	**0.6%**	**0.6%**	**0.5%**	**0.6%**

Licensee Comments: none

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)	4Q/99	1Q/00	2Q/00	3Q/00	4Q/00	1Q/01
Train 1						
Planned unavailable hours	2.09	21.12	15.34	11.85	7.54	23.28
Unplanned unavailable hours	6.80	0	0	0	0	0
Fault exposure hours	0	0	0	0	0	0
Effective Reset hours	0	0	0	0	0	0
Required hours	1339.10	2184.00	2184.00	2208.00	2208.00	2136.00
Train 2						
Planned unavailable hours	10.84	16.75	3.53	17.08	18.21	38.64
Unplanned unavailable hours	13.28	0	0	0	0	0
Fault exposure hours	0	0	0	0	0	0
Effective Reset hours	0	0	0	0	0	0
Required hours	1339.10	2184.00	2184.00	2208.00	2208.00	2136.00
Indicator value	**1.1%**	**1.1%**	**1.1%**	**1.1%**	**1.1%**	**1.1%**

Licensee Comments: none

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)	4Q/99	1Q/00	2Q/00	3Q/00	4Q/00	1Q/01
Train 1						
Planned unavailable hours	3.60	22.40	9.20	16.05	1.41	18.67
Unplanned unavailable hours	6.80	12.00	4.85	0	1.45	0
Fault exposure hours	0	0	0	0	0	0
Effective Reset hours	0	0	0	0	0	0
Required hours	1339.10	2184.00	2184.00	2208.00	2208.00	2136.00
Train 2						
Planned unavailable hours	0	13.67	0	10.45	6.30	11.05
Unplanned unavailable hours	13.28	0	0	0	0	0
Fault exposure hours	0	0	0	0	0	0
Effective Reset hours	0	0	0	0	0	0
Required hours	1339.10	2184.00	2184.00	2208.00	2208.00	2136.00
Train 3						
Planned unavailable hours	0.48	0.33	11.43	0.43	0.25	0.45
Unplanned unavailable hours	0	0	0	0	0	0
Fault exposure hours	0	0	0	0	0	0
Effective Reset hours	0	0	0	0	0	0
Required hours	1339.10	2184.00	2184.00	2208.00	2208.00	2136.00
Indicator value	**0.5%**	**0.5%**	**0.5%**	**0.5%**	**0.5%**	**0.5%**

Licensee Comments: none

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	4Q/99	1Q/00	2Q/00	3Q/00	4Q/00	1Q/01
Train 1						
Planned unavailable hours	14.36	39.92	5.82	12.13	9.64	20.38
Unplanned unavailable hours	6.80	0	0	0	0	0
Fault exposure hours	0	0	0	0	0	0
Effective Reset hours	0	0	0	0	0	0
Required hours	1386.70	2184.00	2184.00	2208.00	2208.00	2157.05
Train 2						
Planned unavailable hours	9.57	19.73	4.31	11.57	13.91	19.01
Unplanned unavailable hours	17.48	0	0	0	0	0
Fault exposure hours	0	0	0	0	0	0
Effective Reset hours	0	0	0	0	0	0
Required hours	1386.70	2184.00	2184.00	2208.00	2208.00	2157.05
Train 3						
Planned unavailable hours	0	0	0	0	0	0
Unplanned unavailable hours	0	0	0	0	0	0
Fault exposure hours	0	0	0	0	0	0
Effective Reset hours	0	0	0	0	0	0
Required hours	474.75	0	0	0	0	2.95
Train 4						
Planned unavailable hours	0	0	0	0	0	0
Unplanned unavailable hours	0	0	0	0	0	0
Fault exposure hours	0	0	0	0	0	0
Effective Reset hours	0	0	0	0	0	0
Required hours	463.03	0	0	0	0	0
Indicator value			**0.7%**	**0.7%**	**0.6%**	**0.6%**

Licensee Comments: none

Thresholds: White > 5.0

Notes

Safety System Functional Failures (PWR)	4Q/99	1Q/00	2Q/00	3Q/00	4Q/00	1Q/01
Safety System Functional Failures	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Reactor Coolant System Activity

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Activity	10/99	11/99	12/99	1/00	2/00	3/00	4/00	5/00	6/00	7/00	8/00	9/00
Maximum activity	0.002000	0.001000	0.001000	0.001000	0.001000	0.001000	0.002000	0.002000	0.002000	0.002000	0.002000	0.002000
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	**0.2**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**

Reactor Coolant System Activity	10/00	11/00	12/00	1/01	2/01	3/01
Maximum activity	0.002000	0.002000	0.004000	0.002000	0.002000	0.023000
Technical specification limit	1.0	1.0	1.0	1.0	1.0	1.0
Indicator value	**0.2**	**0.2**	**0.4**	**0.2**	**0.2**	**2.3**

Licensee Comments: none

Reactor Coolant System Leakage

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Leakage	10/99	11/99	12/99	1/00	2/00	3/00	4/00	5/00	6/00	7/00	8/00	9/00
Maximum leakage	0.040	0.020	0.020	0.036	0.022	0.056	0.024	0.066	0.050	0.068	0.040	0.097
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	**0.4**	**0.2**	**0.2**	**0.4**	**0.2**	**0.6**	**0.2**	**0.7**	**0.5**	**0.7**	**0.4**	**1.0**

Reactor Coolant System Leakage	10/00	11/00	12/00	1/01	2/01	3/01
Maximum leakage	0.030	0.038	0.028	0.021	0.043	0.123
Technical specification limit	10.0	10.0	10.0	10.0	10.0	10.0
Indicator value	**0.3**	**0.4**	**0.3**	**0.2**	**0.4**	**1.2**

Licensee Comments: none

Drill/Exercise Performance

Thresholds: White < 90.0% Yellow < 70.0%

Notes

Drill/Exercise Performance	4Q/99	1Q/00	2Q/00	3Q/00	4Q/00	1Q/01
Successful opportunities	3.0	29.0	22.0	95.0	0	20.0
Total opportunities	3.0	32.0	22.0	100.0	0	20.0
Indicator value	**93.8%**	**92.5%**	**94.4%**	**95.2%**	**95.2%**	**95.4%**

Licensee Comments: none

ERO Drill Participation

Thresholds: White < 80.0% Yellow < 60.0%

Notes

ERO Drill Participation	4Q/99	1Q/00	2Q/00	3Q/00	4Q/00	1Q/01
Participating Key personnel	65.0	132.0	166.0	165.0	163.0	166.0
Total Key personnel	68.0	132.0	167.0	167.0	174.0	175.0
Indicator value	**95.6%**	**100.0%**	**99.4%**	**98.8%**	**93.7%**	**94.9%**

Licensee Comments: none

Alert & Notification System

Thresholds: White < 94.0% Yellow < 90.0%

Notes

Alert & Notification System	4Q/99	1Q/00	2Q/00	3Q/00	4Q/00	1Q/01
Successful siren-tests	426	390	385	347	467	382
Total sirens-tests	429	390	390	351	468	390
Indicator value	**99.5%**	**99.8%**	**99.5%**	**99.2%**	**99.4%**	**98.9%**

Licensee Comments: none

Occupational Exposure Control Effectiveness

Thresholds: White > 2.0 Yellow > 5.0

Notes

Occupational Exposure Control Effectiveness	4Q/99	1Q/00	2Q/00	3Q/00	4Q/00	1Q/01
High radiation area occurrences	1	0	1	0	0	0
Very high radiation area occurrences	0	0	0	0	0	0
Unintended exposure occurrences	0	0	0	0	0	0
Indicator value	**1**	**1**	**2**	**2**	**1**	**1**

Licensee Comments:

2Q/00: During a routine tour of the Unit 3 "B" LPSI Pump Room on 5/4/00, a hot spot was identified on a cyclone separator reading 1,200 mrem/hr at one foot. The event was documented and placed in the corrective action system. The associated corrective action documents were subsequently reviewed during an NRC inspection and the event was characterized by the NRC as a failure to perform adequate surveys of the cyclone separator resulting in untimely LHRA posting of this area. A PI data change is being made to acknowledge the NRC finding. The data change did not affect the color of the performance indicator.

RETS/ODCM Radiological Effluent

Thresholds: White > 1.0 Yellow > 3.0

Notes

RETS/ODCM Radiological Effluent	4Q/99	1Q/00	2Q/00	3Q/00	4Q/00	1Q/01
RETS/ODCM occurrences	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Protected Area Security Performance Index

Thresholds: White > 0.080

Notes

Protected Area Security Performance Index	4Q/99	1Q/00	2Q/00	3Q/00	4Q/00	1Q/01
IDS compensatory hours	220.10	326.60	79.20	85.60	95.20	71.50
CCTV compensatory hours	225.3	35.2	76.7	8.5	1.3	19.8
IDS normalization factor	1.85	1.85	1.85	1.85	1.85	1.85
CCTV normalization factor	1.4	1.2	1.2	1.2	1.2	1.2
Index Value	**0.024**	**0.034**	**0.038**	**0.038**	**0.024**	**0.015**

Licensee Comments: none

Personnel Screening Program

Thresholds: White > 2.0 Yellow > 5.0

Notes

Personnel Screening Program	4Q/99	1Q/00	2Q/00	3Q/00	4Q/00	1Q/01
Program failures	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

FFD/Personnel Reliability

Thresholds: White > 2.0 Yellow > 5.0

Notes

FFD/Personnel Reliability	4Q/99	1Q/00	2Q/00	3Q/00	4Q/00	1Q/01
Program Failures	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

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

Last Modified: March 28, 2002

Palo Verde 1

2Q/2001 Performance Indicators

Licensee's General Comments: none

Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

Notes

Unplanned Scrams per 7000 Critical Hrs	4Q/99	1Q/00	2Q/00	3Q/00	4Q/00	1Q/01	2Q/01
Unplanned scrams	0	0	0	0	0	0	0
Critical hours	1339.1	2184.0	2184.0	2208.0	2208.0	2136.0	1187.0
Indicator value	**0.9**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

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	4Q/99	1Q/00	2Q/00	3Q/00	4Q/00	1Q/01	2Q/01
Scrams	0	0	0	0	0	0	0
Indicator value	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**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	4Q/99	1Q/00	2Q/00	3Q/00	4Q/00	1Q/01	2Q/01
Unplanned power changes	0	0	1.0	0	0	0	0
Critical hours	1339.1	2184.0	2184.0	2208.0	2208.0	2136.0	1187.0
Indicator value	**0**	**0**	**0.9**	**0.9**	**0.8**	**0.8**	**0**

Licensee Comments: none

Safety System Unavailability, Emergency AC Power

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

Notes

Safety System Unavailability, Emergency AC Power	4Q/99	1Q/00	2Q/00	3Q/00	4Q/00	1Q/01	2Q/01
Train 1							
Planned unavailable hours	0	35.35	1.32	17.37	0	18.63	1.27
Unplanned unavailable hours	0	0	0	0	0	0	0
Fault exposure hours	0	0	0	0	0	0	0
Effective Reset hours	0	0	0	0	0	0	0
Required hours	2208.00	2184.00	2184.00	2208.00	2208.00	2160.00	2184.00
Train 2							
Planned unavailable hours	0	22.28	0	20.62	6.30	15.20	0
Unplanned unavailable hours	0	10.34	0	0	0	0	0
Fault exposure hours	0	0	0	0	0	0	0
Effective Reset hours	0	0	0	0	0	0	0
Required hours	2208.00	2184.00	2184.00	2208.00	2208.00	2160.00	2184.00
Indicator value	**0.6%**	**0.7%**	**0.6%**	**0.6%**	**0.5%**	**0.6%**	**0.5%**

Licensee Comments: none

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)	4Q/99	1Q/00	2Q/00	3Q/00	4Q/00	1Q/01	2Q/01
Train 1							
Planned unavailable hours	2.09	21.12	15.34	11.85	7.54	23.28	1.97
Unplanned unavailable hours	6.80	0	0	0	0	0	0
Fault exposure hours	0	0	0	0	0	0	0
Effective Reset hours	0	0	0	0	0	0	0
Required hours	1339.10	2184.00	2184.00	2208.00	2208.00	2136.00	1186.95
Train 2							
Planned unavailable hours	10.84	16.75	3.53	17.08	18.21	38.64	22.10
Unplanned unavailable hours	13.28	0	0	0	0	0	0
Fault exposure hours	0	0	0	0	0	0	0
Effective Reset hours	0	0	0	0	0	0	0
Required hours	1339.10	2184.00	2184.00	2208.00	2208.00	2136.00	1186.95
Indicator value	**1.1%**	**1.1%**	**1.1%**	**1.1%**	**1.1%**	**1.1%**	**1.0%**

Licensee Comments:

2Q/01: The number of planned unavailability hours for HPSI train "B" was originally incorrectly counted. The number reported in 2Q2001 should have been 22.1 instead of 18.53. The change did not affect the "color" of the indicator.

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)	4Q/99	1Q/00	2Q/00	3Q/00	4Q/00	1Q/01	2Q/01
Train 1							
Planned unavailable hours	3.60	22.40	9.20	16.05	1.41	18.67	3.66
Unplanned unavailable hours	6.80	12.00	4.85	0	1.45	0	8.70
Fault exposure hours	0	0	0	0	0	0	0
Effective Reset hours	0	0	0	0	0	0	0
Required hours	1339.10	2184.00	2184.00	2208.00	2208.00	2136.00	1186.95
Train 2							
Planned unavailable hours	0	13.67	0	10.45	6.30	11.05	0
Unplanned unavailable hours	13.28	0	0	0	0	0	0
Fault exposure hours	0	0	0	0	0	0	0
Effective Reset hours	0	0	0	0	0	0	0
Required hours	1339.10	2184.00	2184.00	2208.00	2208.00	2136.00	1186.95
Train 3							
Planned unavailable hours	0.48	0.33	11.43	0.43	0.25	0.45	0.88
Unplanned unavailable hours	0	0	0	0	0	0	0
Fault exposure hours	0	0	0	0	0	0	0
Effective Reset hours	0	0	0	0	0	0	0
Required hours	1339.10	2184.00	2184.00	2208.00	2208.00	2136.00	1186.95
Indicator value	**0.5%**	**0.5%**	**0.5%**	**0.5%**	**0.5%**	**0.5%**	**0.5%**

Licensee Comments: none

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	4Q/99	1Q/00	2Q/00	3Q/00	4Q/00	1Q/01	2Q/01
Train 1							
Planned unavailable hours	14.36	39.92	5.82	12.13	9.64	20.38	6.37
Unplanned unavailable hours	6.80	0	0	0	0	0	0
Fault exposure hours	0	0	0	0	0	0	0
Effective Reset hours	0	0	0	0	0	0	0
Required hours	1386.70	2184.00	2184.00	2208.00	2208.00	2157.05	1239.10
Train 2							
Planned unavailable hours	9.57	19.73	4.31	11.57	13.91	19.01	9.58
Unplanned unavailable hours	17.48	0	0	0	0	0	0
Fault exposure hours	0	0	0	0	0	0	0
Effective Reset hours	0	0	0	0	0	0	0
Required hours	1386.70	2184.00	2184.00	2208.00	2208.00	2157.05	1239.10
Train 3							
Planned unavailable hours	0	0	0	0	0	0	0.28
Unplanned unavailable hours	0	0	0	0	0	0	0
Fault exposure hours	0	0	0	0	0	0	0
Effective Reset hours	0	0	0	0	0	0	0
Required hours	474.75	0	0	0	0	2.95	425.22
Train 4							
Planned unavailable hours	0	0	0	0	0	0	0
Unplanned unavailable hours	0	0	0	0	0	0	0
Fault exposure hours	0	0	0	0	0	0	0
Effective Reset hours	0	0	0	0	0	0	0
Required hours	463.03	0	0	0	0	0	99.33
Indicator value			**0.7%**	**0.7%**	**0.6%**	**0.6%**	**0.6%**

Licensee Comments: none

Thresholds: White > 5.0

Notes

Safety System Functional Failures (PWR)	4Q/99	1Q/00	2Q/00	3Q/00	4Q/00	1Q/01	2Q/01
Safety System Functional Failures	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Reactor Coolant System Activity

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Activity	10/99	11/99	12/99	1/00	2/00	3/00	4/00	5/00	6/00	7/00	8/00	9/00
Maximum activity	0.002000	0.001000	0.001000	0.001000	0.001000	0.001000	0.002000	0.002000	0.002000	0.002000	0.002000	0.002000
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	**0.2**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**

Reactor Coolant System Activity	10/00	11/00	12/00	1/01	2/01	3/01	4/01	5/01	6/01
Maximum activity	0.002000	0.002000	0.004000	0.002000	0.002000	0.023000	N/A	0.001000	0.001000
Technical specification limit	1.0	1.0	1.0	1.0	1.0	1.0	N/A	1.0	1.0
Indicator value	**0.2**	**0.2**	**0.4**	**0.2**	**0.2**	**2.3**	**N/A**	**0.1**	**0.1**

Licensee Comments:

6/01: Unit was shutdown for a refueling outage during the month of April

Reactor Coolant System Leakage

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Leakage	10/99	11/99	12/99	1/00	2/00	3/00	4/00	5/00	6/00	7/00	8/00	9/00
Maximum leakage	0.040	0.020	0.020	0.036	0.022	0.056	0.024	0.066	0.050	0.068	0.040	0.097
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	**0.4**	**0.2**	**0.2**	**0.4**	**0.2**	**0.6**	**0.2**	**0.7**	**0.5**	**0.7**	**0.4**	**1.0**

Reactor Coolant System Leakage	10/00	11/00	12/00	1/01	2/01	3/01	4/01	5/01	6/01
Maximum leakage	0.030	0.038	0.028	0.021	0.043	0.123	N/A	0.078	0.032
Technical specification limit	10.0	10.0	10.0	10.0	10.0	10.0	N/A	10.0	10.0
Indicator value	**0.3**	**0.4**	**0.3**	**0.2**	**0.4**	**1.2**	**N/A**	**0.8**	**0.3**

Licensee Comments:

6/01: Unit was shutdown for a refueling outage during the month of April

Drill/Exercise Performance

Thresholds: White < 90.0% Yellow < 70.0%

Notes

Drill/Exercise Performance	4Q/99	1Q/00	2Q/00	3Q/00	4Q/00	1Q/01	2Q/01
Successful opportunities	3.0	29.0	22.0	95.0	0	20.0	0
Total opportunities	3.0	32.0	22.0	100.0	0	20.0	0
Indicator value	**93.8%**	**92.5%**	**94.4%**	**95.2%**	**95.2%**	**95.4%**	**95.4%**

Licensee Comments: none

Thresholds: White < 80.0% Yellow < 60.0%

Notes

ERO Drill Participation	4Q/99	1Q/00	2Q/00	3Q/00	4Q/00	1Q/01	2Q/01
Participating Key personnel	65.0	132.0	166.0	165.0	163.0	166.0	160.0
Total Key personnel	68.0	132.0	167.0	167.0	174.0	175.0	165.0
Indicator value	**95.6%**	**100.0%**	**99.4%**	**98.8%**	**93.7%**	**94.9%**	**97.0%**

Licensee Comments: none

Alert & Notification System

Thresholds: White < 94.0% Yellow < 90.0%

Notes

Alert & Notification System	4Q/99	1Q/00	2Q/00	3Q/00	4Q/00	1Q/01	2Q/01
Successful siren-tests	426	390	385	347	467	382	382
Total sirens-tests	429	390	390	351	468	390	390
Indicator value	**99.5%**	**99.8%**	**99.5%**	**99.2%**	**99.4%**	**98.9%**	**98.7%**

Licensee Comments: none

Occupational Exposure Control Effectiveness

Thresholds: White > 2.0 Yellow > 5.0

Notes

Occupational Exposure Control Effectiveness	4Q/99	1Q/00	2Q/00	3Q/00	4Q/00	1Q/01	2Q/01
High radiation area occurrences	1	0	1	0	0	0	1
Very high radiation area occurrences	0	0	0	0	0	0	0
Unintended exposure occurrences	0	0	0	0	0	0	0
Indicator value	**1**	**1**	**2**	**2**	**1**	**1**	**1**

Licensee Comments:

2Q/00: During a routine tour of the Unit 3 "B" LPSI Pump Room on 5/4/00, a hot spot was identified on a cyclone separator reading 1,200 mrem/hr at one foot. The event was documented and placed in the corrective action system. The associated corrective action documents were subsequently reviewed during an NRC inspection and the event was characterized by the NRC as a failure to perform adequate surveys of the cyclone separator resulting in untimely LHRA posting of this area. A PI data change is being made to acknowledge the NRC finding. The data change did not affect the color of the performance indicator.

RETS/ODCM Radiological Effluent

Thresholds: White > 1.0 Yellow > 3.0

Notes

RETS/ODCM Radiological Effluent	4Q/99	1Q/00	2Q/00	3Q/00	4Q/00	1Q/01	2Q/01
RETS/ODCM occurrences	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Protected Area Security Performance Index

Thresholds: White > 0.080

Notes

Protected Area Security Performance Index	4Q/99	1Q/00	2Q/00	3Q/00	4Q/00	1Q/01	2Q/01
IDS compensatory hours	220.10	326.60	79.20	85.60	95.20	71.50	109.90
CCTV compensatory hours	225.3	35.2	76.7	8.5	1.3	19.8	82.6
IDS normalization factor	1.85	1.85	1.85	1.85	1.85	1.85	1.85
CCTV normalization factor	1.4	1.2	1.2	1.2	1.2	1.2	1.2
Index Value	**0.024**	**0.034**	**0.038**	**0.038**	**0.024**	**0.015**	**0.017**

Licensee Comments: none

Personnel Screening Program

Thresholds: White > 2.0 Yellow > 5.0

Notes

Personnel Screening Program	4Q/99	1Q/00	2Q/00	3Q/00	4Q/00	1Q/01	2Q/01
Program failures	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

FFD/Personnel Reliability

Thresholds: White > 2.0 Yellow > 5.0

Notes

FFD/Personnel Reliability	4Q/99	1Q/00	2Q/00	3Q/00	4Q/00	1Q/01	2Q/01
Program Failures	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

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

Last Modified: March 27, 2002

Palo Verde 1

3Q/2001 Performance Indicators

Licensee's General Comments: none

Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

Notes

Unplanned Scrams per 7000 Critical Hrs	4Q/99	1Q/00	2Q/00	3Q/00	4Q/00	1Q/01	2Q/01	3Q/01
Unplanned scrams	0	0	0	0	0	0	0	0
Critical hours	1339.1	2184.0	2184.0	2208.0	2208.0	2136.0	1187.0	2208.0
Indicator value	**0.9**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

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	4Q/99	1Q/00	2Q/00	3Q/00	4Q/00	1Q/01	2Q/01	3Q/01
Scrams	0	0	0	0	0	0	0	0
Indicator value	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**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	4Q/99	1Q/00	2Q/00	3Q/00	4Q/00	1Q/01	2Q/01	3Q/01
Unplanned power changes	0	0	1.0	0	0	0	0	0
Critical hours	1339.1	2184.0	2184.0	2208.0	2208.0	2136.0	1187.0	2208.0
Indicator value	**0**	**0**	**0.9**	**0.9**	**0.8**	**0.8**	**0**	**0**

Licensee Comments: none

Safety System Unavailability, Emergency AC Power

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

Notes

Safety System Unavailability, Emergency AC Power	4Q/99	1Q/00	2Q/00	3Q/00	4Q/00	1Q/01	2Q/01	3Q/01
Train 1								
Planned unavailable hours	0	35.35	1.32	17.37	0	18.63	1.27	21.58
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	2208.00	2184.00	2184.00	2208.00	2208.00	2160.00	2184.00	2208.00
Train 2								
Planned unavailable hours	0	22.28	0	20.62	6.30	15.20	0	47.65
Unplanned unavailable hours	0	10.34	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	2208.00	2184.00	2184.00	2208.00	2208.00	2160.00	2184.00	2208.00
Indicator value	**0.6%**	**0.7%**	**0.6%**	**0.6%**	**0.5%**	**0.6%**	**0.5%**	**0.6%**

Licensee Comments: none

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)	4Q/99	1Q/00	2Q/00	3Q/00	4Q/00	1Q/01	2Q/01	3Q/01
Train 1								
Planned unavailable hours	2.09	21.12	15.34	11.85	7.54	23.28	1.97	15.11
Unplanned unavailable hours	6.80	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	1339.10	2184.00	2184.00	2208.00	2208.00	2136.00	1186.95	2208.00
Train 2								
Planned unavailable hours	10.84	16.75	3.53	17.08	18.21	38.64	22.10	38.95
Unplanned unavailable hours	13.28	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	1339.10	2184.00	2184.00	2208.00	2208.00	2136.00	1186.95	2208.00
Indicator value	**1.1%**	**1.1%**	**1.1%**	**1.1%**	**1.1%**	**1.1%**	**1.0%**	**1.0%**

Licensee Comments:

2Q/01: The number of planned unavailability hours for HPSI train "B" was originally incorrectly counted. The number reported in 2Q2001 should have been 22.1 instead of 18.53. The change did not affect the "color" of the indicator.

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)	4Q/99	1Q/00	2Q/00	3Q/00	4Q/00	1Q/01	2Q/01	3Q/01
Train 1								
Planned unavailable hours	3.60	22.40	9.20	16.05	1.41	18.67	3.66	8.15
Unplanned unavailable hours	6.80	12.00	4.85	0	1.45	0	8.70	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	1339.10	2184.00	2184.00	2208.00	2208.00	2136.00	1186.95	2208.00
Train 2								
Planned unavailable hours	0	13.67	0	10.45	6.30	11.05	0	35.65
Unplanned unavailable hours	13.28	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	1339.10	2184.00	2184.00	2208.00	2208.00	2136.00	1186.95	2208.00
Train 3								
Planned unavailable hours	0.48	0.33	11.43	0.43	0.25	0.45	0.88	0.37
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	1339.10	2184.00	2184.00	2208.00	2208.00	2136.00	1186.95	2208.00
Indicator value	**0.5%**	**0.5%**	**0.5%**	**0.5%**	**0.5%**	**0.5%**	**0.5%**	**0.5%**

Licensee Comments: none

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	4Q/99	1Q/00	2Q/00	3Q/00	4Q/00	1Q/01	2Q/01	3Q/01
Train 1								
Planned unavailable hours	14.36	39.92	5.82	12.13	9.64	20.38	6.37	13.83
Unplanned unavailable hours	6.80	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	1386.70	2184.00	2184.00	2208.00	2208.00	2157.05	1239.10	2208.00
Train 2								
Planned unavailable hours	9.57	19.73	4.31	11.57	13.91	19.01	9.58	35.83
Unplanned unavailable hours	17.48	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	1386.70	2184.00	2184.00	2208.00	2208.00	2157.05	1239.10	2208.00
Train 3								
Planned unavailable hours	0	0	0	0	0	0	0.28	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	474.75	0	0	0	0	2.95	425.22	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	463.03	0	0	0	0	0	99.33	0
Indicator value			**0.7%**	**0.7%**	**0.6%**	**0.6%**	**0.6%**	**0.6%**

Licensee Comments: none

Thresholds: White > 5.0

Notes

Safety System Functional Failures (PWR)	4Q/99	1Q/00	2Q/00	3Q/00	4Q/00	1Q/01	2Q/01	3Q/01
Safety System Functional Failures	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Reactor Coolant System Activity

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Activity	10/99	11/99	12/99	1/00	2/00	3/00	4/00	5/00	6/00	7/00	8/00	9/00
Maximum activity	0.002000	0.001000	0.001000	0.001000	0.001000	0.001000	0.002000	0.002000	0.002000	0.002000	0.002000	0.002000
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	**0.2**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**

Reactor Coolant System Activity	10/00	11/00	12/00	1/01	2/01	3/01	4/01	5/01	6/01	7/01	8/01	9/01
Maximum activity	0.002000	0.002000	0.004000	0.002000	0.002000	0.023000	N/A	0.001000	0.001000	0.001000	0.001000	0.001000
Technical specification limit	1.0	1.0	1.0	1.0	1.0	1.0	N/A	1.0	1.0	1.0	1.0	1.0
Indicator value	**0.2**	**0.2**	**0.4**	**0.2**	**0.2**	**2.3**	**N/A**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**

Licensee Comments: none

Reactor Coolant System Leakage

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Leakage	10/99	11/99	12/99	1/00	2/00	3/00	4/00	5/00	6/00	7/00	8/00	9/00
Maximum leakage	0.040	0.020	0.020	0.036	0.022	0.056	0.024	0.066	0.050	0.068	0.040	0.097
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	**0.4**	**0.2**	**0.2**	**0.4**	**0.2**	**0.6**	**0.2**	**0.7**	**0.5**	**0.7**	**0.4**	**1.0**

Reactor Coolant System Leakage	10/00	11/00	12/00	1/01	2/01	3/01	4/01	5/01	6/01	7/01	8/01	9/01
Maximum leakage	0.030	0.038	0.028	0.021	0.043	0.123	N/A	0.078	0.032	0.046	0.046	0.057
Technical specification limit	10.0	10.0	10.0	10.0	10.0	10.0	N/A	10.0	10.0	10.0	10.0	10.0
Indicator value	**0.3**	**0.4**	**0.3**	**0.2**	**0.4**	**1.2**	**N/A**	**0.8**	**0.3**	**0.5**	**0.5**	**0.6**

Licensee Comments: none

Drill/Exercise Performance

Thresholds: White < 90.0% Yellow < 70.0%

Notes

Drill/Exercise Performance	4Q/99	1Q/00	2Q/00	3Q/00	4Q/00	1Q/01	2Q/01	3Q/01
Successful opportunities	3.0	29.0	22.0	95.0	0	20.0	0	9.0
Total opportunities	3.0	32.0	22.0	100.0	0	20.0	0	9.0
Indicator value	**93.8%**	**92.5%**	**94.4%**	**95.2%**	**95.2%**	**95.4%**	**95.4%**	**95.7%**

Licensee Comments: none

ERO Drill Participation

Thresholds: White < 80.0% Yellow < 60.0%

Notes

ERO Drill Participation	4Q/99	1Q/00	2Q/00	3Q/00	4Q/00	1Q/01	2Q/01	3Q/01
Participating Key personnel	65.0	132.0	166.0	165.0	163.0	166.0	160.0	176.0
Total Key personnel	68.0	132.0	167.0	167.0	174.0	175.0	165.0	182.0
Indicator value	**95.6%**	**100.0%**	**99.4%**	**98.8%**	**93.7%**	**94.9%**	**97.0%**	**96.7%**

Licensee Comments: none

Alert & Notification System

Thresholds: White < 94.0% Yellow < 90.0%

Notes

Alert & Notification System	4Q/99	1Q/00	2Q/00	3Q/00	4Q/00	1Q/01	2Q/01	3Q/01
Successful siren-tests	426	390	385	347	467	382	382	375
Total sirens-tests	429	390	390	351	468	390	390	390
Indicator value	**99.5%**	**99.8%**	**99.5%**	**99.2%**	**99.4%**	**98.9%**	**98.7%**	**98.0%**

Licensee Comments:

3Q/01: The number of successful ANS siren tests was originally incorrectly counted. The number reported in the 3Q2001 should have been 375 instead of 376. The change did not affect the "color" of the indicator.

Occupational Exposure Control Effectiveness

Thresholds: White > 2.0 Yellow > 5.0

Notes

Occupational Exposure Control Effectiveness	4Q/99	1Q/00	2Q/00	3Q/00	4Q/00	1Q/01	2Q/01	3Q/01
High radiation area occurrences	1	0	1	0	0	0	1	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**	**2**	**2**	**1**	**1**	**1**	**1**

Licensee Comments: none

RETS/ODCM Radiological Effluent

Thresholds: White > 1.0 Yellow > 3.0

Notes

RETS/ODCM Radiological Effluent	4Q/99	1Q/00	2Q/00	3Q/00	4Q/00	1Q/01	2Q/01	3Q/01
RETS/ODCM occurrences	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Protected Area Security Performance Index

Thresholds: White > 0.080

Notes

Protected Area Security Performance Index	4Q/99	1Q/00	2Q/00	3Q/00	4Q/00	1Q/01	2Q/01	3Q/01
IDS compensatory hours	220.10	326.60	79.20	85.60	95.20	71.50	109.90	71.00
CCTV compensatory hours	225.3	35.2	76.7	8.5	1.3	19.8	82.6	69.5
IDS normalization factor	1.85	1.85	1.85	1.85	1.85	1.85	1.85	1.85
CCTV normalization factor	1.4	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Index Value	**0.024**	**0.034**	**0.038**	**0.038**	**0.024**	**0.015**	**0.017**	**0.019**

Licensee Comments: none

Personnel Screening Program

Thresholds: White > 2.0 Yellow > 5.0

Notes

Personnel Screening Program	4Q/99	1Q/00	2Q/00	3Q/00	4Q/00	1Q/01	2Q/01	3Q/01
Program failures	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

FFD/Personnel Reliability

Thresholds: White > 2.0 Yellow > 5.0

Notes

FFD/Personnel Reliability	4Q/99	1Q/00	2Q/00	3Q/00	4Q/00	1Q/01	2Q/01	3Q/01
Program Failures	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

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

Last Modified: March 26, 2002

Palo Verde 1

4Q/2001 Performance Indicators

Licensee's General Comments: none

Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

Notes

Unplanned Scrams per 7000 Critical Hrs	1Q/00	2Q/00	3Q/00	4Q/00	1Q/01	2Q/01	3Q/01	4Q/01
Unplanned scrams	0	0	0	0	0	0	0	0
Critical hours	2184.0	2184.0	2208.0	2208.0	2136.0	1187.0	2208.0	2208.0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

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/00	2Q/00	3Q/00	4Q/00	1Q/01	2Q/01	3Q/01	4Q/01
Scrams	0	0	0	0	0	0	0	0
Indicator value	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**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	1Q/00	2Q/00	3Q/00	4Q/00	1Q/01	2Q/01	3Q/01	4Q/01
Unplanned power changes	0	1.0	0	0	0	0	0	1.0
Critical hours	2184.0	2184.0	2208.0	2208.0	2136.0	1187.0	2208.0	2208.0
Indicator value	**0**	**0.9**	**0.9**	**0.8**	**0.8**	**0**	**0**	**0.9**

Licensee Comments: none

Safety System Unavailability, Emergency AC Power

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

Notes

Safety System Unavailability, Emergency AC Power	1Q/00	2Q/00	3Q/00	4Q/00	1Q/01	2Q/01	3Q/01	4Q/01
Train 1								
Planned unavailable hours	35.35	1.32	17.37	0	18.63	1.27	21.58	0.08
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	2184.00	2184.00	2208.00	2208.00	2160.00	2184.00	2208.00	2208.00
Train 2								
Planned unavailable hours	22.28	0	20.62	6.30	15.20	0	47.65	0.02
Unplanned unavailable hours	10.34	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	2184.00	2184.00	2208.00	2208.00	2160.00	2184.00	2208.00	2208.00
Indicator value	**0.7%**	**0.6%**	**0.6%**	**0.5%**	**0.6%**	**0.5%**	**0.6%**	**0.5%**

Licensee Comments: none

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/00	2Q/00	3Q/00	4Q/00	1Q/01	2Q/01	3Q/01	4Q/01
Train 1								
Planned unavailable hours	21.12	15.34	11.85	7.54	23.28	1.97	15.11	2.57
Unplanned unavailable hours	0	0	0	0	0	0	0	13.38
Fault exposure hours	0	0	0	0	0	0	0	0
Effective Reset hours	0	0	0	0	0	0	0	0
Required hours	2184.00	2184.00	2208.00	2208.00	2136.00	1186.95	2208.00	2208.00
Train 2								
Planned unavailable hours	16.75	3.53	17.08	18.21	38.64	22.10	38.95	10.71
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	2184.00	2184.00	2208.00	2208.00	2136.00	1186.95	2208.00	2208.00
Indicator value	**1.1%**	**1.1%**	**1.1%**	**1.1%**	**1.1%**	**1.0%**	**1.0%**	**1.0%**

Licensee Comments:

2Q/01: The number of planned unavailability hours for HPSI train "B" was originally incorrectly counted. The number reported in 2Q2001 should have been 22.1 instead of 18.53. The change did not affect the "color" of the indicator.

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)	1Q/00	2Q/00	3Q/00	4Q/00	1Q/01	2Q/01	3Q/01	4Q/01
Train 1								
Planned unavailable hours	22.40	9.20	16.05	1.41	18.67	3.66	8.15	0.75
Unplanned unavailable hours	12.00	4.85	0	1.45	0	8.70	0	13.38
Fault exposure hours	0	0	0	0	0	0	0	0
Effective Reset hours	0	0	0	0	0	0	0	0
Required hours	2184.00	2184.00	2208.00	2208.00	2136.00	1186.95	2208.00	2208.00
Train 2								
Planned unavailable hours	13.67	0	10.45	6.30	11.05	0	35.65	1.40
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	2184.00	2184.00	2208.00	2208.00	2136.00	1186.95	2208.00	2208.00
Train 3								
Planned unavailable hours	0.33	11.43	0.43	0.25	0.45	0.88	0.37	0.23
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	2184.00	2184.00	2208.00	2208.00	2136.00	1186.95	2208.00	2208.00
Indicator value	**0.5%**	**0.5%**	**0.5%**	**0.5%**	**0.5%**	**0.5%**	**0.5%**	**0.5%**

Licensee Comments: none

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	1Q/00	2Q/00	3Q/00	4Q/00	1Q/01	2Q/01	3Q/01	4Q/01
Train 1								
Planned unavailable hours	39.92	5.82	12.13	9.64	20.38	6.37	13.83	5.32
Unplanned unavailable hours	0	0	0	0	0	0	0	13.38
Fault exposure hours	0	0	0	0	0	0	0	0
Effective Reset hours	0	0	0	0	0	0	0	0
Required hours	2184.00	2184.00	2208.00	2208.00	2157.05	1239.10	2208.00	2208.00
Train 2								
Planned unavailable hours	19.73	4.31	11.57	13.91	19.01	9.58	35.83	2.87
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	2184.00	2184.00	2208.00	2208.00	2157.05	1239.10	2208.00	2208.00
Train 3								
Planned unavailable hours	0	0	0	0	0	0.28	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	0	0	0	0	2.95	425.22	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	0	0	0	0	0	99.33	0	0
Indicator value		**0.7%**	**0.7%**	**0.6%**	**0.6%**	**0.6%**	**0.6%**	**0.5%**

Licensee Comments: none

Safety System Functional Failures (PWR)

Thresholds: White > 5.0

Notes

Safety System Functional Failures (PWR)	1Q/00	2Q/00	3Q/00	4Q/00	1Q/01	2Q/01	3Q/01	4Q/01
Safety System Functional Failures	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Reactor Coolant System Activity

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Activity	1/00	2/00	3/00	4/00	5/00	6/00	7/00	8/00	9/00	10/00	11/00	12/00
Maximum activity	0.001000	0.001000	0.001000	0.002000	0.002000	0.002000	0.002000	0.002000	0.002000	0.002000	0.002000	0.004000
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	**0.1**	**0.1**	**0.1**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.4**

Reactor Coolant System Activity	1/01	2/01	3/01	4/01	5/01	6/01	7/01	8/01	9/01	10/01	11/01	12/01
Maximum activity	0.002000	0.002000	0.023000	N/A	0.001000	0.001000	0.001000	0.001000	0.001000	0.001000	0.001000	0.001000
Technical specification limit	1.0	1.0	1.0	N/A	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Indicator value	**0.2**	**0.2**	**2.3**	**N/A**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**

Licensee Comments: none

Reactor Coolant System Leakage

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Leakage	1/00	2/00	3/00	4/00	5/00	6/00	7/00	8/00	9/00	10/00	11/00	12/00
Maximum leakage	0.036	0.022	0.056	0.024	0.066	0.050	0.068	0.040	0.097	0.030	0.038	0.028
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	**0.4**	**0.2**	**0.6**	**0.2**	**0.7**	**0.5**	**0.7**	**0.4**	**1.0**	**0.3**	**0.4**	**0.3**

Reactor Coolant System Leakage	1/01	2/01	3/01	4/01	5/01	6/01	7/01	8/01	9/01	10/01	11/01	12/01
Maximum leakage	0.021	0.043	0.123	N/A	0.078	0.032	0.046	0.046	0.057	0.164	0.075	0.088
Technical specification limit	10.0	10.0	10.0	N/A	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Indicator value	**0.2**	**0.4**	**1.2**	**N/A**	**0.8**	**0.3**	**0.5**	**0.5**	**0.6**	**1.6**	**0.8**	**0.9**

Licensee Comments: none

Drill/Exercise Performance

Thresholds: White < 90.0% Yellow < 70.0%

Notes

Drill/Exercise Performance	1Q/00	2Q/00	3Q/00	4Q/00	1Q/01	2Q/01	3Q/01	4Q/01
Successful opportunities	29.0	22.0	95.0	0	20.0	0	9.0	86.0
Total opportunities	32.0	22.0	100.0	0	20.0	0	9.0	87.0
Indicator value	**92.5%**	**94.4%**	**95.2%**	**95.2%**	**95.4%**	**95.4%**	**95.7%**	**96.7%**

Licensee Comments: none

ERO Drill Participation

Thresholds: White < 80.0% Yellow < 60.0%

Notes

ERO Drill Participation	1Q/00	2Q/00	3Q/00	4Q/00	1Q/01	2Q/01	3Q/01	4Q/01
Participating Key personnel	132.0	166.0	165.0	163.0	166.0	160.0	176.0	188.0
Total Key personnel	132.0	167.0	167.0	174.0	175.0	165.0	182.0	194.0
Indicator value	**100.0%**	**99.4%**	**98.8%**	**93.7%**	**94.9%**	**97.0%**	**96.7%**	**96.9%**

Licensee Comments: none

Alert & Notification System

Thresholds: White < 94.0% Yellow < 90.0%

Notes

Alert & Notification System	1Q/00	2Q/00	3Q/00	4Q/00	1Q/01	2Q/01	3Q/01	4Q/01
Successful siren-tests	390	385	347	467	382	382	375	466
Total sirens-tests	390	390	351	468	390	390	390	468
Indicator value	**99.8%**	**99.5%**	**99.2%**	**99.4%**	**98.9%**	**98.7%**	**98.0%**	**98.0%**

Licensee Comments:

3Q/01: The number of successful ANS siren tests was originally incorrectly counted. The number reported in the 3Q2001 should have been 375 instead of 376. The change did not affect the "color" of the indicator.

Occupational Exposure Control Effectiveness

Thresholds: White > 2.0 Yellow > 5.0

Notes

Occupational Exposure Control Effectiveness	1Q/00	2Q/00	3Q/00	4Q/00	1Q/01	2Q/01	3Q/01	4Q/01
High radiation area occurrences	0	1	0	0	0	1	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**	**2**	**2**	**1**	**1**	**1**	**1**	**1**

Licensee Comments: none

RETS/ODCM Radiological Effluent

Thresholds: White > 1.0 Yellow > 3.0

Notes

RETS/ODCM Radiological Effluent	1Q/00	2Q/00	3Q/00	4Q/00	1Q/01	2Q/01	3Q/01	4Q/01
RETS/ODCM occurrences	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Protected Area Security Performance Index

Thresholds: White > 0.080

Notes

Protected Area Security Performance Index	1Q/00	2Q/00	3Q/00	4Q/00	1Q/01	2Q/01	3Q/01	4Q/01
IDS compensatory hours	326.60	79.20	85.60	95.20	71.50	109.90	71.00	65.30
CCTV compensatory hours	35.2	76.7	8.5	1.3	19.8	82.6	69.5	14.6
IDS normalization factor	1.85	1.85	1.85	1.85	1.85	1.85	1.85	1.85
CCTV normalization factor	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Index Value	**0.034**	**0.038**	**0.038**	**0.024**	**0.015**	**0.017**	**0.019**	**0.019**

Licensee Comments: none

Personnel Screening Program

Thresholds: White > 2.0 Yellow > 5.0

Notes

Personnel Screening Program	1Q/00	2Q/00	3Q/00	4Q/00	1Q/01	2Q/01	3Q/01	4Q/01
Program failures	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

FFD/Personnel Reliability

Thresholds: White > 2.0 Yellow > 5.0

Notes

FFD/Personnel Reliability	1Q/00	2Q/00	3Q/00	4Q/00	1Q/01	2Q/01	3Q/01	4Q/01
Program Failures	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

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

Last Modified: March 15, 2002

Palo Verde 1

1Q/2002 Performance Indicators

Licensee's General Comments: none

Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

Notes

Unplanned Scrams per 7000 Critical Hrs	2Q/00	3Q/00	4Q/00	1Q/01	2Q/01	3Q/01	4Q/01	1Q/02
Unplanned scrams	0	0	0	0	0	0	0	0
Critical hours	2184.0	2208.0	2208.0	2136.0	1187.0	2208.0	2208.0	2160.0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

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	2Q/00	3Q/00	4Q/00	1Q/01	2Q/01	3Q/01	4Q/01	1Q/02
Scrams	0	0	0	0	0	0	0	0
Indicator value	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**0**

Licensee Comments: none

Unplanned Power Changes per 7000 Critical Hrs

Thresholds: White > 6.0

Notes

Unplanned Power Changes per 7000 Critical Hrs	2Q/00	3Q/00	4Q/00	1Q/01	2Q/01	3Q/01	4Q/01	1Q/02
Unplanned power changes	1.0	0	0	0	0	0	1.0	0
Critical hours	2184.0	2208.0	2208.0	2136.0	1187.0	2208.0	2208.0	2160.0
Indicator value	**0.9**	**0.9**	**0.8**	**0.8**	**0**	**0**	**0.9**	**0.9**

Licensee Comments: none

Safety System Unavailability, Emergency AC Power

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

Notes

Safety System Unavailability, Emergency AC Power	2Q/00	3Q/00	4Q/00	1Q/01	2Q/01	3Q/01	4Q/01	1Q/02
Train 1								
Planned unavailable hours	1.32	17.37	0	18.63	1.27	21.58	0.08	68.78
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	2184.00	2208.00	2208.00	2160.00	2184.00	2208.00	2208.00	2160.00
Train 2								
Planned unavailable hours	0	20.62	6.30	15.20	0	47.65	0.02	14.26
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	2184.00	2208.00	2208.00	2160.00	2184.00	2208.00	2208.00	2160.00
Indicator value	**0.6%**	**0.6%**	**0.5%**	**0.6%**	**0.5%**	**0.6%**	**0.5%**	**0.7%**

Licensee Comments: none

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)	2Q/00	3Q/00	4Q/00	1Q/01	2Q/01	3Q/01	4Q/01	1Q/02
Train 1								
Planned unavailable hours	15.34	11.85	7.54	23.28	1.97	15.11	2.57	16.45
Unplanned unavailable hours	0	0	0	0	0	0	13.38	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	2184.00	2208.00	2208.00	2136.00	1186.95	2208.00	2208.00	2160.00
Train 2								
Planned unavailable hours	3.53	17.08	18.21	38.64	22.10	38.95	10.71	21.63
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	2184.00	2208.00	2208.00	2136.00	1186.95	2208.00	2208.00	2160.00
Indicator value	**1.1%**	**1.1%**	**1.1%**	**1.1%**	**1.0%**	**1.0%**	**1.0%**	**1.0%**

Licensee Comments: none

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)	2Q/00	3Q/00	4Q/00	1Q/01	2Q/01	3Q/01	4Q/01	1Q/02
Train 1								
Planned unavailable hours	9.20	16.05	1.41	18.67	3.66	8.15	0.75	10.98
Unplanned unavailable hours	4.85	0	1.45	0	8.70	0	13.38	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	2184.00	2208.00	2208.00	2136.00	1186.95	2208.00	2208.00	2160.00
Train 2								
Planned unavailable hours	0	10.45	6.30	11.05	0	35.65	1.40	7.20
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	2184.00	2208.00	2208.00	2136.00	1186.95	2208.00	2208.00	2160.00
Train 3								
Planned unavailable hours	11.43	0.43	0.25	0.45	0.88	0.37	0.23	0.25
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	2184.00	2208.00	2208.00	2136.00	1186.95	2208.00	2208.00	2160.00
Indicator value	**0.5%**	**0.5%**	**0.5%**	**0.5%**	**0.5%**	**0.5%**	**0.5%**	**0.4%**

Licensee Comments: none

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	2Q/00	3Q/00	4Q/00	1Q/01	2Q/01	3Q/01	4Q/01	1Q/02
Train 1								
Planned unavailable hours	5.82	12.13	9.64	20.38	6.37	13.83	5.32	18.17
Unplanned unavailable hours	0	0	0	0	0	0	13.38	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	2184.00	2208.00	2208.00	2157.05	1239.10	2208.00	2208.00	2160.00
Train 2								
Planned unavailable hours	4.31	11.57	13.91	19.01	9.58	35.83	2.87	13.00
Unplanned unavailable hours	0	0	0	0	0	0	0	25.42
Fault exposure hours	0	0	0	0	0	0	0	0
Effective Reset hours	0	0	0	0	0	0	0	0
Required hours	2184.00	2208.00	2208.00	2157.05	1239.10	2208.00	2208.00	2160.00
Train 3								
Planned unavailable hours	0	0	0	0	0.28	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	0	0	0	2.95	425.22	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	0	0	0	0	99.33	0	0	0
Indicator value	**0.7%**	**0.7%**	**0.6%**	**0.6%**	**0.6%**	**0.6%**	**0.5%**	**0.5%**

Licensee Comments: none

Safety System Functional Failures (PWR)

Thresholds: White > 5.0

Notes

Safety System Functional Failures (PWR)	2Q/00	3Q/00	4Q/00	1Q/01	2Q/01	3Q/01	4Q/01	1Q/02
Safety System Functional Failures	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Reactor Coolant System Activity

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Activity	4/00	5/00	6/00	7/00	8/00	9/00	10/00	11/00	12/00	1/01	2/01	3/01
Maximum activity	0.002000	0.002000	0.002000	0.002000	0.002000	0.002000	0.002000	0.002000	0.004000	0.002000	0.002000	0.023000
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	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.4**	**0.2**	**0.2**	**2.3**

Reactor Coolant System Activity	4/01	5/01	6/01	7/01	8/01	9/01	10/01	11/01	12/01	1/02	2/02	3/02
Maximum activity	N/A	0.001000	0.001000	0.001000	0.001000	0.001000	0.001000	0.001000	0.001000	0.001000	0.001000	0.001000
Technical specification limit	N/A	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**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**

Licensee Comments: none

Reactor Coolant System Leakage

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Leakage	4/00	5/00	6/00	7/00	8/00	9/00	10/00	11/00	12/00	1/01	2/01	3/01
Maximum leakage	0.024	0.066	0.050	0.068	0.040	0.097	0.030	0.038	0.028	0.021	0.043	0.123
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**	**0.7**	**0.5**	**0.7**	**0.4**	**1.0**	**0.3**	**0.4**	**0.3**	**0.2**	**0.4**	**1.2**

Reactor Coolant System Leakage	4/01	5/01	6/01	7/01	8/01	9/01	10/01	11/01	12/01	1/02	2/02	3/02
Maximum leakage	N/A	0.078	0.032	0.046	0.046	0.057	0.164	0.075	0.088	0.107	0.261	0.108
Technical specification limit	N/A	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**	**0.8**	**0.3**	**0.5**	**0.5**	**0.6**	**1.6**	**0.8**	**0.9**	**1.1**	**2.6**	**1.1**

Licensee Comments: none

Drill/Exercise Performance

Thresholds: White < 90.0% Yellow < 70.0%

Notes

Drill/Exercise Performance	2Q/00	3Q/00	4Q/00	1Q/01	2Q/01	3Q/01	4Q/01	1Q/02
Successful opportunities	22.0	95.0	0	20.0	0	9.0	86.0	19.0
Total opportunities	22.0	100.0	0	20.0	0	9.0	87.0	20.0
Indicator value	**94.4%**	**95.2%**	**95.2%**	**95.4%**	**95.4%**	**95.7%**	**96.7%**	**97.3%**

Licensee Comments: none

ERO Drill Participation

Thresholds: White < 80.0% Yellow < 60.0%

Notes

ERO Drill Participation	2Q/00	3Q/00	4Q/00	1Q/01	2Q/01	3Q/01	4Q/01	1Q/02
Participating Key personnel	166.0	165.0	163.0	166.0	160.0	176.0	188.0	188.0
Total Key personnel	167.0	167.0	174.0	175.0	165.0	182.0	194.0	191.0
Indicator value	**99.4%**	**98.8%**	**93.7%**	**94.9%**	**97.0%**	**96.7%**	**96.9%**	**98.4%**

Licensee Comments: none

Alert & Notification System

Thresholds: White < 94.0% Yellow < 90.0%

Notes

Alert & Notification System	2Q/00	3Q/00	4Q/00	1Q/01	2Q/01	3Q/01	4Q/01	1Q/02
Successful siren-tests	385	347	467	382	382	375	466	390
Total sirens-tests	390	351	468	390	390	390	468	390
Indicator value	**99.5%**	**99.2%**	**99.4%**	**98.9%**	**98.7%**	**98.0%**	**98.0%**	**98.5%**

Licensee Comments: none

Occupational Exposure Control Effectiveness

Thresholds: White > 2.0 Yellow > 5.0

Notes

Occupational Exposure Control Effectiveness	2Q/00	3Q/00	4Q/00	1Q/01	2Q/01	3Q/01	4Q/01	1Q/02
High radiation area occurrences	1	0	0	0	1	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	**2**	**2**	**1**	**1**	**1**	**1**	**1**	**1**

Licensee Comments: none

RETS/ODCM Radiological Effluent

Thresholds: White > 1.0 Yellow > 3.0

Notes

RETS/ODCM Radiological Effluent	2Q/00	3Q/00	4Q/00	1Q/01	2Q/01	3Q/01	4Q/01	1Q/02
RETS/ODCM occurrences	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Protected Area Security Performance Index

Thresholds: White > 0.080

Notes

Protected Area Security Performance Index	2Q/00	3Q/00	4Q/00	1Q/01	2Q/01	3Q/01	4Q/01	1Q/02
IDS compensatory hours	79.20	85.60	95.20	71.50	109.90	71.00	65.30	87.00
CCTV compensatory hours	76.7	8.5	1.3	19.8	82.6	69.5	14.6	39.4
IDS normalization factor	1.85	1.85	1.85	1.85	1.85	1.85	1.85	1.85
CCTV normalization factor	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Index Value	**0.038**	**0.038**	**0.024**	**0.015**	**0.017**	**0.019**	**0.019**	**0.020**

Licensee Comments: none

Personnel Screening Program

Thresholds: White > 2.0 Yellow > 5.0

Notes

Personnel Screening Program	2Q/00	3Q/00	4Q/00	1Q/01	2Q/01	3Q/01	4Q/01	1Q/02
Program failures	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

FFD/Personnel Reliability

Thresholds: White > 2.0 Yellow > 5.0

Notes

FFD/Personnel Reliability	2Q/00	3Q/00	4Q/00	1Q/01	2Q/01	3Q/01	4Q/01	1Q/02
Program Failures	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

PI Summary | Inspection Findings Summary | Reactor Oversight Process

Last Modified: May 1, 2002

Palo Verde 1

2Q/2002 Performance Indicators

Licensee's General Comments: none

Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

Notes

Unplanned Scrams per 7000 Critical Hrs	3Q/00	4Q/00	1Q/01	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02
Unplanned scrams	0	0	0	0	0	0	0	0
Critical hours	2208.0	2208.0	2136.0	1187.0	2208.0	2208.0	2160.0	2184.0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

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	3Q/00	4Q/00	1Q/01	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02
Scrams	0	0	0	0	0	0	0	0
Indicator value	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**0**	**0**

Licensee Comments: none

Thresholds: White > 6.0

Notes

Unplanned Power Changes per 7000 Critical Hrs	3Q/00	4Q/00	1Q/01	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02
Unplanned power changes	0	0	0	0	0	1.0	0	0
Critical hours	2208.0	2208.0	2136.0	1187.0	2208.0	2208.0	2160.0	2184.0
Indicator value	**0.9**	**0.8**	**0.8**	**0**	**0**	**0.9**	**0.9**	**0.8**

Licensee Comments: none

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

Notes

Safety System Unavailability, Emergency AC Power	3Q/00	4Q/00	1Q/01	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02
Train 1								
Planned unavailable hours	17.37	0	18.63	1.27	21.58	0.08	68.78	0.04
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	2208.00	2208.00	2160.00	2184.00	2208.00	2208.00	2160.00	2184.00
Train 2								
Planned unavailable hours	20.62	6.30	15.20	0	47.65	0.02	14.26	24.90
Unplanned unavailable hours	0	0	0	0	0	0	0	27.92
Fault exposure hours	0	0	0	0	0	0	0	15.82
Effective Reset hours	0	0	0	0	0	0	0	0
Required hours	2208.00	2208.00	2160.00	2184.00	2208.00	2208.00	2160.00	2184.00
Indicator value	**0.6%**	**0.5%**	**0.6%**	**0.5%**	**0.6%**	**0.5%**	**0.7%**	**0.7%**

Licensee Comments: none

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)	**3Q/00**	**4Q/00**	**1Q/01**	**2Q/01**	**3Q/01**	**4Q/01**	**1Q/02**	**2Q/02**
Train 1								
Planned unavailable hours	11.85	7.54	23.28	1.97	15.11	2.57	16.45	12.78
Unplanned unavailable hours	0	0	0	0	0	13.38	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	2208.00	2208.00	2136.00	1186.95	2208.00	2208.00	2160.00	2184.00
Train 2								
Planned unavailable hours	17.08	18.21	38.64	22.10	38.95	10.71	21.63	15.77
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	2208.00	2208.00	2136.00	1186.95	2208.00	2208.00	2160.00	2184.00
Indicator value	**1.1%**	**1.1%**	**1.1%**	**1.0%**	**1.0%**	**1.0%**	**1.0%**	**0.9%**

Licensee Comments:

2Q/02: A hot leg flow indicator used to manually balance HPSI flow between the hot and cold legs failed. The failure had no effect on any automatic HPSI function. This failure is currently being evaluated to determine if "t/2" fault exposure hours should be reported. A FAQ may be submitted.

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)	3Q/00	4Q/00	1Q/01	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02
Train 1								
Planned unavailable hours	16.05	1.41	18.67	3.66	8.15	0.75	10.98	1.05
Unplanned unavailable hours	0	1.45	0	8.70	0	13.38	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	2208.00	2208.00	2136.00	1186.95	2208.00	2208.00	2160.00	2184.00
Train 2								
Planned unavailable hours	10.45	6.30	11.05	0	35.65	1.40	7.20	8.08
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	2208.00	2208.00	2136.00	1186.95	2208.00	2208.00	2160.00	2184.00
Train 3								
Planned unavailable hours	0.43	0.25	0.45	0.88	0.37	0.23	0.25	0.62
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	2208.00	2208.00	2136.00	1186.95	2208.00	2208.00	2160.00	2184.00
Indicator value	**0.5%**	**0.5%**	**0.5%**	**0.5%**	**0.5%**	**0.5%**	**0.4%**	**0.4%**

Licensee Comments: none

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	3Q/00	4Q/00	1Q/01	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02
Train 1								
Planned unavailable hours	12.13	9.64	20.38	6.37	13.83	5.32	18.17	3.10
Unplanned unavailable hours	0	0	0	0	0	13.38	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	2208.00	2208.00	2157.05	1239.10	2208.00	2208.00	2160.00	2184.00
Train 2								
Planned unavailable hours	11.57	13.91	19.01	9.58	35.83	2.87	13.00	10.55
Unplanned unavailable hours	0	0	0	0	0	0	25.42	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	2208.00	2208.00	2157.05	1239.10	2208.00	2208.00	2160.00	2184.00
Train 3								
Planned unavailable hours	0	0	0	0.28	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	0	0	2.95	425.22	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	0	0	0	99.33	0	0	0	0
Indicator value	**0.7%**	**0.6%**	**0.6%**	**0.6%**	**0.6%**	**0.5%**	**0.5%**	**0.5%**

Licensee Comments: none

Safety System Functional Failures (PWR)

Thresholds: White > 5.0

Notes

Safety System Functional Failures (PWR)	3Q/00	4Q/00	1Q/01	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02
Safety System Functional Failures	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Reactor Coolant System Activity

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Activity	7/00	8/00	9/00	10/00	11/00	12/00	1/01	2/01	3/01	4/01	5/01	6/01
Maximum activity	0.002000	0.002000	0.002000	0.002000	0.002000	0.004000	0.002000	0.002000	0.023000	N/A	0.001000	0.001000
Technical specification limit	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	N/A	1.0	1.0
Indicator value	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.4**	**0.2**	**0.2**	**2.3**	**N/A**	**0.1**	**0.1**

Reactor Coolant System Activity	7/01	8/01	9/01	10/01	11/01	12/01	1/02	2/02	3/02	4/02	5/02	6/02
Maximum activity	0.001000	0.001000	0.001000	0.001000	0.001000	0.001000	0.001000	0.001000	0.001000	0.001000	0.001000	0.001000
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	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**

Licensee Comments: none

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Leakage	7/00	8/00	9/00	10/00	11/00	12/00	1/01	2/01	3/01	4/01	5/01	6/01
Maximum leakage	0.068	0.040	0.097	0.030	0.038	0.028	0.021	0.043	0.123	N/A	0.078	0.032
Technical specification limit	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	N/A	10.0	10.0
Indicator value	**0.7**	**0.4**	**1.0**	**0.3**	**0.4**	**0.3**	**0.2**	**0.4**	**1.2**	**N/A**	**0.8**	**0.3**

Reactor Coolant System Leakage	7/01	8/01	9/01	10/01	11/01	12/01	1/02	2/02	3/02	4/02	5/02	6/02
Maximum leakage	0.046	0.046	0.057	0.164	0.075	0.088	0.107	0.261	0.108	0.056	0.030	0.069
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	**0.5**	**0.5**	**0.6**	**1.6**	**0.8**	**0.9**	**1.1**	**2.6**	**1.1**	**0.6**	**0.3**	**0.7**

Licensee Comments: none

Thresholds: White < 90.0% Yellow < 70.0%

Notes

Drill/Exercise Performance	3Q/00	4Q/00	1Q/01	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02
Successful opportunities	95.0	0	20.0	0	9.0	198.0	19.0	8.0
Total opportunities	100.0	0	20.0	0	9.0	205.0	20.0	8.0
Indicator value	**95.2%**	**95.2%**	**95.4%**	**95.4%**	**95.7%**	**96.1%**	**96.5%**	**96.4%**

Licensee Comments:

2Q/02: Data previously submitted in 4th quarter of 2001 has been changed. 118 Communicators were counted in the Drill Participation PI data but were inadvertently not included as contributing to the Drill Performance statistics. The change did not affect the "color" of the indicator.

Thresholds: White < 80.0% Yellow < 60.0%

Notes

ERO Drill Participation	3Q/00	4Q/00	1Q/01	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02
Participating Key personnel	165.0	163.0	166.0	160.0	176.0	188.0	188.0	191.0
Total Key personnel	167.0	174.0	175.0	165.0	182.0	194.0	191.0	193.0
Indicator value	**98.8%**	**93.7%**	**94.9%**	**97.0%**	**96.7%**	**96.9%**	**98.4%**	**99.0%**

Licensee Comments: none

Thresholds: White < 94.0% Yellow < 90.0%

Notes

Alert & Notification System	3Q/00	4Q/00	1Q/01	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02
Successful siren-tests	347	467	382	382	375	466	390	383
Total sirens-tests	351	468	390	390	390	468	390	387
Indicator value	**99.2%**	**99.4%**	**98.9%**	**98.7%**	**98.0%**	**98.0%**	**98.5%**	**98.7%**

Licensee Comments: none

Occupational Exposure Control Effectiveness

Thresholds: White > 2.0 Yellow > 5.0

Notes

Occupational Exposure Control Effectiveness	3Q/00	4Q/00	1Q/01	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02
High radiation area occurrences	0	0	0	1	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	**2**	**1**	**1**	**1**	**1**	**1**	**1**	**0**

Licensee Comments: none

RETS/ODCM Radiological Effluent

Thresholds: White > 1.0 Yellow > 3.0

Notes

RETS/ODCM Radiological Effluent	3Q/00	4Q/00	1Q/01	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02
RETS/ODCM occurrences	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Thresholds: White > 0.080

Notes

Protected Area Security Performance Index	3Q/00	4Q/00	1Q/01	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02
IDS compensatory hours	85.60	95.20	71.50	109.90	71.00	65.30	87.00	804.00
CCTV compensatory hours	8.5	1.3	19.8	82.6	69.5	14.6	39.4	0
IDS normalization factor	1.85	1.85	1.85	1.85	1.85	1.85	1.85	1.85
CCTV normalization factor	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Index Value	**0.038**	**0.024**	**0.015**	**0.017**	**0.019**	**0.019**	**0.020**	**0.038**

Licensee Comments:

2Q/02: A design problem was identified with the IDS requiring compensatory measures in May 2002. An engineering modification was approved and issued to correct the problem. Based on the approved engineering modification no IDS compensatory hours associated with the modification were counted in June.

Personnel Screening Program

Thresholds: White > 2.0 Yellow > 5.0

Notes

Personnel Screening Program	3Q/00	4Q/00	1Q/01	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02
Program failures	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

FFD/Personnel Reliability

Thresholds: White > 2.0 Yellow > 5.0

Notes

FFD/Personnel Reliability	3Q/00	4Q/00	1Q/01	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02
Program Failures	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

PI Summary | Inspection Findings Summary | Reactor Oversight Process

Last Modified: July 31, 2002

Palo Verde 1

3Q/2002 Performance Indicators

Licensee's General Comments: none

Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

Notes

Unplanned Scrams per 7000 Critical Hrs	4Q/00	1Q/01	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02	3Q/02
Unplanned scrams	0	0	0	0	0	0	0	0
Critical hours	2208.0	2136.0	1187.0	2208.0	2208.0	2160.0	2184.0	2136.0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

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	4Q/00	1Q/01	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02	3Q/02
Scrams	0	0	0	0	0	0	0	0
Indicator value	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**0**	**0**	**0**

Licensee Comments: none

Thresholds: White > 6.0

Notes

Unplanned Power Changes per 7000 Critical Hrs	4Q/00	1Q/01	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02	3Q/02
Unplanned power changes	0	0	0	0	1.0	0	0	0
Critical hours	2208.0	2136.0	1187.0	2208.0	2208.0	2160.0	2184.0	2136.0
Indicator value	**0.8**	**0.8**	**0**	**0**	**0.9**	**0.9**	**0.8**	**0.8**

Licensee Comments: none

Safety System Unavailability, Emergency AC Power

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

Notes

Safety System Unavailability, Emergency AC Power	4Q/00	1Q/01	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02	3Q/02
Train 1								
Planned unavailable hours	0	18.63	1.27	21.58	0.08	68.78	0.04	28.09
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	2208.00	2160.00	2184.00	2208.00	2208.00	2160.00	2184.00	2208.00
Train 2								
Planned unavailable hours	6.30	15.20	0	47.65	0.02	14.26	24.90	0.06
Unplanned unavailable hours	0	0	0	0	0	0	27.92	0
Fault exposure hours	0	0	0	0	0	0	15.82	0
Effective Reset hours	0	0	0	0	0	0	0	0
Required hours	2208.00	2160.00	2184.00	2208.00	2208.00	2160.00	2184.00	2208.00
Indicator value	**0.5%**	**0.6%**	**0.5%**	**0.6%**	**0.5%**	**0.7%**	**0.7%**	**0.8%**

Licensee Comments: none

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)	**4Q/00**	**1Q/01**	**2Q/01**	**3Q/01**	**4Q/01**	**1Q/02**	**2Q/02**	**3Q/02**
Train 1								
Planned unavailable hours	7.54	23.28	1.97	15.11	2.57	16.45	12.78	28.53
Unplanned unavailable hours	0	0	0	0	13.38	0	0	2.58
Fault exposure hours	0	0	0	0	0	0	0	0
Effective Reset hours	0	0	0	0	0	0	0	0
Required hours	2208.00	2136.00	1186.95	2208.00	2208.00	2160.00	2184.00	2136.00
Train 2								
Planned unavailable hours	18.21	38.64	22.10	38.95	10.71	21.63	15.77	8.98
Unplanned unavailable hours	0	0	0	0	0	0	0	1.85
Fault exposure hours	0	0	0	0	0	0	0	0
Effective Reset hours	0	0	0	0	0	0	0	0
Required hours	2208.00	2136.00	1186.95	2208.00	2208.00	2160.00	2184.00	2136.00
Indicator value	**1.1%**	**1.1%**	**1.0%**	**1.0%**	**1.0%**	**1.0%**	**0.9%**	**0.9%**

Licensee Comments: none

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)	4Q/00	1Q/01	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02	3Q/02
Train 1								
Planned unavailable hours	1.41	18.67	3.66	8.15	0.75	10.98	1.05	12.51
Unplanned unavailable hours	1.45	0	8.70	0	13.38	0	0	2.58
Fault exposure hours	0	0	0	0	0	0	0	0
Effective Reset hours	0	0	0	0	0	0	0	0
Required hours	2208.00	2136.00	1186.95	2208.00	2208.00	2160.00	2184.00	2136.00
Train 2								
Planned unavailable hours	6.30	11.05	0	35.65	1.40	7.20	8.08	0.60
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	2208.00	2136.00	1186.95	2208.00	2208.00	2160.00	2184.00	2136.00
Train 3								
Planned unavailable hours	0.25	0.45	0.88	0.37	0.23	0.25	0.62	1.15
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	2208.00	2136.00	1186.95	2208.00	2208.00	2160.00	2184.00	2136.00
Indicator value	**0.5%**	**0.5%**	**0.5%**	**0.5%**	**0.5%**	**0.4%**	**0.4%**	**0.4%**

Licensee Comments: none

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	4Q/00	1Q/01	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02	3Q/02
Train 1								
Planned unavailable hours	9.64	20.38	6.37	13.83	5.32	18.17	3.10	33.90
Unplanned unavailable hours	0	0	0	0	13.38	0	0	2.58
Fault exposure hours	0	0	0	0	0	0	0	0
Effective Reset hours	0	0	0	0	0	0	0	0
Required hours	2208.00	2157.05	1239.10	2208.00	2208.00	2160.00	2184.00	2147.85
Train 2								
Planned unavailable hours	13.91	19.01	9.58	35.83	2.87	13.00	10.55	17.08
Unplanned unavailable hours	0	0	0	0	0	25.42	0	1.85
Fault exposure hours	0	0	0	0	0	0	0	0
Effective Reset hours	0	0	0	0	0	0	0	0
Required hours	2208.00	2157.05	1239.10	2208.00	2208.00	2160.00	2184.00	2147.85
Train 3								
Planned unavailable hours	0	0	0.28	0	0	0	0	0.02
Unplanned unavailable hours	0	0	0	0	0	0	0	0.95
Fault exposure hours	0	0	0	0	0	0	0	0
Effective Reset hours	0	0	0	0	0	0	0	0
Required hours	0	2.95	425.22	0	0	0	0	45.67
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	0	0	99.33	0	0	0	0	50.52
Indicator value	**0.6%**	**0.6%**	**0.6%**	**0.6%**	**0.5%**	**0.5%**	**0.5%**	**0.5%**

Licensee Comments:

3Q/02: A Shutdown Cooling isolation valve (1SIAUV0651) was found in a failed condition at the start of refueling outage U1R10. This failure caused the "C" train of RHR (i.e., one Shutdown Cooling train) to be unavailable and the time of failure cannot be determined. The rules for monitoring RHR in Combustion Engineering plants are established by a "plant specific" FAQ which is included in the current revision of NEI 99-02. This FAQ established four RHR trains for monitoring purposes. The required hours and unavailable hours for each train are based on Technical Specification requirements. Since PVNGS Technical Specifications do not address shutdown cooling operability while at power, there is no t/2 unavailability time associated with this failure. It did result in a small amount of unplanned unavailability.

Safety System Functional Failures (PWR)

Thresholds: White > 5.0

Notes

Safety System Functional Failures (PWR)	4Q/00	1Q/01	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02	3Q/02
Safety System Functional Failures	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Reactor Coolant System Activity

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Activity	**10/00**	**11/00**	**12/00**	**1/01**	**2/01**	**3/01**	**4/01**	**5/01**	**6/01**	**7/01**	**8/01**	**9/01**
Maximum activity	0.002000	0.002000	0.004000	0.002000	0.002000	0.023000	N/A	0.001000	0.001000	0.001000	0.001000	0.001000
Technical specification limit	1.0	1.0	1.0	1.0	1.0	1.0	N/A	1.0	1.0	1.0	1.0	1.0
Indicator value	**0.2**	**0.2**	**0.4**	**0.2**	**0.2**	**2.3**	**N/A**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**

Reactor Coolant System Activity	**10/01**	**11/01**	**12/01**	**1/02**	**2/02**	**3/02**	**4/02**	**5/02**	**6/02**	**7/02**	**8/02**	**9/02**
Maximum activity	0.001000	0.001000	0.001000	0.001000	0.001000	0.001000	0.001000	0.001000	0.001000	0.001000	0.001000	0.001000
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	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**

Licensee Comments: none

Reactor Coolant System Leakage

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Leakage	10/00	11/00	12/00	1/01	2/01	3/01	4/01	5/01	6/01	7/01	8/01	9/01
Maximum leakage	0.030	0.038	0.028	0.021	0.043	0.123	N/A	0.078	0.032	0.046	0.046	0.057
Technical specification limit	10.0	10.0	10.0	10.0	10.0	10.0	N/A	10.0	10.0	10.0	10.0	10.0
Indicator value	**0.3**	**0.4**	**0.3**	**0.2**	**0.4**	**1.2**	**N/A**	**0.8**	**0.3**	**0.5**	**0.5**	**0.6**

Reactor Coolant System Leakage	10/01	11/01	12/01	1/02	2/02	3/02	4/02	5/02	6/02	7/02	8/02	9/02
Maximum leakage	0.164	0.075	0.088	0.107	0.261	0.108	0.056	0.030	0.069	0.115	0.107	0.126
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	**1.6**	**0.8**	**0.9**	**1.1**	**2.6**	**1.1**	**0.6**	**0.3**	**0.7**	**1.2**	**1.1**	**1.3**

Licensee Comments: none

Drill/Exercise Performance

Thresholds: White < 90.0% Yellow < 70.0%

Notes

Drill/Exercise Performance	4Q/00	1Q/01	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02	3Q/02
Successful opportunities	0	20.0	0	9.0	198.0	19.0	8.0	108.0
Total opportunities	0	20.0	0	9.0	205.0	20.0	8.0	110.0
Indicator value	**95.2%**	**95.4%**	**95.4%**	**95.7%**	**96.1%**	**96.5%**	**96.4%**	**97.3%**

Licensee Comments: none

Thresholds: White < 80.0% Yellow < 60.0%

Notes

ERO Drill Participation	4Q/00	1Q/01	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02	3Q/02
Participating Key personnel	163.0	166.0	160.0	176.0	188.0	188.0	191.0	190.0
Total Key personnel	174.0	175.0	165.0	182.0	194.0	191.0	193.0	193.0
Indicator value	**93.7%**	**94.9%**	**97.0%**	**96.7%**	**96.9%**	**98.4%**	**99.0%**	**98.4%**

Licensee Comments: none

Thresholds: White < 94.0% Yellow < 90.0%

Notes

Alert & Notification System	4Q/00	1Q/01	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02	3Q/02
Successful siren-tests	467	382	382	375	466	390	383	351
Total sirens-tests	468	390	390	390	468	390	387	360
Indicator value	**99.4%**	**98.9%**	**98.7%**	**98.0%**	**98.0%**	**98.5%**	**98.7%**	**99.1%**

Licensee Comments: none

Occupational Exposure Control Effectiveness

Thresholds: White > 2.0 Yellow > 5.0

Notes

Occupational Exposure Control Effectiveness	4Q/00	1Q/01	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02	3Q/02
High radiation area occurrences	0	0	1	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**	**1**	**1**	**1**	**1**	**0**	**0**

Licensee Comments: none

RETS/ODCM Radiological Effluent

Thresholds: White > 1.0 Yellow > 3.0

Notes

RETS/ODCM Radiological Effluent	4Q/00	1Q/01	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02	3Q/02
RETS/ODCM occurrences	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Thresholds: White > 0.080

Notes

Protected Area Security Performance Index	4Q/00	1Q/01	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02	3Q/02
IDS compensatory hours	95.20	71.50	109.90	71.00	65.30	87.00	804.00	92.60
CCTV compensatory hours	1.3	19.8	82.6	69.5	14.6	39.4	0	34.1
IDS normalization factor	1.85	1.85	1.85	1.85	1.85	1.85	1.85	2.00
CCTV normalization factor	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Index Value	**0.024**	**0.015**	**0.017**	**0.019**	**0.019**	**0.020**	**0.038**	**0.034**

Licensee Comments: none

Personnel Screening Program

Thresholds: White > 2.0 Yellow > 5.0

Notes

Personnel Screening Program	4Q/00	1Q/01	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02	3Q/02
Program failures	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

FFD/Personnel Reliability

Thresholds: White > 2.0 Yellow > 5.0

Notes

FFD/Personnel Reliability	4Q/00	1Q/01	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02	3Q/02
Program Failures	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

PI Summary | Inspection Findings Summary | Reactor Oversight Process

Last Modified: October 22, 2002

Palo Verde 1

4Q/2002 Performance Indicators

Licensee's General Comments: none

Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

Notes

Unplanned Scrams per 7000 Critical Hrs	1Q/01	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02	3Q/02	4Q/02
Unplanned scrams	0	0	0	0	0	0	0	1.0
Critical hours	2136.0	1187.0	2208.0	2208.0	2160.0	2184.0	2136.0	1450.1
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.9**

Licensee Comments: none

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/01	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02	3Q/02	4Q/02
Scrams	0	0	0	0	0	0	0	0
Indicator value	**1.0**	**1.0**	**1.0**	**1.0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Thresholds: White > 6.0

Notes

Unplanned Power Changes per 7000 Critical Hrs	1Q/01	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02	3Q/02	4Q/02
Unplanned power changes	0	0	0	1.0	0	0	0	0
Critical hours	2136.0	1187.0	2208.0	2208.0	2160.0	2184.0	2136.0	1450.1
Indicator value	**0.8**	**0**	**0**	**0.9**	**0.9**	**0.8**	**0.8**	**0**

Licensee Comments: none

Safety System Unavailability, Emergency AC Power

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

Notes

Safety System Unavailability, Emergency AC Power	1Q/01	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02	3Q/02	4Q/02
Train 1								
Planned unavailable hours	18.63	1.27	21.58	0.08	68.78	0.04	28.09	20.35
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	2160.00	2184.00	2208.00	2208.00	2160.00	2184.00	2208.00	2208.00
Train 2								
Planned unavailable hours	15.20	0	47.65	0.02	14.26	24.90	0.06	18.19
Unplanned unavailable hours	0	0	0	0	0	27.92	0	0
Fault exposure hours	0	0	0	0	0	15.82	0	0
Effective Reset hours	0	0	0	0	0	0	0	0
Required hours	2160.00	2184.00	2208.00	2208.00	2160.00	2184.00	2208.00	2208.00
Indicator value	**0.6%**	**0.5%**	**0.6%**	**0.5%**	**0.7%**	**0.7%**	**0.8%**	**0.8%**

Licensee Comments: none

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/01	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02	3Q/02	4Q/02
Train 1								
Planned unavailable hours	23.28	1.97	15.11	2.57	16.45	12.78	28.53	12.75
Unplanned unavailable hours	0	0	0	13.38	0	0	2.58	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	2136.00	1186.95	2208.00	2208.00	2160.00	2184.00	2136.00	1450.11
Train 2								
Planned unavailable hours	38.64	22.10	38.95	10.71	21.63	15.77	8.98	23.22
Unplanned unavailable hours	0	0	0	0	0	0	1.85	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	2136.00	1186.95	2208.00	2208.00	2160.00	2184.00	2136.00	1450.11
Indicator value	**1.1%**	**1.0%**	**1.0%**	**1.0%**	**1.0%**	**0.9%**	**0.9%**	**0.9%**

Licensee Comments: none

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)	1Q/01	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02	3Q/02	4Q/02
Train 1								
Planned unavailable hours	18.67	3.66	8.15	0.75	10.98	1.05	12.51	18.22
Unplanned unavailable hours	0	8.70	0	13.38	0	0	2.58	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	2136.00	1186.95	2208.00	2208.00	2160.00	2184.00	2136.00	1450.11
Train 2								
Planned unavailable hours	11.05	0	35.65	1.40	7.20	8.08	0.60	10.15
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	2136.00	1186.95	2208.00	2208.00	2160.00	2184.00	2136.00	1450.11
Train 3								
Planned unavailable hours	0.45	0.88	0.37	0.23	0.25	0.62	1.15	0.62
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	2136.00	1186.95	2208.00	2208.00	2160.00	2184.00	2136.00	1450.11
Indicator value	**0.5%**	**0.5%**	**0.5%**	**0.5%**	**0.4%**	**0.4%**	**0.4%**	**0.4%**

Licensee Comments: none

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	1Q/01	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02	3Q/02	4Q/02
Train 1								
Planned unavailable hours	20.38	6.37	13.83	5.32	18.17	3.10	33.90	17.93
Unplanned unavailable hours	0	0	0	13.38	0	0	2.58	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	2157.05	1239.10	2208.00	2208.00	2160.00	2184.00	2147.85	1551.82
Train 2								
Planned unavailable hours	19.01	9.58	35.83	2.87	13.00	10.55	17.08	16.30
Unplanned unavailable hours	0	0	0	0	25.42	0	1.85	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	2157.05	1239.10	2208.00	2208.00	2160.00	2184.00	2147.85	1551.82
Train 3								
Planned unavailable hours	0	0.28	0	0	0	0	0.02	0
Unplanned unavailable hours	0	0	0	0	0	0	0.95	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	2.95	425.22	0	0	0	0	45.67	212.52
Train 4								
Planned unavailable hours	0	0	0	0	0	0	0	0.02
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	0	99.33	0	0	0	0	50.52	331.02
Indicator value	**0.6%**	**0.6%**	**0.6%**	**0.5%**	**0.5%**	**0.5%**	**0.5%**	**0.5%**

Licensee Comments: none

Thresholds: White > 5.0

Notes

Safety System Functional Failures (PWR)	1Q/01	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02	3Q/02	4Q/02
Safety System Functional Failures	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Reactor Coolant System Activity

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Activity	1/01	2/01	3/01	4/01	5/01	6/01	7/01	8/01	9/01	10/01	11/01	12/01
Maximum activity	0.002000	0.002000	0.023000	N/A	0.001000	0.001000	0.001000	0.001000	0.001000	0.001000	0.001000	0.001000
Technical specification limit	1.0	1.0	1.0	N/A	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Indicator value	**0.2**	**0.2**	**2.3**	**N/A**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**

Reactor Coolant System Activity	1/02	2/02	3/02	4/02	5/02	6/02	7/02	8/02	9/02	10/02	11/02	12/02
Maximum activity	0.001000	0.001000	0.001000	0.001000	0.001000	0.001000	0.001000	0.001000	0.001000	N/A	0.001000	0.001000
Technical specification limit	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	N/A	1.0	1.0
Indicator value	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**N/A**	**0.1**	**0.1**

Licensee Comments:

12/02: Unit 1 was in a refueling outage during the month of October - no Technical Specification RCS activity samples were required.

Reactor Coolant System Leakage

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Leakage	1/01	2/01	3/01	4/01	5/01	6/01	7/01	8/01	9/01	10/01	11/01	12/01
Maximum leakage	0.021	0.043	0.123	N/A	0.078	0.032	0.046	0.046	0.057	0.164	0.075	0.088
Technical specification limit	10.0	10.0	10.0	N/A	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Indicator value	**0.2**	**0.4**	**1.2**	**N/A**	**0.8**	**0.3**	**0.5**	**0.5**	**0.6**	**1.6**	**0.8**	**0.9**

Reactor Coolant System Leakage	1/02	2/02	3/02	4/02	5/02	6/02	7/02	8/02	9/02	10/02	11/02	12/02
Maximum leakage	0.107	0.261	0.108	0.056	0.030	0.069	0.115	0.107	0.126	0	0.047	0.034
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	**1.1**	**2.6**	**1.1**	**0.6**	**0.3**	**0.7**	**1.2**	**1.1**	**1.3**	**0**	**0.5**	**0.3**

Licensee Comments: none

Drill/Exercise Performance

Thresholds: White < 90.0% Yellow < 70.0%

Notes

Drill/Exercise Performance	1Q/01	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02	3Q/02	4Q/02
Successful opportunities	20.0	0	9.0	198.0	19.0	8.0	108.0	137.0
Total opportunities	20.0	0	9.0	205.0	20.0	8.0	110.0	141.0
Indicator value	**95.4%**	**95.4%**	**95.7%**	**96.1%**	**96.5%**	**96.4%**	**97.3%**	**97.3%**

Licensee Comments: none

Thresholds: White < 80.0% Yellow < 60.0%

Notes

ERO Drill Participation	1Q/01	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02	3Q/02	4Q/02
Participating Key personnel	166.0	160.0	176.0	188.0	188.0	191.0	190.0	183.0
Total Key personnel	175.0	165.0	182.0	194.0	191.0	193.0	193.0	185.0
Indicator value	**94.9%**	**97.0%**	**96.7%**	**96.9%**	**98.4%**	**99.0%**	**98.4%**	**98.9%**

Licensee Comments: none

Alert & Notification System

Thresholds: White < 94.0% Yellow < 90.0%

Notes

Alert & Notification System	1Q/01	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02	3Q/02	4Q/02
Successful siren-tests	382	382	375	466	390	383	351	459
Total sirens-tests	390	390	390	468	390	387	360	468
Indicator value	**98.9%**	**98.7%**	**98.0%**	**98.0%**	**98.5%**	**98.7%**	**99.1%**	**98.6%**

Licensee Comments: none

Occupational Exposure Control Effectiveness

Thresholds: White > 2.0 Yellow > 5.0

Notes

Occupational Exposure Control Effectiveness	1Q/01	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02	3Q/02	4Q/02
High radiation area occurrences	0	1	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**	**1**	**1**	**1**	**0**	**0**	**0**

Licensee Comments: none

RETS/ODCM Radiological Effluent

Thresholds: White > 1.0 Yellow > 3.0

Notes

RETS/ODCM Radiological Effluent	1Q/01	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02	3Q/02	4Q/02
RETS/ODCM occurrences	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Protected Area Security Performance Index

Thresholds: White > 0.080

Notes

Protected Area Security Performance Index	1Q/01	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02	3Q/02	4Q/02
IDS compensatory hours	71.50	109.90	71.00	65.30	87.00	804.00	92.60	86.90
CCTV compensatory hours	19.8	82.6	69.5	14.6	39.4	0	34.1	58.4
IDS normalization factor	1.85	1.85	1.85	1.85	1.85	1.85	2.00	2.00
CCTV normalization factor	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Index Value	**0.015**	**0.017**	**0.019**	**0.019**	**0.020**	**0.038**	**0.034**	**0.037**

Licensee Comments: none

Personnel Screening Program

Thresholds: White > 2.0 Yellow > 5.0

Notes

Personnel Screening Program	1Q/01	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02	3Q/02	4Q/02
Program failures	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

FFD/Personnel Reliability

Thresholds: White > 2.0 Yellow > 5.0

Notes

FFD/Personnel Reliability	1Q/01	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02	3Q/02	4Q/02
Program Failures	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

PI Summary | Inspection Findings Summary | Reactor Oversight Process

Last Modified: January 30, 2003

Palo Verde 1

1Q/2003 Performance Indicators

Licensee's General Comments: none

Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

Notes

Unplanned Scrams per 7000 Critical Hrs	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02	3Q/02	4Q/02	1Q/03
Unplanned scrams	0	0	0	0	0	0	1.0	1.0
Critical hours	1187.0	2208.0	2208.0	2160.0	2184.0	2136.0	1450.1	2057.8
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0.9**	**1.8**

Licensee Comments: none

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	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02	3Q/02	4Q/02	1Q/03
Scrams	0	0	0	0	0	0	0	0
Indicator value	**1.0**	**1.0**	**1.0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Thresholds: White > 6.0

Notes

Unplanned Power Changes per 7000 Critical Hrs	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02	3Q/02	4Q/02	1Q/03
Unplanned power changes	0	0	1.0	0	0	0	0	0
Critical hours	1187.0	2208.0	2208.0	2160.0	2184.0	2136.0	1450.1	2057.8
Indicator value	**0**	**0**	**0.9**	**0.9**	**0.8**	**0.8**	**0**	**0**

Licensee Comments: none

Safety System Unavailability, Emergency AC Power

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

Notes

Safety System Unavailability, Emergency AC Power	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02	3Q/02	4Q/02	1Q/03
Train 1								
Planned unavailable hours	1.27	21.58	0.08	68.78	0.04	28.09	20.35	0.04
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	2184.00	2208.00	2208.00	2160.00	2184.00	2208.00	2208.00	2160.00
Train 2								
Planned unavailable hours	0	47.65	0.02	14.26	24.90	0.06	18.19	0.12
Unplanned unavailable hours	0	0	0	0	27.92	0	0	31.37
Fault exposure hours	0	0	0	0	15.82	0	0	0
Effective Reset hours	0	0	0	0	0	0	0	0
Required hours	2184.00	2208.00	2208.00	2160.00	2184.00	2208.00	2208.00	2160.00
Indicator value	**0.5%**	**0.6%**	**0.5%**	**0.7%**	**0.7%**	**0.8%**	**0.8%**	**0.8%**

Licensee Comments: none

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)	**2Q/01**	**3Q/01**	**4Q/01**	**1Q/02**	**2Q/02**	**3Q/02**	**4Q/02**	**1Q/03**
Train 1								
Planned unavailable hours	1.97	15.11	2.57	16.45	12.78	28.53	12.75	6.55
Unplanned unavailable hours	0	0	13.38	0	0	2.58	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	1186.95	2208.00	2208.00	2160.00	2184.00	2136.00	1450.11	2057.75
Train 2								
Planned unavailable hours	22.10	38.95	10.71	21.63	15.77	8.98	23.22	7.27
Unplanned unavailable hours	0	0	0	0	0	1.85	0	13.13
Fault exposure hours	0	0	0	0	0	0	0	0
Effective Reset hours	0	0	0	0	0	0	0	0
Required hours	1186.95	2208.00	2208.00	2160.00	2184.00	2136.00	1450.11	2057.75
Indicator value	**1.0%**	**1.0%**	**1.0%**	**1.0%**	**0.9%**	**0.9%**	**0.9%**	**0.8%**

Licensee Comments: none

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)	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02	3Q/02	4Q/02	1Q/03
Train 1								
Planned unavailable hours	3.66	8.15	0.75	10.98	1.05	12.51	18.22	1.34
Unplanned unavailable hours	8.70	0	13.38	0	0	2.58	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	1186.95	2208.00	2208.00	2160.00	2184.00	2136.00	1450.11	2057.75
Train 2								
Planned unavailable hours	0	35.65	1.40	7.20	8.08	0.60	10.15	0.55
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	1186.95	2208.00	2208.00	2160.00	2184.00	2136.00	1450.11	2057.75
Train 3								
Planned unavailable hours	0.88	0.37	0.23	0.25	0.62	1.15	0.62	0.87
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	1186.95	2208.00	2208.00	2160.00	2184.00	2136.00	1450.11	2057.75
Indicator value	**0.5%**	**0.5%**	**0.5%**	**0.4%**	**0.4%**	**0.4%**	**0.4%**	**0.3%**

Licensee Comments: none

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	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02	3Q/02	4Q/02	1Q/03
Train 1								
Planned unavailable hours	6.37	13.83	5.32	18.17	3.10	33.90	17.93	2.50
Unplanned unavailable hours	0	0	13.38	0	0	2.58	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	1239.10	2208.00	2208.00	2160.00	2184.00	2147.85	1551.82	2087.47
Train 2								
Planned unavailable hours	9.58	35.83	2.87	13.00	10.55	17.08	16.30	3.48
Unplanned unavailable hours	0	0	0	25.42	0	1.85	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	1239.10	2208.00	2208.00	2160.00	2184.00	2147.85	1551.82	2087.47
Train 3								
Planned unavailable hours	0.28	0	0	0	0	0.02	0	0
Unplanned unavailable hours	0	0	0	0	0	0.95	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	425.22	0	0	0	0	45.67	212.52	0
Train 4								
Planned unavailable hours	0	0	0	0	0	0	0.02	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	99.33	0	0	0	0	50.52	331.02	56.68
Indicator value	**0.6%**	**0.6%**	**0.5%**	**0.5%**	**0.5%**	**0.5%**	**0.5%**	**0.4%**

Licensee Comments: none

Safety System Functional Failures (PWR)

Thresholds: White > 5.0

Notes

Safety System Functional Failures (PWR)	**2Q/01**	**3Q/01**	**4Q/01**	**1Q/02**	**2Q/02**	**3Q/02**	**4Q/02**	**1Q/03**
Safety System Functional Failures	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Activity	4/01	5/01	6/01	7/01	8/01	9/01	10/01	11/01	12/01	1/02	2/02	3/02
Maximum activity	N/A	0.001000	0.001000	0.001000	0.001000	0.001000	0.001000	0.001000	0.001000	0.001000	0.001000	0.001000
Technical specification limit	N/A	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**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**

Reactor Coolant System Activity	4/02	5/02	6/02	7/02	8/02	9/02	10/02	11/02	12/02	1/03	2/03	3/03
Maximum activity	0.001000	0.001000	0.001000	0.001000	0.001000	0.001000	N/A	0.001000	0.001000	0.001000	0.001000	0.001000
Technical specification limit	1.0	1.0	1.0	1.0	1.0	1.0	N/A	1.0	1.0	1.0	1.0	1.0
Indicator value	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**N/A**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**

Licensee Comments: none

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Leakage	4/01	5/01	6/01	7/01	8/01	9/01	10/01	11/01	12/01	1/02	2/02	3/02
Maximum leakage	N/A	0.078	0.032	0.046	0.046	0.057	0.164	0.075	0.088	0.107	0.261	0.108
Technical specification limit	N/A	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**	**0.8**	**0.3**	**0.5**	**0.5**	**0.6**	**1.6**	**0.8**	**0.9**	**1.1**	**2.6**	**1.1**

Reactor Coolant System Leakage	4/02	5/02	6/02	7/02	8/02	9/02	10/02	11/02	12/02	1/03	2/03	3/03
Maximum leakage	0.056	0.030	0.069	0.115	0.107	0.126	0	0.047	0.034	0.018	0.036	0.047
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	**0.6**	**0.3**	**0.7**	**1.2**	**1.1**	**1.3**	**0**	**0.5**	**0.3**	**0.2**	**0.4**	**0.5**

Licensee Comments: none

Drill/Exercise Performance

Thresholds: White < 90.0% Yellow < 70.0%

Notes

Drill/Exercise Performance	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02	3Q/02	4Q/02	1Q/03
Successful opportunities	0	9.0	198.0	19.0	8.0	108.0	137.0	14.0
Total opportunities	0	9.0	205.0	20.0	8.0	110.0	141.0	18.0
Indicator value	**95.4%**	**95.7%**	**96.1%**	**96.5%**	**96.4%**	**97.3%**	**97.3%**	**96.5%**

Licensee Comments: none

Thresholds: White < 80.0% Yellow < 60.0%

Notes

ERO Drill Participation	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02	3Q/02	4Q/02	1Q/03
Participating Key personnel	160.0	176.0	188.0	188.0	191.0	190.0	183.0	181.0
Total Key personnel	165.0	182.0	194.0	191.0	193.0	193.0	185.0	183.0
Indicator value	**97.0%**	**96.7%**	**96.9%**	**98.4%**	**99.0%**	**98.4%**	**98.9%**	**98.9%**

Licensee Comments: none

Alert & Notification System

Thresholds: White < 94.0% Yellow < 90.0%

Notes

Alert & Notification System	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02	3Q/02	4Q/02	1Q/03
Successful siren-tests	382	375	466	390	383	351	459	307
Total sirens-tests	390	390	468	390	387	360	468	307
Indicator value	**98.7%**	**98.0%**	**98.0%**	**98.5%**	**98.7%**	**99.1%**	**98.6%**	**98.6%**

Licensee Comments: none

Thresholds: White > 2.0 Yellow > 5.0

Notes

Occupational Exposure Control Effectiveness	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02	3Q/02	4Q/02	1Q/03
High radiation area occurrences	1	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**	**1**	**1**	**0**	**0**	**0**	**0**

Licensee Comments: none

RETS/ODCM Radiological Effluent

Thresholds: White > 1.0 Yellow > 3.0

Notes

RETS/ODCM Radiological Effluent	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02	3Q/02	4Q/02	1Q/03
RETS/ODCM occurrences	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Thresholds: White > 0.080

Notes

Protected Area Security Performance Index	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02	3Q/02	4Q/02	1Q/03
IDS compensatory hours	109.90	71.00	65.30	87.00	804.00	92.60	86.90	141.60
CCTV compensatory hours	82.6	69.5	14.6	39.4	0	34.1	58.4	10.4
IDS normalization factor	1.85	1.85	1.85	1.85	1.85	2.00	2.00	2.00
CCTV normalization factor	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Index Value	**0.017**	**0.019**	**0.019**	**0.020**	**0.038**	**0.034**	**0.037**	**0.037**

Licensee Comments: none

Personnel Screening Program

Thresholds: White > 2.0 Yellow > 5.0

Notes

Personnel Screening Program	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02	3Q/02	4Q/02	1Q/03
Program failures	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Thresholds: White > 2.0 Yellow > 5.0

Notes

FFD/Personnel Reliability	2Q/01	3Q/01	4Q/01	1Q/02	2Q/02	3Q/02	4Q/02	1Q/03
Program Failures	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

PI Summary | Inspection Findings Summary | Reactor Oversight Process

Last Modified: April 22, 2003

Palo Verde 1

2Q/2003 Performance Indicators

Licensee's General Comments: none

Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

Notes

Unplanned Scrams per 7000 Critical Hrs	3Q/01	4Q/01	1Q/02	2Q/02	3Q/02	4Q/02	1Q/03	2Q/03
Unplanned scrams	0	0	0	0	0	1.0	1.0	0
Critical hours	2208.0	2208.0	2160.0	2184.0	2136.0	1450.1	2057.8	2184.0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0.9**	**1.8**	**1.8**

Licensee Comments: none

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	3Q/01	4Q/01	1Q/02	2Q/02	3Q/02	4Q/02	1Q/03	2Q/03
Scrams	0	0	0	0	0	0	0	0
Indicator value	**1.0**	**1.0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Thresholds: White > 6.0

Notes

Unplanned Power Changes per 7000 Critical Hrs	3Q/01	4Q/01	1Q/02	2Q/02	3Q/02	4Q/02	1Q/03	2Q/03
Unplanned power changes	0	1.0	0	0	0	0	0	0
Critical hours	2208.0	2208.0	2160.0	2184.0	2136.0	1450.1	2057.8	2184.0
Indicator value	**0**	**0.9**	**0.9**	**0.8**	**0.8**	**0**	**0**	**0**

Licensee Comments: none

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

Notes

Safety System Unavailability, Emergency AC Power	3Q/01	4Q/01	1Q/02	2Q/02	3Q/02	4Q/02	1Q/03	2Q/03
Train 1								
Planned unavailable hours	21.58	0.08	68.78	0.04	28.09	20.35	0.04	19.80
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	2208.00	2208.00	2160.00	2184.00	2208.00	2208.00	2160.00	2184.00
Train 2								
Planned unavailable hours	47.65	0.02	14.26	24.90	0.06	18.19	0.12	27.00
Unplanned unavailable hours	0	0	0	27.92	0	0	31.37	0
Fault exposure hours	0	0	0	15.82	0	0	0	0
Effective Reset hours	0	0	0	0	0	0	0	0
Required hours	2208.00	2208.00	2160.00	2184.00	2208.00	2208.00	2160.00	2184.00
Indicator value	**0.6%**	**0.5%**	**0.7%**	**0.7%**	**0.8%**	**0.8%**	**0.8%**	**0.8%**

Licensee Comments: none

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)	**3Q/01**	**4Q/01**	**1Q/02**	**2Q/02**	**3Q/02**	**4Q/02**	**1Q/03**	**2Q/03**
Train 1								
Planned unavailable hours	15.11	2.57	16.45	12.78	28.53	12.75	6.55	14.95
Unplanned unavailable hours	0	13.38	0	0	2.58	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	2208.00	2208.00	2160.00	2184.00	2136.00	1450.11	2057.75	2184.00
Train 2								
Planned unavailable hours	38.95	10.71	21.63	15.77	8.98	23.22	7.27	34.15
Unplanned unavailable hours	0	0	0	0	1.85	0	13.13	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	2208.00	2208.00	2160.00	2184.00	2136.00	1450.11	2057.75	2184.00
Indicator value	**1.0%**	**1.0%**	**1.0%**	**0.9%**	**0.9%**	**0.9%**	**0.8%**	**0.9%**

Licensee Comments: none

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)	3Q/01	4Q/01	1Q/02	2Q/02	3Q/02	4Q/02	1Q/03	2Q/03
Train 1								
Planned unavailable hours	8.15	0.75	10.98	1.05	12.51	18.22	1.34	14.38
Unplanned unavailable hours	0	13.38	0	0	2.58	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	2208.00	2208.00	2160.00	2184.00	2136.00	1450.11	2057.75	2184.00
Train 2								
Planned unavailable hours	35.65	1.40	7.20	8.08	0.60	10.15	0.55	33.20
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	2208.00	2208.00	2160.00	2184.00	2136.00	1450.11	2057.75	2184.00
Train 3								
Planned unavailable hours	0.37	0.23	0.25	0.62	1.15	0.62	0.87	0.35
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	2208.00	2208.00	2160.00	2184.00	2136.00	1450.11	2057.75	2184.00
Indicator value	**0.5%**	**0.5%**	**0.4%**	**0.4%**	**0.4%**	**0.4%**	**0.3%**	**0.4%**

Licensee Comments: none

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	3Q/01	4Q/01	1Q/02	2Q/02	3Q/02	4Q/02	1Q/03	2Q/03
Train 1								
Planned unavailable hours	13.83	5.32	18.17	3.10	33.90	17.93	2.50	12.43
Unplanned unavailable hours	0	13.38	0	0	2.58	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	2208.00	2208.00	2160.00	2184.00	2147.85	1551.82	2087.47	2184.00
Train 2								
Planned unavailable hours	35.83	2.87	13.00	10.55	17.08	16.30	3.48	37.61
Unplanned unavailable hours	0	0	25.42	0	1.85	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	2208.00	2208.00	2160.00	2184.00	2147.85	1551.82	2087.47	2184.00
Train 3								
Planned unavailable hours	0	0	0	0	0.02	0	0	0
Unplanned unavailable hours	0	0	0	0	0.95	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	0	0	0	0	45.67	212.52	0	0
Train 4								
Planned unavailable hours	0	0	0	0	0	0.02	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	0	0	0	0	50.52	331.02	56.68	0
Indicator value	**0.6%**	**0.5%**	**0.5%**	**0.5%**	**0.5%**	**0.5%**	**0.4%**	**0.4%**

Licensee Comments: none

Safety System Functional Failures (PWR)

Thresholds: White > 5.0

Notes

Safety System Functional Failures (PWR)	**3Q/01**	**4Q/01**	**1Q/02**	**2Q/02**	**3Q/02**	**4Q/02**	**1Q/03**	**2Q/03**
Safety System Functional Failures	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Activity	7/01	8/01	9/01	10/01	11/01	12/01	1/02	2/02	3/02	4/02	5/02	6/02
Maximum activity	0.001000	0.001000	0.001000	0.001000	0.001000	0.001000	0.001000	0.001000	0.001000	0.001000	0.001000	0.001000
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	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**

Reactor Coolant System Activity	7/02	8/02	9/02	10/02	11/02	12/02	1/03	2/03	3/03	4/03	5/03	6/03
Maximum activity	0.001000	0.001000	0.001000	N/A	0.001000	0.001000	0.001000	0.001000	0.001000	0.001000	0.001000	0.001000
Technical specification limit	1.0	1.0	1.0	N/A	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Indicator value	**0.1**	**0.1**	**0.1**	**N/A**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**

Licensee Comments: none

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Leakage	7/01	8/01	9/01	10/01	11/01	12/01	1/02	2/02	3/02	4/02	5/02	6/02
Maximum leakage	0.046	0.046	0.057	0.164	0.075	0.088	0.107	0.261	0.108	0.056	0.030	0.069
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	**0.5**	**0.5**	**0.6**	**1.6**	**0.8**	**0.9**	**1.1**	**2.6**	**1.1**	**0.6**	**0.3**	**0.7**

Reactor Coolant System Leakage	7/02	8/02	9/02	10/02	11/02	12/02	1/03	2/03	3/03	4/03	5/03	6/03
Maximum leakage	0.115	0.107	0.126	0	0.047	0.034	0.018	0.036	0.047	0.063	0.077	0.056
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	**1.2**	**1.1**	**1.3**	**0**	**0.5**	**0.3**	**0.2**	**0.4**	**0.5**	**0.6**	**0.8**	**0.6**

Licensee Comments: none

Drill/Exercise Performance

Thresholds: White < 90.0% Yellow < 70.0%

Notes

Drill/Exercise Performance	3Q/01	4Q/01	1Q/02	2Q/02	3Q/02	4Q/02	1Q/03	2Q/03
Successful opportunities	9.0	198.0	19.0	8.0	108.0	137.0	14.0	8.0
Total opportunities	9.0	205.0	20.0	8.0	110.0	141.0	18.0	8.0
Indicator value	**95.7%**	**96.1%**	**96.5%**	**96.4%**	**97.3%**	**97.3%**	**96.5%**	**96.5%**

Licensee Comments: none

Thresholds: White < 80.0% Yellow < 60.0%

Notes

ERO Drill Participation	3Q/01	4Q/01	1Q/02	2Q/02	3Q/02	4Q/02	1Q/03	2Q/03
Participating Key personnel	176.0	188.0	188.0	191.0	190.0	183.0	181.0	181.0
Total Key personnel	182.0	194.0	191.0	193.0	193.0	185.0	183.0	182.0
Indicator value	**96.7%**	**96.9%**	**98.4%**	**99.0%**	**98.4%**	**98.9%**	**98.9%**	**99.5%**

Licensee Comments: none

Alert & Notification System

Thresholds: White < 94.0% Yellow < 90.0%

Notes

Alert & Notification System	3Q/01	4Q/01	1Q/02	2Q/02	3Q/02	4Q/02	1Q/03	2Q/03
Successful siren-tests	375	466	390	383	351	459	307	461
Total sirens-tests	390	468	390	387	360	468	307	504
Indicator value	**98.0%**	**98.0%**	**98.5%**	**98.7%**	**99.1%**	**98.6%**	**98.6%**	**96.3%**

Licensee Comments: none

Thresholds: White > 2.0 Yellow > 5.0

Notes

Occupational Exposure Control Effectiveness	3Q/01	4Q/01	1Q/02	2Q/02	3Q/02	4Q/02	1Q/03	2Q/03
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**	**1**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

RETS/ODCM Radiological Effluent

Thresholds: White > 1.0 Yellow > 3.0

Notes

RETS/ODCM Radiological Effluent	3Q/01	4Q/01	1Q/02	2Q/02	3Q/02	4Q/02	1Q/03	2Q/03
RETS/ODCM occurrences	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Thresholds: White > 0.080

Notes

Protected Area Security Performance Index	3Q/01	4Q/01	1Q/02	2Q/02	3Q/02	4Q/02	1Q/03	2Q/03
IDS compensatory hours	71.00	65.30	87.00	804.00	92.60	86.90	141.60	54.60
CCTV compensatory hours	69.5	14.6	39.4	0	34.1	58.4	10.4	19.2
IDS normalization factor	1.85	1.85	1.85	1.85	2.00	2.00	2.00	2.15
CCTV normalization factor	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.3
Index Value	**0.019**	**0.019**	**0.020**	**0.038**	**0.034**	**0.037**	**0.037**	**0.016**

Licensee Comments: none

Personnel Screening Program

Thresholds: White > 2.0 Yellow > 5.0

Notes

Personnel Screening Program	3Q/01	4Q/01	1Q/02	2Q/02	3Q/02	4Q/02	1Q/03	2Q/03
Program failures	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Thresholds: White > 2.0 Yellow > 5.0

Notes

FFD/Personnel Reliability	3Q/01	4Q/01	1Q/02	2Q/02	3Q/02	4Q/02	1Q/03	2Q/03
Program Failures	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

PI Summary | Inspection Findings Summary | Reactor Oversight Process

Last Modified: July 22, 2003

Palo Verde 1

3Q/2003 Performance Indicators

Licensee's General Comments: none

Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

Notes

Unplanned Scrams per 7000 Critical Hrs	4Q/01	1Q/02	2Q/02	3Q/02	4Q/02	1Q/03	2Q/03	3Q/03
Unplanned scrams	0	0	0	0	1.0	1.0	0	0
Critical hours	2208.0	2160.0	2184.0	2136.0	1450.1	2057.8	2184.0	2170.9
Indicator value	**0**	**0**	**0**	**0**	**0.9**	**1.8**	**1.8**	**1.8**

Licensee Comments: none

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	4Q/01	1Q/02	2Q/02	3Q/02	4Q/02	1Q/03	2Q/03	3Q/03
Scrams	0	0	0	0	0	0	0	0
Indicator value	**1.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Thresholds: White > 6.0

Notes

Unplanned Power Changes per 7000 Critical Hrs	4Q/01	1Q/02	2Q/02	3Q/02	4Q/02	1Q/03	2Q/03	3Q/03
Unplanned power changes	1.0	0	0	0	0	0	0	1.0
Critical hours	2208.0	2160.0	2184.0	2136.0	1450.1	2057.8	2184.0	2170.9
Indicator value	**0.9**	**0.9**	**0.8**	**0.8**	**0**	**0**	**0**	**0.9**

Licensee Comments: none

Safety System Unavailability, Emergency AC Power

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

Notes

Safety System Unavailability, Emergency AC Power	4Q/01	1Q/02	2Q/02	3Q/02	4Q/02	1Q/03	2Q/03	3Q/03
Train 1								
Planned unavailable hours	0.08	68.78	0.04	28.09	20.35	0.04	19.80	0.07
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	2208.00	2160.00	2184.00	2208.00	2208.00	2160.00	2184.00	2208.00
Train 2								
Planned unavailable hours	0.02	14.26	24.90	0.06	18.19	0.12	27.00	0.06
Unplanned unavailable hours	0	0	27.92	0	0	31.37	0	0
Fault exposure hours	0	0	15.82	0	0	0	0	0
Effective Reset hours	0	0	0	0	0	0	0	0
Required hours	2208.00	2160.00	2184.00	2208.00	2208.00	2160.00	2184.00	2208.00
Indicator value	**0.5%**	**0.7%**	**0.7%**	**0.8%**	**0.8%**	**0.8%**	**0.8%**	**0.8%**

Licensee Comments: none

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)	**4Q/01**	**1Q/02**	**2Q/02**	**3Q/02**	**4Q/02**	**1Q/03**	**2Q/03**	**3Q/03**
Train 1								
Planned unavailable hours	2.57	16.45	12.78	28.53	12.75	6.55	14.95	4.97
Unplanned unavailable hours	13.38	0	0	2.58	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	2208.00	2160.00	2184.00	2136.00	1450.11	2057.75	2184.00	2170.92
Train 2								
Planned unavailable hours	10.71	21.63	15.77	8.98	23.22	7.27	34.15	0.78
Unplanned unavailable hours	0	0	0	1.85	0	13.13	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	2208.00	2160.00	2184.00	2136.00	1450.11	2057.75	2184.00	2170.92
Indicator value	**1.0%**	**1.0%**	**0.9%**	**0.9%**	**0.9%**	**0.8%**	**0.9%**	**0.9%**

Licensee Comments: none

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)	4Q/01	1Q/02	2Q/02	3Q/02	4Q/02	1Q/03	2Q/03	3Q/03
Train 1								
Planned unavailable hours	0.75	10.98	1.05	12.51	18.22	1.34	14.38	1.14
Unplanned unavailable hours	13.38	0	0	2.58	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	2208.00	2160.00	2184.00	2136.00	1450.11	2057.75	2184.00	2170.92
Train 2								
Planned unavailable hours	1.40	7.20	8.08	0.60	10.15	0.55	33.20	2.23
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	2208.00	2160.00	2184.00	2136.00	1450.11	2057.75	2184.00	2170.92
Train 3								
Planned unavailable hours	0.23	0.25	0.62	1.15	0.62	0.87	0.35	0.52
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	2208.00	2160.00	2184.00	2136.00	1450.11	2057.75	2184.00	2170.92
Indicator value	**0.5%**	**0.4%**	**0.4%**	**0.4%**	**0.4%**	**0.3%**	**0.4%**	**0.3%**

Licensee Comments: none

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	4Q/01	1Q/02	2Q/02	3Q/02	4Q/02	1Q/03	2Q/03	3Q/03
Train 1								
Planned unavailable hours	5.32	18.17	3.10	33.90	17.93	2.50	12.43	1.45
Unplanned unavailable hours	13.38	0	0	2.58	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	2208.00	2160.00	2184.00	2147.85	1551.82	2087.47	2184.00	2208.00
Train 2								
Planned unavailable hours	2.87	13.00	10.55	17.08	16.30	3.48	37.61	2.28
Unplanned unavailable hours	0	25.42	0	1.85	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	2208.00	2160.00	2184.00	2147.85	1551.82	2087.47	2184.00	2208.00
Train 3								
Planned unavailable hours	0	0	0	0.02	0	0	0	0
Unplanned unavailable hours	0	0	0	0.95	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	0	0	0	45.67	212.52	0	0	0
Train 4								
Planned unavailable hours	0	0	0	0	0.02	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	0	0	0	50.52	331.02	56.68	0	0
Indicator value	**0.5%**	**0.5%**	**0.5%**	**0.5%**	**0.5%**	**0.4%**	**0.4%**	**0.4%**

Licensee Comments: none

Safety System Functional Failures (PWR)

Thresholds: White > 5.0

Notes

Safety System Functional Failures (PWR)	**4Q/01**	**1Q/02**	**2Q/02**	**3Q/02**	**4Q/02**	**1Q/03**	**2Q/03**	**3Q/03**
Safety System Functional Failures	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Reactor Coolant System Activity

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Activity	**10/01**	**11/01**	**12/01**	**1/02**	**2/02**	**3/02**	**4/02**	**5/02**	**6/02**	**7/02**	**8/02**	**9/02**
Maximum activity	0.001000	0.001000	0.001000	0.001000	0.001000	0.001000	0.001000	0.001000	0.001000	0.001000	0.001000	0.001000
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	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**

Reactor Coolant System Activity	**10/02**	**11/02**	**12/02**	**1/03**	**2/03**	**3/03**	**4/03**	**5/03**	**6/03**	**7/03**	**8/03**	**9/03**
Maximum activity	N/A	0.001000	0.001000	0.001000	0.001000	0.001000	0.001000	0.001000	0.001000	0.002000	0.001000	0.002000
Technical specification limit	N/A	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**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.2**	**0.1**	**0.2**

Licensee Comments: none

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Leakage	10/01	11/01	12/01	1/02	2/02	3/02	4/02	5/02	6/02	7/02	8/02	9/02
Maximum leakage	0.164	0.075	0.088	0.107	0.261	0.108	0.056	0.030	0.069	0.115	0.107	0.126
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	**1.6**	**0.8**	**0.9**	**1.1**	**2.6**	**1.1**	**0.6**	**0.3**	**0.7**	**1.2**	**1.1**	**1.3**

Reactor Coolant System Leakage	10/02	11/02	12/02	1/03	2/03	3/03	4/03	5/03	6/03	7/03	8/03	9/03
Maximum leakage	0	0.047	0.034	0.018	0.036	0.047	0.063	0.077	0.056	0.027	0.068	0.057
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**	**0.5**	**0.3**	**0.2**	**0.4**	**0.5**	**0.6**	**0.8**	**0.6**	**0.3**	**0.7**	**0.6**

Licensee Comments: none

Drill/Exercise Performance

Thresholds: White < 90.0% Yellow < 70.0%

Notes

Drill/Exercise Performance	4Q/01	1Q/02	2Q/02	3Q/02	4Q/02	1Q/03	2Q/03	3Q/03
Successful opportunities	198.0	19.0	8.0	108.0	137.0	14.0	8.0	280.0
Total opportunities	205.0	20.0	8.0	110.0	141.0	18.0	8.0	287.0
Indicator value	**96.1%**	**96.5%**	**96.4%**	**97.3%**	**97.3%**	**96.5%**	**96.5%**	**96.9%**

Licensee Comments: none

Thresholds: White < 80.0% Yellow < 60.0%

Notes

ERO Drill Participation	4Q/01	1Q/02	2Q/02	3Q/02	4Q/02	1Q/03	2Q/03	3Q/03
Participating Key personnel	188.0	188.0	191.0	190.0	183.0	181.0	181.0	182.0
Total Key personnel	194.0	191.0	193.0	193.0	185.0	183.0	182.0	182.0
Indicator value	**96.9%**	**98.4%**	**99.0%**	**98.4%**	**98.9%**	**98.9%**	**99.5%**	**100.0%**

Licensee Comments: none

Thresholds: White < 94.0% Yellow < 90.0%

Notes

Alert & Notification System	4Q/01	1Q/02	2Q/02	3Q/02	4Q/02	1Q/03	2Q/03	3Q/03
Successful siren-tests	466	390	383	351	459	307	461	658
Total sirens-tests	468	390	387	360	468	307	504	672
Indicator value	**98.0%**	**98.5%**	**98.7%**	**99.1%**	**98.6%**	**98.6%**	**96.3%**	**96.6%**

Licensee Comments: none

Occupational Exposure Control Effectiveness

Thresholds: White > 2.0 Yellow > 5.0

Notes

Occupational Exposure Control Effectiveness	4Q/01	1Q/02	2Q/02	3Q/02	4Q/02	1Q/03	2Q/03	3Q/03
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

Thresholds: White > 1.0 Yellow > 3.0

Notes

RETS/ODCM Radiological Effluent	4Q/01	1Q/02	2Q/02	3Q/02	4Q/02	1Q/03	2Q/03	3Q/03
RETS/ODCM occurrences	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Thresholds: White > 0.080

Notes

Protected Area Security Performance Index	4Q/01	1Q/02	2Q/02	3Q/02	4Q/02	1Q/03	2Q/03	3Q/03
IDS compensatory hours	65.30	87.00	804.00	92.60	86.90	141.60	54.60	287.80
CCTV compensatory hours	14.6	39.4	0	34.1	58.4	10.4	19.2	53.8
IDS normalization factor	1.85	1.85	1.85	2.00	2.00	2.00	2.15	2.15
CCTV normalization factor	1.2	1.2	1.2	1.2	1.2	1.2	1.3	1.3
Index Value	**0.019**	**0.020**	**0.038**	**0.034**	**0.037**	**0.037**	**0.016**	**0.022**

Licensee Comments: none

Personnel Screening Program

Thresholds: White > 2.0 Yellow > 5.0

Notes

Personnel Screening Program	4Q/01	1Q/02	2Q/02	3Q/02	4Q/02	1Q/03	2Q/03	3Q/03
Program failures	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Thresholds: White > 2.0 Yellow > 5.0

Notes

FFD/Personnel Reliability	4Q/01	1Q/02	2Q/02	3Q/02	4Q/02	1Q/03	2Q/03	3Q/03
Program Failures	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

PI Summary | Inspection Findings Summary | Reactor Oversight Process

Last Modified: October 22, 2003

Palo Verde 1

4Q/2003 Performance Indicators

Licensee's General Comments: none

Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

Notes

Unplanned Scrams per 7000 Critical Hrs	1Q/02	2Q/02	3Q/02	4Q/02	1Q/03	2Q/03	3Q/03	4Q/03
Unplanned scrams	0	0	0	1.0	1.0	0	0	0
Critical hours	2160.0	2184.0	2136.0	1450.1	2057.8	2184.0	2170.9	2208.0
Indicator value	**0**	**0**	**0**	**0.9**	**1.8**	**1.8**	**1.8**	**0.8**

Licensee Comments: none

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/02	2Q/02	3Q/02	4Q/02	1Q/03	2Q/03	3Q/03	4Q/03
Scrams	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Thresholds: White > 6.0

Notes

Unplanned Power Changes per 7000 Critical Hrs	1Q/02	2Q/02	3Q/02	4Q/02	1Q/03	2Q/03	3Q/03	4Q/03
Unplanned power changes	0	0	0	0	0	0	1.0	1.0
Critical hours	2160.0	2184.0	2136.0	1450.1	2057.8	2184.0	2170.9	2208.0
Indicator value	**0.9**	**0.8**	**0.8**	**0**	**0**	**0**	**0.9**	**1.6**

Licensee Comments: none

Safety System Unavailability, Emergency AC Power

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

Notes

Safety System Unavailability, Emergency AC Power	1Q/02	2Q/02	3Q/02	4Q/02	1Q/03	2Q/03	3Q/03	4Q/03
Train 1								
Planned unavailable hours	68.78	0.04	28.09	20.35	0.04	19.80	0.07	31.67
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	2160.00	2184.00	2208.00	2208.00	2160.00	2184.00	2208.00	2208.00
Train 2								
Planned unavailable hours	14.26	24.90	0.06	18.19	0.12	27.00	0.06	32.24
Unplanned unavailable hours	0	27.92	0	0	31.37	0	0	0
Fault exposure hours	0	15.82	0	0	0	0	0	0
Effective Reset hours	0	0	0	0	0	0	0	0
Required hours	2160.00	2184.00	2208.00	2208.00	2160.00	2184.00	2208.00	2208.00
Indicator value	**0.7%**	**0.7%**	**0.8%**	**0.8%**	**0.8%**	**0.8%**	**0.8%**	**0.9%**

Licensee Comments: none

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/02**	**2Q/02**	**3Q/02**	**4Q/02**	**1Q/03**	**2Q/03**	**3Q/03**	**4Q/03**
Train 1								
Planned unavailable hours	16.45	12.78	28.53	12.75	6.55	14.95	4.97	15.23
Unplanned unavailable hours	0	0	2.58	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	2160.00	2184.00	2136.00	1450.11	2057.75	2184.00	2170.92	2208.00
Train 2								
Planned unavailable hours	21.63	15.77	8.98	23.22	7.27	34.15	0.78	15.54
Unplanned unavailable hours	0	0	1.85	0	13.13	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	2160.00	2184.00	2136.00	1450.11	2057.75	2184.00	2170.92	2208.00
Indicator value	**1.0%**	**0.9%**	**0.9%**	**0.9%**	**0.8%**	**0.9%**	**0.9%**	**0.9%**

Licensee Comments: none

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)	1Q/02	2Q/02	3Q/02	4Q/02	1Q/03	2Q/03	3Q/03	4Q/03
Train 1								
Planned unavailable hours	10.98	1.05	12.51	18.22	1.34	14.38	1.14	13.65
Unplanned unavailable hours	0	0	2.58	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	2160.00	2184.00	2136.00	1450.11	2057.75	2184.00	2170.92	2208.00
Train 2								
Planned unavailable hours	7.20	8.08	0.60	10.15	0.55	33.20	2.23	7.70
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	2160.00	2184.00	2136.00	1450.11	2057.75	2184.00	2170.92	2208.00
Train 3								
Planned unavailable hours	0.25	0.62	1.15	0.62	0.87	0.35	0.52	0.58
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	2160.00	2184.00	2136.00	1450.11	2057.75	2184.00	2170.92	2208.00
Indicator value	**0.4%**	**0.4%**	**0.4%**	**0.4%**	**0.3%**	**0.4%**	**0.3%**	**0.3%**

Licensee Comments: none

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	1Q/02	2Q/02	3Q/02	4Q/02	1Q/03	2Q/03	3Q/03	4Q/03
Train 1								
Planned unavailable hours	18.17	3.10	33.90	17.93	2.50	12.43	1.45	16.77
Unplanned unavailable hours	0	0	2.58	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	2160.00	2184.00	2147.85	1551.82	2087.47	2184.00	2208.00	2208.00
Train 2								
Planned unavailable hours	13.00	10.55	17.08	16.30	3.48	37.61	2.28	14.10
Unplanned unavailable hours	25.42	0	1.85	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	2160.00	2184.00	2147.85	1551.82	2087.47	2184.00	2208.00	2208.00
Train 3								
Planned unavailable hours	0	0	0.02	0	0	0	0	0
Unplanned unavailable hours	0	0	0.95	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	0	0	45.67	212.52	0	0	0	0
Train 4								
Planned unavailable hours	0	0	0	0.02	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	0	0	50.52	331.02	56.68	0	0	0
Indicator value	**0.5%**	**0.5%**	**0.5%**	**0.5%**	**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/02**	**2Q/02**	**3Q/02**	**4Q/02**	**1Q/03**	**2Q/03**	**3Q/03**	**4Q/03**
Safety System Functional Failures	0	0	0	0	0	0	0	1
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**

Licensee Comments: none

Reactor Coolant System Activity

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Activity	**1/02**	**2/02**	**3/02**	**4/02**	**5/02**	**6/02**	**7/02**	**8/02**	**9/02**	**10/02**	**11/02**	**12/02**
Maximum activity	0.001000	0.001000	0.001000	0.001000	0.001000	0.001000	0.001000	0.001000	0.001000	N/A	0.001000	0.001000
Technical specification limit	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	N/A	1.0	1.0
Indicator value	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**N/A**	**0.1**	**0.1**

Reactor Coolant System Activity	**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 activity	0.001000	0.001000	0.001000	0.001000	0.001000	0.001000	0.002000	0.001000	0.002000	0.000948	0.001030	0.000977
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	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.2**	**0.1**	**0.2**	**0.1**	**0.1**	**0.1**

Licensee Comments: none

Reactor Coolant System Leakage

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Leakage	1/02	2/02	3/02	4/02	5/02	6/02	7/02	8/02	9/02	10/02	11/02	12/02
Maximum leakage	0.107	0.261	0.108	0.056	0.030	0.069	0.115	0.107	0.126	0	0.047	0.034
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	**1.1**	**2.6**	**1.1**	**0.6**	**0.3**	**0.7**	**1.2**	**1.1**	**1.3**	**0**	**0.5**	**0.3**

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	0.018	0.036	0.047	0.063	0.077	0.056	0.027	0.068	0.057	0.035	0.050	0.051
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**	**0.4**	**0.5**	**0.6**	**0.8**	**0.6**	**0.3**	**0.7**	**0.6**	**0.4**	**0.5**	**0.5**

Licensee Comments: none

Drill/Exercise Performance

Thresholds: White < 90.0% Yellow < 70.0%

Notes

Drill/Exercise Performance	1Q/02	2Q/02	3Q/02	4Q/02	1Q/03	2Q/03	3Q/03	4Q/03
Successful opportunities	19.0	8.0	108.0	137.0	14.0	8.0	280.0	38.0
Total opportunities	20.0	8.0	110.0	141.0	18.0	8.0	287.0	38.0
Indicator value	**96.5%**	**96.4%**	**97.3%**	**97.3%**	**96.5%**	**96.5%**	**96.9%**	**97.1%**

Licensee Comments: none

Thresholds: White < 80.0% Yellow < 60.0%

Notes

ERO Drill Participation	1Q/02	2Q/02	3Q/02	4Q/02	1Q/03	2Q/03	3Q/03	4Q/03
Participating Key personnel	188.0	191.0	190.0	183.0	181.0	181.0	182.0	194.0
Total Key personnel	191.0	193.0	193.0	185.0	183.0	182.0	182.0	200.0
Indicator value	**98.4%**	**99.0%**	**98.4%**	**98.9%**	**98.9%**	**99.5%**	**100.0%**	**97.0%**

Licensee Comments: none

Thresholds: White < 94.0% Yellow < 90.0%

Notes

Alert & Notification System	1Q/02	2Q/02	3Q/02	4Q/02	1Q/03	2Q/03	3Q/03	4Q/03
Successful siren-tests	390	383	351	459	349	503	700	867
Total sirens-tests	390	387	360	468	349	546	714	882
Indicator value	**98.5%**	**98.7%**	**99.1%**	**98.6%**	**98.6%**	**96.5%**	**96.8%**	**97.1%**

Licensee Comments:

3Q/03: The results of an entire system growl test were found to be unreported in 3Q03. The 3Q03 PI data was corrected. The PI color was unaffected by the correction.

2Q/03: The results of an entire system growl test were found to be unreported in 2Q03. The 2Q03 PI data was corrected. The PI color was unaffected by the correction.

1Q/03: The results of an entire system growl test were found to be unreported in 1Q03. The 1Q03 PI data was corrected. The PI color was unaffected by the correction.

Occupational Exposure Control Effectiveness

Thresholds: White > 2.0 Yellow > 5.0

Notes

Occupational Exposure Control Effectiveness	1Q/02	2Q/02	3Q/02	4Q/02	1Q/03	2Q/03	3Q/03	4Q/03
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**	**0**	**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	1Q/02	2Q/02	3Q/02	4Q/02	1Q/03	2Q/03	3Q/03	4Q/03
RETS/ODCM occurrences	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Thresholds: White > 0.080

Notes

Protected Area Security Performance Index	1Q/02	2Q/02	3Q/02	4Q/02	1Q/03	2Q/03	3Q/03	4Q/03
IDS compensatory hours	87.00	804.00	92.60	86.90	141.60	54.60	287.80	206.90
CCTV compensatory hours	39.4	0	34.1	58.4	10.4	19.2	53.8	52.2
IDS normalization factor	1.85	1.85	2.00	2.00	2.00	2.15	2.15	2.15
CCTV normalization factor	1.2	1.2	1.2	1.2	1.2	1.3	1.3	1.3
Index Value	**0.020**	**0.038**	**0.034**	**0.037**	**0.037**	**0.016**	**0.022**	**0.024**

Licensee Comments: none

Personnel Screening Program

Thresholds: White > 2.0 Yellow > 5.0

Notes

Personnel Screening Program	1Q/02	2Q/02	3Q/02	4Q/02	1Q/03	2Q/03	3Q/03	4Q/03
Program failures	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

FFD/Personnel Reliability

Thresholds: White > 2.0 Yellow > 5.0

Notes

FFD/Personnel Reliability	1Q/02	2Q/02	3Q/02	4Q/02	1Q/03	2Q/03	3Q/03	4Q/03
Program Failures	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

PI Summary | Inspection Findings Summary | Reactor Oversight Process

Last Modified: January 23, 2004

Palo Verde 1

1Q/2004 Performance Indicators

Licensee's General Comments: none

Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

Notes

Unplanned Scrams per 7000 Critical Hrs	2Q/02	3Q/02	4Q/02	1Q/03	2Q/03	3Q/03	4Q/03	1Q/04
Unplanned scrams	0	0	1.0	1.0	0	0	0	0
Critical hours	2184.0	2136.0	1450.1	2057.8	2184.0	2170.9	2208.0	2094.3
Indicator value	**0**	**0**	**0.9**	**1.8**	**1.8**	**1.8**	**0.8**	**0**

Licensee Comments: none

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	2Q/02	3Q/02	4Q/02	1Q/03	2Q/03	3Q/03	4Q/03	1Q/04
Scrams	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Thresholds: White > 6.0

Notes

Unplanned Power Changes per 7000 Critical Hrs	2Q/02	3Q/02	4Q/02	1Q/03	2Q/03	3Q/03	4Q/03	1Q/04
Unplanned power changes	0	0	0	0	0	1.0	1.0	1.0
Critical hours	2184.0	2136.0	1450.1	2057.8	2184.0	2170.9	2208.0	2094.3
Indicator value	**0.8**	**0.8**	**0**	**0**	**0**	**0.9**	**1.6**	**2.4**

Licensee Comments: none

Safety System Unavailability, Emergency AC Power

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

Notes

Safety System Unavailability, Emergency AC Power	2Q/02	3Q/02	4Q/02	1Q/03	2Q/03	3Q/03	4Q/03	1Q/04
Train 1								
Planned unavailable hours	0.04	28.09	20.35	0.04	19.80	0.07	31.67	0.52
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	2184.00	2208.00	2208.00	2160.00	2184.00	2208.00	2208.00	2184.00
Train 2								
Planned unavailable hours	24.90	0.06	18.19	0.12	27.00	0.06	32.24	0.02
Unplanned unavailable hours	27.92	0	0	31.37	0	0	0	2.20
Fault exposure hours	15.82	0	0	0	0	0	0	0
Effective Reset hours	0	0	0	0	0	0	0	0
Required hours	2184.00	2208.00	2208.00	2160.00	2184.00	2208.00	2208.00	2184.00
Indicator value	**0.7%**	**0.8%**	**0.8%**	**0.8%**	**0.8%**	**0.8%**	**0.9%**	**0.8%**

Licensee Comments: none

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)	2Q/02	3Q/02	4Q/02	1Q/03	2Q/03	3Q/03	4Q/03	1Q/04
Train 1								
Planned unavailable hours	12.78	28.53	12.75	6.55	14.95	4.97	15.23	10.90
Unplanned unavailable hours	0	2.58	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	2184.00	2136.00	1450.11	2057.75	2184.00	2170.92	2208.00	2094.30
Train 2								
Planned unavailable hours	15.77	8.98	23.22	7.27	34.15	0.78	15.54	19.57
Unplanned unavailable hours	0	1.85	0	13.13	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	2184.00	2136.00	1450.11	2057.75	2184.00	2170.92	2208.00	2094.30
Indicator value	**0.9%**	**0.9%**	**0.9%**	**0.8%**	**0.9%**	**0.9%**	**0.9%**	**0.8%**

Licensee Comments: none

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)	2Q/02	3Q/02	4Q/02	1Q/03	2Q/03	3Q/03	4Q/03	1Q/04
Train 1								
Planned unavailable hours	1.05	12.51	18.22	1.34	14.38	1.14	13.65	2.25
Unplanned unavailable hours	0	2.58	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	2184.00	2136.00	1450.11	2057.75	2184.00	2170.92	2208.00	2094.30
Train 2								
Planned unavailable hours	8.08	0.60	10.15	0.55	33.20	2.23	7.70	15.38
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	2184.00	2136.00	1450.11	2057.75	2184.00	2170.92	2208.00	2094.30
Train 3								
Planned unavailable hours	0.62	1.15	0.62	0.87	0.35	0.52	0.58	0.62
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	2184.00	2136.00	1450.11	2057.75	2184.00	2170.92	2208.00	2094.30
Indicator value	**0.4%**	**0.4%**	**0.4%**	**0.3%**	**0.4%**	**0.3%**	**0.3%**	**0.3%**

Licensee Comments: none

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	2Q/02	3Q/02	4Q/02	1Q/03	2Q/03	3Q/03	4Q/03	1Q/04
Train 1								
Planned unavailable hours	3.10	33.90	17.93	2.50	12.43	1.45	16.77	2.54
Unplanned unavailable hours	0	2.58	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	2184.00	2147.85	1551.82	2087.47	2184.00	2208.00	2208.00	2140.32
Train 2								
Planned unavailable hours	10.55	17.08	16.30	3.48	37.61	2.28	14.10	24.82
Unplanned unavailable hours	0	1.85	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	2184.00	2147.85	1551.82	2087.47	2184.00	2208.00	2208.00	2140.32
Train 3								
Planned unavailable hours	0	0.02	0	0	0	0	0	0
Unplanned unavailable hours	0	0.95	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	0	45.67	212.52	0	0	0	0	0
Train 4								
Planned unavailable hours	0	0	0.02	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	0	50.52	331.02	56.68	0	0	0	33.88
Indicator value	**0.5%**	**0.5%**	**0.5%**	**0.4%**	**0.4%**	**0.4%**	**0.4%**	**0.4%**

Licensee Comments: none

Thresholds: White > 5.0

Notes

Safety System Functional Failures (PWR)	2Q/02	3Q/02	4Q/02	1Q/03	2Q/03	3Q/03	4Q/03	1Q/04
Safety System Functional Failures	0	0	0	0	0	0	1	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**

Licensee Comments: none

Reactor Coolant System Activity

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Activity	4/02	5/02	6/02	7/02	8/02	9/02	10/02	11/02	12/02	1/03	2/03	3/03
Maximum activity	0.001000	0.001000	0.001000	0.001000	0.001000	0.001000	N/A	0.001000	0.001000	0.001000	0.001000	0.001000
Technical specification limit	1.0	1.0	1.0	1.0	1.0	1.0	N/A	1.0	1.0	1.0	1.0	1.0
Indicator value	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**N/A**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**

Reactor Coolant System Activity	4/03	5/03	6/03	7/03	8/03	9/03	10/03	11/03	12/03	1/04	2/04	3/04
Maximum activity	0.001000	0.001000	0.001000	0.002000	0.001000	0.002000	0.000948	0.001030	0.000977	0.001080	0.001050	0.001100
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	**0.1**	**0.1**	**0.1**	**0.2**	**0.1**	**0.2**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**

Licensee Comments: none

Reactor Coolant System Leakage

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Leakage	4/02	5/02	6/02	7/02	8/02	9/02	10/02	11/02	12/02	1/03	2/03	3/03
Maximum leakage	0.056	0.030	0.069	0.115	0.107	0.126	0	0.047	0.034	0.018	0.036	0.047
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	**0.6**	**0.3**	**0.7**	**1.2**	**1.1**	**1.3**	**0**	**0.5**	**0.3**	**0.2**	**0.4**	**0.5**

Reactor Coolant System Leakage	4/03	5/03	6/03	7/03	8/03	9/03	10/03	11/03	12/03	1/04	2/04	3/04
Maximum leakage	0.063	0.077	0.056	0.027	0.068	0.057	0.035	0.050	0.051	0.044	0.055	0.026
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	**0.6**	**0.8**	**0.6**	**0.3**	**0.7**	**0.6**	**0.4**	**0.5**	**0.5**	**0.4**	**0.6**	**0.3**

Licensee Comments: none

Drill/Exercise Performance

Thresholds: White < 90.0% Yellow < 70.0%

Notes

Drill/Exercise Performance	2Q/02	3Q/02	4Q/02	1Q/03	2Q/03	3Q/03	4Q/03	1Q/04
Successful opportunities	8.0	108.0	137.0	14.0	8.0	280.0	38.0	19.0
Total opportunities	8.0	110.0	141.0	18.0	8.0	287.0	38.0	20.0
Indicator value	**96.4%**	**97.3%**	**97.3%**	**96.5%**	**96.5%**	**96.9%**	**97.1%**	**97.1%**

Licensee Comments: none

Thresholds: White < 80.0% Yellow < 60.0%

Notes

ERO Drill Participation	2Q/02	3Q/02	4Q/02	1Q/03	2Q/03	3Q/03	4Q/03	1Q/04
Participating Key personnel	191.0	190.0	183.0	181.0	181.0	182.0	194.0	189.0
Total Key personnel	193.0	193.0	185.0	183.0	182.0	182.0	200.0	194.0
Indicator value	**99.0%**	**98.4%**	**98.9%**	**98.9%**	**99.5%**	**100.0%**	**97.0%**	**97.4%**

Licensee Comments: none

Alert & Notification System

Thresholds: White < 94.0% Yellow < 90.0%

Notes

Alert & Notification System	2Q/02	3Q/02	4Q/02	1Q/03	2Q/03	3Q/03	4Q/03	1Q/04
Successful siren-tests	383	351	459	349	503	700	867	712
Total sirens-tests	387	360	468	349	546	714	882	714
Indicator value	**98.7%**	**99.1%**	**98.6%**	**98.6%**	**96.5%**	**96.8%**	**97.1%**	**97.4%**

Licensee Comments: none

Occupational Exposure Control Effectiveness

Thresholds: White > 2.0 Yellow > 5.0

Notes

Occupational Exposure Control Effectiveness	2Q/02	3Q/02	4Q/02	1Q/03	2Q/03	3Q/03	4Q/03	1Q/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**	**0**	**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/02	3Q/02	4Q/02	1Q/03	2Q/03	3Q/03	4Q/03	1Q/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

Protected Area Security Performance Index

Thresholds: White > 0.080

Notes

Protected Area Security Performance Index	2Q/02	3Q/02	4Q/02	1Q/03	2Q/03	3Q/03	4Q/03	1Q/04
IDS compensatory hours	804.00	92.60	86.90	141.60	54.60	287.80	206.90	96.90
CCTV compensatory hours	0	34.1	58.4	10.4	19.2	53.8	52.2	13.5
IDS normalization factor	1.85	2.00	2.00	2.00	2.15	2.15	2.15	2.15
CCTV normalization factor	1.2	1.2	1.2	1.2	1.3	1.3	1.3	1.3
Index Value	**0.038**	**0.034**	**0.037**	**0.037**	**0.016**	**0.022**	**0.024**	**0.023**

Licensee Comments: none

Personnel Screening Program

Thresholds: White > 2.0 Yellow > 5.0

Notes

Personnel Screening Program	2Q/02	3Q/02	4Q/02	1Q/03	2Q/03	3Q/03	4Q/03	1Q/04
Program failures	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

FFD/Personnel Reliability

Thresholds: White > 2.0 Yellow > 5.0

Notes

FFD/Personnel Reliability	2Q/02	3Q/02	4Q/02	1Q/03	2Q/03	3Q/03	4Q/03	1Q/04
Program Failures	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

PI Summary | Inspection Findings Summary | Reactor Oversight Process

Last Modified: April 22, 2004

Palo Verde 1

2Q/2004 Performance Indicators

Licensee's General Comments: none

Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

Notes

Unplanned Scrams per 7000 Critical Hrs	3Q/02	4Q/02	1Q/03	2Q/03	3Q/03	4Q/03	1Q/04	2Q/04
Unplanned scrams	0	1.0	1.0	0	0	0	0	2.0
Critical hours	2136.0	1450.1	2057.8	2184.0	2170.9	2208.0	2094.3	1216.0
Indicator value	**0**	**0.9**	**1.8**	**1.8**	**1.8**	**0.8**	**0**	**1.8**

Licensee Comments: none

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	3Q/02	4Q/02	1Q/03	2Q/03	3Q/03	4Q/03	1Q/04	2Q/04
Scrams	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Unplanned Power Changes per 7000 Critical Hrs

Thresholds: White > 6.0

Notes

Unplanned Power Changes per 7000 Critical Hrs	3Q/02	4Q/02	1Q/03	2Q/03	3Q/03	4Q/03	1Q/04	2Q/04
Unplanned power changes	0	0	0	0	1.0	1.0	1.0	1.0
Critical hours	2136.0	1450.1	2057.8	2184.0	2170.9	2208.0	2094.3	1216.0
Indicator value	**0.8**	**0**	**0**	**0**	**0.9**	**1.6**	**2.4**	**3.6**

Licensee Comments: none

Safety System Unavailability, Emergency AC Power

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

Notes

Safety System Unavailability, Emergency AC Power	3Q/02	4Q/02	1Q/03	2Q/03	3Q/03	4Q/03	1Q/04	2Q/04
Train 1								
Planned unavailable hours	28.09	20.35	0.04	19.80	0.07	31.67	0.52	0.04
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	2208.00	2208.00	2160.00	2184.00	2208.00	2208.00	2184.00	2184.00
Train 2								
Planned unavailable hours	0.06	18.19	0.12	27.00	0.06	32.24	0.02	0.04
Unplanned unavailable hours	0	0	31.37	0	0	0	2.20	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	2208.00	2208.00	2160.00	2184.00	2208.00	2208.00	2184.00	2184.00
Indicator value	**0.8%**	**0.8%**	**0.8%**	**0.8%**	**0.8%**	**0.9%**	**0.8%**	**0.8%**

Licensee Comments: none

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)	3Q/02	4Q/02	1Q/03	2Q/03	3Q/03	4Q/03	1Q/04	2Q/04
Train 1								
Planned unavailable hours	28.53	12.75	6.55	14.95	4.97	15.23	10.90	5.85
Unplanned unavailable hours	2.58	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	2136.00	1450.11	2057.75	2184.00	2170.92	2208.00	2094.30	1216.00
Train 2								
Planned unavailable hours	8.98	23.22	7.27	34.15	0.78	15.54	19.57	28.94
Unplanned unavailable hours	1.85	0	13.13	0	0	0	0	2.42
Fault exposure hours	0	0	0	0	0	0	0	0
Effective Reset hours	0	0	0	0	0	0	0	0
Required hours	2136.00	1450.11	2057.75	2184.00	2170.92	2208.00	2094.30	1216.00
Indicator value	**0.9%**	**0.9%**	**0.8%**	**0.9%**	**0.9%**	**0.9%**	**0.8%**	**0.8%**

Licensee Comments: none

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)	3Q/02	4Q/02	1Q/03	2Q/03	3Q/03	4Q/03	1Q/04	2Q/04
Train 1								
Planned unavailable hours	12.51	18.22	1.34	14.38	1.14	13.65	2.25	0.67
Unplanned unavailable hours	2.58	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	2136.00	1450.11	2057.75	2184.00	2170.92	2208.00	2094.30	1216.00
Train 2								
Planned unavailable hours	0.60	10.15	0.55	33.20	2.23	7.70	15.38	0.20
Unplanned unavailable hours	0	0	0	0	0	0	0	2.42
Fault exposure hours	0	0	0	0	0	0	0	0
Effective Reset hours	0	0	0	0	0	0	0	0
Required hours	2136.00	1450.11	2057.75	2184.00	2170.92	2208.00	2094.30	1216.00
Train 3								
Planned unavailable hours	1.15	0.62	0.87	0.35	0.52	0.58	0.62	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	2136.00	1450.11	2057.75	2184.00	2170.92	2208.00	2094.30	1216.00
Indicator value	**0.4%**	**0.4%**	**0.3%**	**0.4%**	**0.3%**	**0.3%**	**0.3%**	**0.3%**

Licensee Comments: none

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	3Q/02	4Q/02	1Q/03	2Q/03	3Q/03	4Q/03	1Q/04	2Q/04
Train 1								
Planned unavailable hours	33.90	17.93	2.50	12.43	1.45	16.77	2.54	13.30
Unplanned unavailable hours	2.58	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	2147.85	1551.82	2087.47	2184.00	2208.00	2208.00	2140.32	1387.70
Train 2								
Planned unavailable hours	17.08	16.30	3.48	37.61	2.28	14.10	24.82	5.17
Unplanned unavailable hours	1.85	0	0	0	0	0	0	2.42
Fault exposure hours	0	0	0	0	0	0	0	0
Effective Reset hours	0	0	0	0	0	0	0	0
Required hours	2147.85	1551.82	2087.47	2184.00	2208.00	2208.00	2140.32	1387.70
Train 3								
Planned unavailable hours	0.02	0	0	0	0	0	0	0
Unplanned unavailable hours	0.95	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	45.67	212.52	0	0	0	0	0	397.71
Train 4								
Planned unavailable hours	0	0.02	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	50.52	331.02	56.68	0	0	0	33.88	434.17
Indicator value	**0.5%**	**0.5%**	**0.4%**	**0.4%**	**0.4%**	**0.4%**	**0.4%**	**0.4%**

Licensee Comments: none

Thresholds: White > 5.0

Notes

Safety System Functional Failures (PWR)	3Q/02	4Q/02	1Q/03	2Q/03	3Q/03	4Q/03	1Q/04	2Q/04
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

Reactor Coolant System Activity

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Activity	**7/02**	**8/02**	**9/02**	**10/02**	**11/02**	**12/02**	**1/03**	**2/03**	**3/03**	**4/03**	**5/03**	**6/03**
Maximum activity	0.001000	0.001000	0.001000	N/A	0.001000	0.001000	0.001000	0.001000	0.001000	0.001000	0.001000	0.001000
Technical specification limit	1.0	1.0	1.0	N/A	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Indicator value	**0.1**	**0.1**	**0.1**	**N/A**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**

Reactor Coolant System Activity	**7/03**	**8/03**	**9/03**	**10/03**	**11/03**	**12/03**	**1/04**	**2/04**	**3/04**	**4/04**	**5/04**	**6/04**
Maximum activity	0.002000	0.001000	0.002000	0.000948	0.001030	0.000977	0.001080	0.001050	0.001100	0.001120	0.000431	0.000458
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	**0.2**	**0.1**	**0.2**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0**	**0**

Licensee Comments: none

Reactor Coolant System Leakage

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Leakage	**7/02**	**8/02**	**9/02**	**10/02**	**11/02**	**12/02**	**1/03**	**2/03**	**3/03**	**4/03**	**5/03**	**6/03**
Maximum leakage	0.115	0.107	0.126	0	0.047	0.034	0.018	0.036	0.047	0.063	0.077	0.056
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	**1.2**	**1.1**	**1.3**	**0**	**0.5**	**0.3**	**0.2**	**0.4**	**0.5**	**0.6**	**0.8**	**0.6**
Reactor Coolant System Leakage	**7/03**	**8/03**	**9/03**	**10/03**	**11/03**	**12/03**	**1/04**	**2/04**	**3/04**	**4/04**	**5/04**	**6/04**
Maximum leakage	0.027	0.068	0.057	0.035	0.050	0.051	0.044	0.055	0.026	N/A	0.022	0.098
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**	**0.7**	**0.6**	**0.4**	**0.5**	**0.5**	**0.4**	**0.6**	**0.3**	**N/A**	**0.2**	**1.0**

Licensee Comments:

6/04: Unit 1 was in a refueling outage for the month of April.

Drill/Exercise Performance

Thresholds: White < 90.0% Yellow < 70.0%

Notes

Drill/Exercise Performance	3Q/02	4Q/02	1Q/03	2Q/03	3Q/03	4Q/03	1Q/04	2Q/04
Successful opportunities	108.0	137.0	14.0	8.0	280.0	38.0	19.0	14.0
Total opportunities	110.0	141.0	18.0	8.0	287.0	38.0	20.0	17.0
Indicator value	**97.3%**	**97.3%**	**96.5%**	**96.5%**	**96.9%**	**97.1%**	**97.1%**	**96.7%**

Licensee Comments: none

Thresholds: White < 80.0% Yellow < 60.0%

Notes

ERO Drill Participation	3Q/02	4Q/02	1Q/03	2Q/03	3Q/03	4Q/03	1Q/04	2Q/04
Participating Key personnel	190.0	183.0	181.0	181.0	182.0	194.0	189.0	193.0
Total Key personnel	193.0	185.0	183.0	182.0	182.0	200.0	194.0	195.0
Indicator value	**98.4%**	**98.9%**	**98.9%**	**99.5%**	**100.0%**	**97.0%**	**97.4%**	**99.0%**

Licensee Comments: none

Alert & Notification System

Thresholds: White < 94.0% Yellow < 90.0%

Notes

Alert & Notification System	3Q/02	4Q/02	1Q/03	2Q/03	3Q/03	4Q/03	1Q/04	2Q/04
Successful siren-tests	351	459	349	503	700	867	712	798
Total sirens-tests	360	468	349	546	714	882	714	798
Indicator value	**99.1%**	**98.6%**	**98.6%**	**96.5%**	**96.8%**	**97.1%**	**97.4%**	**99.0%**

Licensee Comments: none

Occupational Exposure Control Effectiveness

Thresholds: White > 2.0 Yellow > 5.0

Notes

Occupational Exposure Control Effectiveness	3Q/02	4Q/02	1Q/03	2Q/03	3Q/03	4Q/03	1Q/04	2Q/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**	**0**	**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	3Q/02	4Q/02	1Q/03	2Q/03	3Q/03	4Q/03	1Q/04	2Q/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

Physical Protection information not publicly available.

Palo Verde 1

3Q/2004 Performance Indicators

Licensee's General Comments: none

Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

Notes

Unplanned Scrams per 7000 Critical Hrs	4Q/02	1Q/03	2Q/03	3Q/03	4Q/03	1Q/04	2Q/04	3Q/04
Unplanned scrams	1.0	1.0	0	0	0	0	2.0	0
Critical hours	1450.1	2057.8	2184.0	2170.9	2208.0	2094.3	1216.0	2208.0
Indicator value	**0.9**	**1.8**	**1.8**	**1.8**	**0.8**	**0**	**1.8**	**1.8**

Licensee Comments: none

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	4Q/02	1Q/03	2Q/03	3Q/03	4Q/03	1Q/04	2Q/04	3Q/04
Scrams	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Unplanned Power Changes per 7000 Critical Hrs

Thresholds: White > 6.0

Notes

Unplanned Power Changes per 7000 Critical Hrs	4Q/02	1Q/03	2Q/03	3Q/03	4Q/03	1Q/04	2Q/04	3Q/04
Unplanned power changes	0	0	0	1.0	1.0	1.0	1.0	0
Critical hours	1450.1	2057.8	2184.0	2170.9	2208.0	2094.3	1216.0	2208.0
Indicator value	**0**	**0**	**0**	**0.9**	**1.6**	**2.4**	**3.6**	**2.7**

Licensee Comments: none

Safety System Unavailability, Emergency AC Power

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

Notes

Safety System Unavailability, Emergency AC Power	4Q/02	1Q/03	2Q/03	3Q/03	4Q/03	1Q/04	2Q/04	3Q/04
Train 1								
Planned unavailable hours	20.35	0.04	19.80	0.07	31.67	0.52	0.04	0.08
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	2208.00	2160.00	2184.00	2208.00	2208.00	2184.00	2184.00	2208.00
Train 2								
Planned unavailable hours	18.19	0.12	27.00	0.06	32.24	0.02	0.04	24.49
Unplanned unavailable hours	0	31.37	0	0	0	2.20	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	2208.00	2160.00	2184.00	2208.00	2208.00	2184.00	2184.00	2208.00
Indicator value	**0.8%**	**0.8%**	**0.8%**	**0.8%**	**0.9%**	**0.8%**	**0.8%**	**0.7%**

Licensee Comments: none

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)	4Q/02	1Q/03	2Q/03	3Q/03	4Q/03	1Q/04	2Q/04	3Q/04
Train 1								
Planned unavailable hours	12.75	6.55	14.95	4.97	15.23	10.90	5.85	27.43
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	1450.11	2057.75	2184.00	2170.92	2208.00	2094.30	1216.00	2208.00
Train 2								
Planned unavailable hours	23.22	7.27	34.15	0.78	15.54	19.57	28.94	33.37
Unplanned unavailable hours	0	13.13	0	0	0	0	2.42	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	1450.11	2057.75	2184.00	2170.92	2208.00	2094.30	1216.00	2208.00
Indicator value	**0.9%**	**0.8%**	**0.9%**	**0.9%**	**0.9%**	**0.8%**	**0.8%**	**0.8%**

Licensee Comments:

3Q/04: Engineering evaluation of HPSI unavailability due to air in containment recirculation sump piping is pending.

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)	4Q/02	1Q/03	2Q/03	3Q/03	4Q/03	1Q/04	2Q/04	3Q/04
Train 1								
Planned unavailable hours	18.22	1.34	14.38	1.14	13.65	2.25	0.67	4.88
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	1450.11	2057.75	2184.00	2170.92	2208.00	2094.30	1216.00	2208.00
Train 2								
Planned unavailable hours	10.15	0.55	33.20	2.23	7.70	15.38	0.20	9.83
Unplanned unavailable hours	0	0	0	0	0	0	2.42	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	1450.11	2057.75	2184.00	2170.92	2208.00	2094.30	1216.00	2208.00
Train 3								
Planned unavailable hours	0.62	0.87	0.35	0.52	0.58	0.62	0	0.47
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	1450.11	2057.75	2184.00	2170.92	2208.00	2094.30	1216.00	2208.00
Indicator value	**0.4%**	**0.3%**	**0.4%**	**0.3%**	**0.3%**	**0.3%**	**0.3%**	**0.3%**

Licensee Comments: none

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	4Q/02	1Q/03	2Q/03	3Q/03	4Q/03	1Q/04	2Q/04	3Q/04
Train 1								
Planned unavailable hours	17.93	2.50	12.43	1.45	16.77	2.54	13.30	13.31
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	1551.82	2087.47	2184.00	2208.00	2208.00	2140.32	1387.70	2208.00
Train 2								
Planned unavailable hours	16.30	3.48	37.61	2.28	14.10	24.82	5.17	26.47
Unplanned unavailable hours	0	0	0	0	0	0	2.42	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	1551.82	2087.47	2184.00	2208.00	2208.00	2140.32	1387.70	2208.00
Train 3								
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	212.52	0	0	0	0	0	397.71	0
Train 4								
Planned unavailable hours	0.02	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	331.02	56.68	0	0	0	33.88	434.17	0
Indicator value	**0.5%**	**0.4%**	**0.4%**	**0.4%**	**0.4%**	**0.4%**	**0.4%**	**0.4%**

Licensee Comments:

3Q/04: Engineering evaluation of RHR unavailability due to air in containment recirculation sump piping is pending.

Thresholds: White > 5.0

Notes

Safety System Functional Failures (PWR)	4Q/02	1Q/03	2Q/03	3Q/03	4Q/03	1Q/04	2Q/04	3Q/04
Safety System Functional Failures	0	0	0	0	1	0	0	2
Indicator value	**0**	**0**	**0**	**0**	**1**	**1**	**1**	**3**

Licensee Comments:

3Q/04: SSFF reported via LER 528/2004-006 on 8/13/2004. SSFF reported via LER 528/2004-009 on 9/28/2004.

Reactor Coolant System Activity

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Activity	**10/02**	**11/02**	**12/02**	**1/03**	**2/03**	**3/03**	**4/03**	**5/03**	**6/03**	**7/03**	**8/03**	**9/03**
Maximum activity	N/A	0.001000	0.001000	0.001000	0.001000	0.001000	0.001000	0.001000	0.001000	0.002000	0.001000	0.002000
Technical specification limit	N/A	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**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.2**	**0.1**	**0.2**

Reactor Coolant System Activity	**10/03**	**11/03**	**12/03**	**1/04**	**2/04**	**3/04**	**4/04**	**5/04**	**6/04**	**7/04**	**8/04**	**9/04**
Maximum activity	0.000948	0.001030	0.000977	0.001080	0.001050	0.001100	0.001120	0.000431	0.000458	0.000482	0.000546	0.001620
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	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0**	**0**	**0**	**0.1**	**0.2**

Licensee Comments: none

Reactor Coolant System Leakage

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Leakage	**10/02**	**11/02**	**12/02**	**1/03**	**2/03**	**3/03**	**4/03**	**5/03**	**6/03**	**7/03**	**8/03**	**9/03**
Maximum leakage	0	0.047	0.034	0.018	0.036	0.047	0.063	0.077	0.056	0.027	0.068	0.057
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**	**0.5**	**0.3**	**0.2**	**0.4**	**0.5**	**0.6**	**0.8**	**0.6**	**0.3**	**0.7**	**0.6**
Reactor Coolant System Leakage	**10/03**	**11/03**	**12/03**	**1/04**	**2/04**	**3/04**	**4/04**	**5/04**	**6/04**	**7/04**	**8/04**	**9/04**
Maximum leakage	0.035	0.050	0.051	0.044	0.055	0.026	N/A	0.022	0.098	0.108	0.133	0.116
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	**0.4**	**0.5**	**0.5**	**0.4**	**0.6**	**0.3**	**N/A**	**0.2**	**1.0**	**1.1**	**1.3**	**1.2**

Licensee Comments: none

Drill/Exercise Performance

Thresholds: White < 90.0% Yellow < 70.0%

Notes

Drill/Exercise Performance	4Q/02	1Q/03	2Q/03	3Q/03	4Q/03	1Q/04	2Q/04	3Q/04
Successful opportunities	137.0	14.0	8.0	280.0	38.0	19.0	14.0	111.0
Total opportunities	141.0	18.0	8.0	287.0	38.0	20.0	17.0	112.0
Indicator value	**97.3%**	**96.5%**	**96.5%**	**96.9%**	**97.1%**	**97.1%**	**96.7%**	**96.9%**

Licensee Comments: none

Thresholds: White < 80.0% Yellow < 60.0%

Notes

ERO Drill Participation	4Q/02	1Q/03	2Q/03	3Q/03	4Q/03	1Q/04	2Q/04	3Q/04
Participating Key personnel	183.0	181.0	181.0	182.0	194.0	189.0	193.0	188.0
Total Key personnel	185.0	183.0	182.0	182.0	200.0	194.0	195.0	191.0
Indicator value	**98.9%**	**98.9%**	**99.5%**	**100.0%**	**97.0%**	**97.4%**	**99.0%**	**98.4%**

Licensee Comments: none

Alert & Notification System

Thresholds: White < 94.0% Yellow < 90.0%

Notes

Alert & Notification System	4Q/02	1Q/03	2Q/03	3Q/03	4Q/03	1Q/04	2Q/04	3Q/04
Successful siren-tests	459	349	503	700	867	712	798	792
Total sirens-tests	468	349	546	714	882	714	798	798
Indicator value	**98.6%**	**98.6%**	**96.5%**	**96.8%**	**97.1%**	**97.4%**	**99.0%**	**99.3%**

Licensee Comments: none

Occupational Exposure Control Effectiveness

Thresholds: White > 2.0 Yellow > 5.0

Notes

Occupational Exposure Control Effectiveness	4Q/02	1Q/03	2Q/03	3Q/03	4Q/03	1Q/04	2Q/04	3Q/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**	**0**	**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	4Q/02	1Q/03	2Q/03	3Q/03	4Q/03	1Q/04	2Q/04	3Q/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

Physical Protection information not publicly available.

Last Modified: October 25, 2004

Palo Verde 1

4Q/2004 Performance Indicators

Licensee's General Comments: none

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	0	0	2.0	0	0
Critical hours	2057.8	2184.0	2170.9	2208.0	2094.3	1216.0	2208.0	2208.0
Indicator value	**1.8**	**1.8**	**1.8**	**0.8**	**0**	**1.8**	**1.8**	**1.8**

Licensee Comments: none

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	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

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	0	1.0	1.0	1.0	1.0	0	1.0
Critical hours	2057.8	2184.0	2170.9	2208.0	2094.3	1216.0	2208.0	2208.0
Indicator value	**0**	**0**	**0.9**	**1.6**	**2.4**	**3.6**	**2.7**	**2.7**

Licensee Comments: none

Safety System Unavailability, Emergency AC Power

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

Notes

Safety System Unavailability, Emergency AC Power	1Q/03	2Q/03	3Q/03	4Q/03	1Q/04	2Q/04	3Q/04	4Q/04
Train 1								
Planned unavailable hours	0.04	19.80	0.07	31.67	0.52	0.04	0.08	20.23
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	2160.00	2184.00	2208.00	2208.00	2184.00	2184.00	2208.00	2208.00
Train 2								
Planned unavailable hours	0.12	27.00	0.06	32.24	0.02	0.04	24.49	0.54
Unplanned unavailable hours	31.37	0	0	0	2.20	0	0	73.71
Fault exposure hours	0	0	0	0	0	0	0	0
Effective Reset hours	0	0	0	0	0	0	0	0
Required hours	2160.00	2184.00	2208.00	2208.00	2184.00	2184.00	2208.00	2208.00
Indicator value	**0.8%**	**0.8%**	**0.8%**	**0.9%**	**0.8%**	**0.8%**	**0.7%**	**0.9%**

Licensee Comments: none

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	6.55	14.95	4.97	15.23	10.90	5.85	27.43	32.53
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	2057.75	2184.00	2170.92	2208.00	2094.30	1216.00	2208.00	2208.00
Train 2								
Planned unavailable hours	7.27	34.15	0.78	15.54	19.57	28.94	33.37	3.70
Unplanned unavailable hours	13.13	0	0	0	0	2.42	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	2057.75	2184.00	2170.92	2208.00	2094.30	1216.00	2208.00	2208.00
Indicator value	**0.8%**	**0.9%**	**0.9%**	**0.9%**	**0.8%**	**0.8%**	**0.8%**	**0.9%**

Licensee Comments:

4Q/04: An engineering evaluation of HPSI unavailability due to air in the containment recirculation sump piping determined that the HPSI system may not have been able to perform its safety function in response to certain accident scenarios. The deficiency was not capable of being discovered during normal surveillance testing and as such is a design deficiency. The design deficiency has existed since initial plant operation. The condition is being evaluated under the NRC's Significance Determination Process and the associated fault exposure hours are not included in the calculation of the unavailability indicator in accordance with the provisions of NEI 99-02, "Equipment Unavailability due to Design Deficiency."

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)	1Q/03	2Q/03	3Q/03	4Q/03	1Q/04	2Q/04	3Q/04	4Q/04
Train 1								
Planned unavailable hours	1.34	14.38	1.14	13.65	2.25	0.67	4.88	30.40
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	2057.75	2184.00	2170.92	2208.00	2094.30	1216.00	2208.00	2208.00
Train 2								
Planned unavailable hours	0.55	33.20	2.23	7.70	15.38	0.20	9.83	2.50
Unplanned unavailable hours	0	0	0	0	0	2.42	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	2057.75	2184.00	2170.92	2208.00	2094.30	1216.00	2208.00	2208.00
Train 3								
Planned unavailable hours	0.87	0.35	0.52	0.58	0.62	0	0.47	0.75
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	2057.75	2184.00	2170.92	2208.00	2094.30	1216.00	2208.00	2208.00
Indicator value	**0.3%**	**0.4%**	**0.3%**	**0.3%**	**0.3%**	**0.3%**	**0.3%**	**0.3%**

Licensee Comments: none

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	1Q/03	2Q/03	3Q/03	4Q/03	1Q/04	2Q/04	3Q/04	4Q/04
Train 1								
Planned unavailable hours	2.50	12.43	1.45	16.77	2.54	13.30	13.31	11.93
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	2087.47	2184.00	2208.00	2208.00	2140.32	1387.70	2208.00	2208.00
Train 2								
Planned unavailable hours	3.48	37.61	2.28	14.10	24.82	5.17	26.47	6.75
Unplanned unavailable hours	0	0	0	0	0	2.42	0	14.67
Fault exposure hours	0	0	0	0	0	0	0	0
Effective Reset hours	0	0	0	0	0	0	0	0
Required hours	2087.47	2184.00	2208.00	2208.00	2140.32	1387.70	2208.00	2208.00
Train 3								
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	0	0	0	0	0	397.71	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	56.68	0	0	0	33.88	434.17	0	0
Indicator value	**0.4%**	**0.4%**	**0.4%**	**0.4%**	**0.4%**	**0.4%**	**0.4%**	**0.4%**

Licensee Comments:

4Q/04: An engineering evaluation of RHR unavailability due to air in the containment recirculation sump piping determined that the RHR system was able to perform its intended safety function. No design deficiency existed. As such, no fault exposure hours are included in the calculation of the unavailability indicator.

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	0	0	1	0	0	2	0
Indicator value	**0**	**0**	**0**	**1**	**1**	**1**	**3**	**2**

Licensee Comments: none

Reactor Coolant System Activity

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Activity	**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 activity	0.001000	0.001000	0.001000	0.001000	0.001000	0.001000	0.002000	0.001000	0.002000	0.000948	0.001030	0.000977
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	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.2**	**0.1**	**0.2**	**0.1**	**0.1**	**0.1**
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	0.001080	0.001050	0.001100	0.001120	0.000431	0.000458	0.000482	0.000546	0.001620	0.000589	0.000613	0.000643
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	**0.1**	**0.1**	**0.1**	**0.1**	**0**	**0**	**0**	**0.1**	**0.2**	**0.1**	**0.1**	**0.1**

Licensee Comments: none

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	0.018	0.036	0.047	0.063	0.077	0.056	0.027	0.068	0.057	0.035	0.050	0.051
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**	**0.4**	**0.5**	**0.6**	**0.8**	**0.6**	**0.3**	**0.7**	**0.6**	**0.4**	**0.5**	**0.5**
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	0.044	0.055	0.026	N/A	0.022	0.098	0.108	0.133	0.116	0.119	0.142	0.151
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	**0.4**	**0.6**	**0.3**	**N/A**	**0.2**	**1.0**	**1.1**	**1.3**	**1.2**	**1.2**	**1.4**	**1.5**

Licensee Comments: none

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	14.0	8.0	280.0	38.0	19.0	14.0	111.0	97.0
Total opportunities	18.0	8.0	287.0	38.0	20.0	17.0	112.0	111.0
Indicator value	**96.5%**	**96.5%**	**96.9%**	**97.1%**	**97.1%**	**96.7%**	**96.9%**	**95.1%**

Licensee Comments: none

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	181.0	181.0	182.0	194.0	189.0	193.0	188.0	188.0
Total Key personnel	183.0	182.0	182.0	200.0	194.0	195.0	191.0	191.0
Indicator value	**98.9%**	**99.5%**	**100.0%**	**97.0%**	**97.4%**	**99.0%**	**98.4%**	**98.4%**

Licensee Comments: none

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	349	503	700	867	712	798	792	872
Total sirens-tests	349	546	714	882	714	798	798	882
Indicator value	**98.6%**	**96.5%**	**96.8%**	**97.1%**	**97.4%**	**99.0%**	**99.3%**	**99.4%**

Licensee Comments: none

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**	**0**	**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	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

Physical Protection information not publicly available.

Last Modified: March 9, 2005

Palo Verde 1

1Q/2005 Performance Indicators

Licensee's General Comments: none

Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

Notes

Unplanned Scrams per 7000 Critical Hrs	2Q/03	3Q/03	4Q/03	1Q/04	2Q/04	3Q/04	4Q/04	1Q/05
Unplanned scrams	0	0	0	0	2.0	0	0	0
Critical hours	2184.0	2170.9	2208.0	2094.3	1216.0	2208.0	2208.0	1860.4
Indicator value	**1.8**	**1.8**	**0.8**	**0**	**1.8**	**1.8**	**1.8**	**1.9**

Licensee Comments: none

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	2Q/03	3Q/03	4Q/03	1Q/04	2Q/04	3Q/04	4Q/04	1Q/05
Scrams	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Thresholds: White > 6.0

Notes

Unplanned Power Changes per 7000 Critical Hrs	2Q/03	3Q/03	4Q/03	1Q/04	2Q/04	3Q/04	4Q/04	1Q/05
Unplanned power changes	0	1.0	1.0	1.0	1.0	0	1.0	2.0
Critical hours	2184.0	2170.9	2208.0	2094.3	1216.0	2208.0	2208.0	1860.4
Indicator value	**0**	**0.9**	**1.6**	**2.4**	**3.6**	**2.7**	**2.7**	**3.7**

Licensee Comments: none

Safety System Unavailability, Emergency AC Power

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

Notes

Safety System Unavailability, Emergency AC Power	2Q/03	3Q/03	4Q/03	1Q/04	2Q/04	3Q/04	4Q/04	1Q/05
Train 1								
Planned unavailable hours	19.80	0.07	31.67	0.52	0.04	0.08	20.23	29.61
Unplanned unavailable hours	0	0	0	0	0	0	0	56.23
Fault exposure hours	0	0	0	0	0	0	0	0
Effective Reset hours	0	0	0	0	0	0	0	0
Required hours	2184.00	2208.00	2208.00	2184.00	2184.00	2208.00	2208.00	2160.00
Train 2								
Planned unavailable hours	27.00	0.06	32.24	0.02	0.04	24.49	0.54	68.17
Unplanned unavailable hours	0	0	0	2.20	0	0	73.71	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	2184.00	2208.00	2208.00	2184.00	2184.00	2208.00	2208.00	2160.00
Indicator value	**0.8%**	**0.8%**	**0.9%**	**0.8%**	**0.8%**	**0.7%**	**0.9%**	**1.1%**

Licensee Comments: none

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)	2Q/03	3Q/03	4Q/03	1Q/04	2Q/04	3Q/04	4Q/04	1Q/05
Train 1								
Planned unavailable hours	14.95	4.97	15.23	10.90	5.85	27.43	32.53	18.23
Unplanned unavailable hours	0	0	0	0	0	0	0	15.65
Fault exposure hours	0	0	0	0	0	0	0	0
Effective Reset hours	0	0	0	0	0	0	0	0
Required hours	2184.00	2170.92	2208.00	2094.30	1216.00	2208.00	2208.00	1860.35
Train 2								
Planned unavailable hours	34.15	0.78	15.54	19.57	28.94	33.37	3.70	59.36
Unplanned unavailable hours	0	0	0	0	2.42	0	0	0.02
Fault exposure hours	0	0	0	0	0	0	0	0
Effective Reset hours	0	0	0	0	0	0	0	0
Required hours	2184.00	2170.92	2208.00	2094.30	1216.00	2208.00	2208.00	1860.35
Indicator value	**0.9%**	**0.9%**	**0.9%**	**0.8%**	**0.8%**	**0.8%**	**0.9%**	**1.0%**

Licensee Comments:

1Q/05: An engineering evaluation of HPSI unavailability due to air in the containment recirculation sump piping determined that the HPSI system may not have been able to perform its safety function in response to certain accident scenarios. The deficiency was not capable of being discovered during normal surveillance testing and as such is a discovered condition. The discovered condition has existed since initial plant operation. NEI 99-02, Revision 3, section 2.2, Clarifying Notes, discusses how to handle "Equipment failures or discovered conditions due to design or construction deficiencies." The guidance also includes, "These failures are amenable to evaluation through the NRC's Significance Determination Process and are excluded from the unavailability indicators." The condition has been evaluated under the NRC's Significance Determination Process in NRC letter ML051010009, dated 11/08/2005, concluding that the inspection finding is most appropriately characterized as a yellow finding.

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)	2Q/03	3Q/03	4Q/03	1Q/04	2Q/04	3Q/04	4Q/04	1Q/05
Train 1								
Planned unavailable hours	14.38	1.14	13.65	2.25	0.67	4.88	30.40	12.42
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	2184.00	2170.92	2208.00	2094.30	1216.00	2208.00	2208.00	1860.35
Train 2								
Planned unavailable hours	33.20	2.23	7.70	15.38	0.20	9.83	2.50	35.68
Unplanned unavailable hours	0	0	0	0	2.42	0	0	0.02
Fault exposure hours	0	0	0	0	0	0	0	0
Effective Reset hours	0	0	0	0	0	0	0	0
Required hours	2184.00	2170.92	2208.00	2094.30	1216.00	2208.00	2208.00	1860.35
Train 3								
Planned unavailable hours	0.35	0.52	0.58	0.62	0	0.47	0.75	0.98
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	2184.00	2170.92	2208.00	2094.30	1216.00	2208.00	2208.00	1860.35
Indicator value	**0.4%**	**0.3%**	**0.3%**	**0.3%**	**0.3%**	**0.3%**	**0.3%**	**0.3%**

Licensee Comments: none

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	2Q/03	3Q/03	4Q/03	1Q/04	2Q/04	3Q/04	4Q/04	1Q/05
Train 1								
Planned unavailable hours	12.43	1.45	16.77	2.54	13.30	13.31	11.93	68.07
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	2184.00	2208.00	2208.00	2140.32	1387.70	2208.00	2208.00	1950.80
Train 2								
Planned unavailable hours	37.61	2.28	14.10	24.82	5.17	26.47	6.75	41.82
Unplanned unavailable hours	0	0	0	0	2.42	0	14.67	0.02
Fault exposure hours	0	0	0	0	0	0	0	0
Effective Reset hours	0	0	0	0	0	0	0	0
Required hours	2184.00	2208.00	2208.00	2140.32	1387.70	2208.00	2208.00	1950.80
Train 3								
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	0	0	0	0	397.71	0	0	170.53
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	0	0	0	33.88	434.17	0	0	30.17
Indicator value	**0.4%**	**0.4%**	**0.4%**	**0.4%**	**0.4%**	**0.4%**	**0.4%**	**0.5%**

Licensee Comments: none

Thresholds: White > 5.0

Notes

Safety System Functional Failures (PWR)	2Q/03	3Q/03	4Q/03	1Q/04	2Q/04	3Q/04	4Q/04	1Q/05
Safety System Functional Failures	0	0	1	0	0	2	0	0
Indicator value	**0**	**0**	**1**	**1**	**1**	**3**	**2**	**2**

Licensee Comments: none

Reactor Coolant System Activity

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Activity	**4/03**	**5/03**	**6/03**	**7/03**	**8/03**	**9/03**	**10/03**	**11/03**	**12/03**	**1/04**	**2/04**	**3/04**
Maximum activity	0.001000	0.001000	0.001000	0.002000	0.001000	0.002000	0.000948	0.001030	0.000977	0.001080	0.001050	0.001100
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	**0.1**	**0.1**	**0.1**	**0.2**	**0.1**	**0.2**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**
Reactor Coolant System Activity	**4/04**	**5/04**	**6/04**	**7/04**	**8/04**	**9/04**	**10/04**	**11/04**	**12/04**	**1/05**	**2/05**	**3/05**
Maximum activity	0.001120	0.000431	0.000458	0.000482	0.000546	0.001620	0.000589	0.000613	0.000643	0.000704	0.000690	0.000724
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	**0.1**	**0**	**0**	**0**	**0.1**	**0.2**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**

Licensee Comments: none

Reactor Coolant System Leakage

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Leakage	**4/03**	**5/03**	**6/03**	**7/03**	**8/03**	**9/03**	**10/03**	**11/03**	**12/03**	**1/04**	**2/04**	**3/04**
Maximum leakage	0.063	0.077	0.056	0.027	0.068	0.057	0.035	0.050	0.051	0.044	0.055	0.026
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	**0.6**	**0.8**	**0.6**	**0.3**	**0.7**	**0.6**	**0.4**	**0.5**	**0.5**	**0.4**	**0.6**	**0.3**
Reactor Coolant System Leakage	**4/04**	**5/04**	**6/04**	**7/04**	**8/04**	**9/04**	**10/04**	**11/04**	**12/04**	**1/05**	**2/05**	**3/05**
Maximum leakage	N/A	0.022	0.098	0.108	0.133	0.116	0.119	0.142	0.151	0.136	0.145	0.034
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**	**1.0**	**1.1**	**1.3**	**1.2**	**1.2**	**1.4**	**1.5**	**1.4**	**1.5**	**0.3**

Licensee Comments: none

Drill/Exercise Performance

Thresholds: White < 90.0% Yellow < 70.0%

Notes

Drill/Exercise Performance	2Q/03	3Q/03	4Q/03	1Q/04	2Q/04	3Q/04	4Q/04	1Q/05
Successful opportunities	8.0	280.0	38.0	17.0	14.0	111.0	97.0	21.0
Total opportunities	8.0	287.0	38.0	20.0	17.0	112.0	111.0	22.0
Indicator value	**96.5%**	**96.9%**	**97.1%**	**96.8%**	**96.4%**	**96.6%**	**94.8%**	**95.3%**

Licensee Comments:

1Q/05: In the 1Q2004 data submittal, credit was incorrectly given for two drill, exercise & event opportunities. The number of successful opportunities was reported as 19 out of 20. The number has been revised to 17 out of 20. This change did not affect the color of the performance indicator.

Thresholds: White < 80.0% Yellow < 60.0%

Notes

ERO Drill Participation	2Q/03	3Q/03	4Q/03	1Q/04	2Q/04	3Q/04	4Q/04	1Q/05
Participating Key personnel	181.0	182.0	194.0	189.0	193.0	188.0	187.0	184.0
Total Key personnel	182.0	182.0	200.0	194.0	195.0	191.0	190.0	190.0
Indicator value	**99.5%**	**100.0%**	**97.0%**	**97.4%**	**99.0%**	**98.4%**	**98.4%**	**96.8%**

Licensee Comments:

1Q/05: In the 4Q2004 data submittal, the number of people being tracked for PI purposes was incorrect. The numbers of participating key personnel and total key personnel were 188 out of 191. The numbers have been revised to 187 out of 190. This change did not affect the color of the performance indicator.

Alert & Notification System

Thresholds: White < 94.0% Yellow < 90.0%

Notes

Alert & Notification System	2Q/03	3Q/03	4Q/03	1Q/04	2Q/04	3Q/04	4Q/04	1Q/05
Successful siren-tests	503	700	867	712	798	792	872	700
Total sirens-tests	546	714	882	714	798	798	882	714
Indicator value	**96.5%**	**96.8%**	**97.1%**	**97.4%**	**99.0%**	**99.3%**	**99.4%**	**99.1%**

Licensee Comments: none

Occupational Exposure Control Effectiveness

Thresholds: White > 2.0 Yellow > 5.0

Notes

Occupational Exposure Control Effectiveness	2Q/03	3Q/03	4Q/03	1Q/04	2Q/04	3Q/04	4Q/04	1Q/05
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**	**0**	**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/03	3Q/03	4Q/03	1Q/04	2Q/04	3Q/04	4Q/04	1Q/05
RETS/ODCM occurrences	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Physical Protection information not publicly available.

Last Modified: June 17, 2005

Palo Verde 1

2Q/2005 Performance Indicators

Licensee's General Comments: none

Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

Notes

Unplanned Scrams per 7000 Critical Hrs	3Q/03	4Q/03	1Q/04	2Q/04	3Q/04	4Q/04	1Q/05	2Q/05
Unplanned scrams	0	0	0	2.0	0	0	0	0
Critical hours	2170.9	2208.0	2094.3	1216.0	2208.0	2208.0	1860.4	2184.0
Indicator value	**1.8**	**0.8**	**0**	**1.8**	**1.8**	**1.8**	**1.9**	**0**

Licensee Comments: none

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	3Q/03	4Q/03	1Q/04	2Q/04	3Q/04	4Q/04	1Q/05	2Q/05
Scrams	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Thresholds: White > 6.0

Notes

Unplanned Power Changes per 7000 Critical Hrs	3Q/03	4Q/03	1Q/04	2Q/04	3Q/04	4Q/04	1Q/05	2Q/05
Unplanned power changes	1.0	1.0	1.0	1.0	0	1.0	2.0	0
Critical hours	2170.9	2208.0	2094.3	1216.0	2208.0	2208.0	1860.4	2184.0
Indicator value	**0.9**	**1.6**	**2.4**	**3.6**	**2.7**	**2.7**	**3.7**	**2.5**

Licensee Comments: none

Safety System Unavailability, Emergency AC Power

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

Notes

Safety System Unavailability, Emergency AC Power	3Q/03	4Q/03	1Q/04	2Q/04	3Q/04	4Q/04	1Q/05	2Q/05
Train 1								
Planned unavailable hours	0.07	31.67	0.52	0.04	0.08	20.23	29.61	3.74
Unplanned unavailable hours	0	0	0	0	0	0	56.23	11.63
Fault exposure hours	0	0	0	0	0	0	0	0
Effective Reset hours	0	0	0	0	0	0	0	0
Required hours	2208.00	2208.00	2184.00	2184.00	2208.00	2208.00	2160.00	2184.00
Train 2								
Planned unavailable hours	0.06	32.24	0.02	0.04	24.49	0.54	68.17	2.81
Unplanned unavailable hours	0	0	2.20	0	0	73.71	0	24.20
Fault exposure hours	0	0	0	0	0	0	0	0
Effective Reset hours	0	0	0	0	0	0	0	0
Required hours	2208.00	2208.00	2184.00	2184.00	2208.00	2208.00	2160.00	2184.00
Indicator value	**0.8%**	**0.9%**	**0.8%**	**0.8%**	**0.7%**	**0.9%**	**1.1%**	**1.0%**

Licensee Comments: none

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)	3Q/03	4Q/03	1Q/04	2Q/04	3Q/04	4Q/04	1Q/05	2Q/05
Train 1								
Planned unavailable hours	4.97	15.23	10.90	5.85	27.43	32.53	18.23	21.53
Unplanned unavailable hours	0	0	0	0	0	0	15.65	12.52
Fault exposure hours	0	0	0	0	0	0	0	0
Effective Reset hours	0	0	0	0	0	0	0	0
Required hours	2170.92	2208.00	2094.30	1216.00	2208.00	2208.00	1860.35	2184.00
Train 2								
Planned unavailable hours	0.78	15.54	19.57	28.94	33.37	3.70	59.36	4.79
Unplanned unavailable hours	0	0	0	2.42	0	0	0.02	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	2170.92	2208.00	2094.30	1216.00	2208.00	2208.00	1860.35	2184.00
Indicator value	**0.9%**	**0.9%**	**0.8%**	**0.8%**	**0.8%**	**0.9%**	**1.0%**	**1.0%**

Licensee Comments: none

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)	3Q/03	4Q/03	1Q/04	2Q/04	3Q/04	4Q/04	1Q/05	2Q/05
Train 1								
Planned unavailable hours	1.14	13.65	2.25	0.67	4.88	30.40	12.42	15.16
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	2170.92	2208.00	2094.30	1216.00	2208.00	2208.00	1860.35	2184.00
Train 2								
Planned unavailable hours	2.23	7.70	15.38	0.20	9.83	2.50	35.68	4.03
Unplanned unavailable hours	0	0	0	2.42	0	0	0.02	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	2170.92	2208.00	2094.30	1216.00	2208.00	2208.00	1860.35	2184.00
Train 3								
Planned unavailable hours	0.52	0.58	0.62	0	0.47	0.75	0.98	0.67
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	2170.92	2208.00	2094.30	1216.00	2208.00	2208.00	1860.35	2184.00
Indicator value	**0.3%**	**0.3%**	**0.3%**	**0.3%**	**0.3%**	**0.3%**	**0.3%**	**0.4%**

Licensee Comments: none

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	3Q/03	4Q/03	1Q/04	2Q/04	3Q/04	4Q/04	1Q/05	2Q/05
Train 1								
Planned unavailable hours	1.45	16.77	2.54	13.30	13.31	11.93	68.07	16.38
Unplanned unavailable hours	0	0	0	0	0	0	0	12.62
Fault exposure hours	0	0	0	0	0	0	0	0
Effective Reset hours	0	0	0	0	0	0	0	0
Required hours	2208.00	2208.00	2140.32	1387.70	2208.00	2208.00	1950.80	2184.00
Train 2								
Planned unavailable hours	2.28	14.10	24.82	5.17	26.47	6.75	41.82	5.00
Unplanned unavailable hours	0	0	0	2.42	0	14.67	0.02	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	2208.00	2208.00	2140.32	1387.70	2208.00	2208.00	1950.80	2184.00
Train 3								
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	0	0	0	397.71	0	0	170.53	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	0	0	33.88	434.17	0	0	30.17	0
Indicator value	**0.4%**	**0.4%**	**0.4%**	**0.4%**	**0.4%**	**0.4%**	**0.5%**	**0.5%**

Licensee Comments: none

Thresholds: White > 5.0

Notes

Safety System Functional Failures (PWR)	3Q/03	4Q/03	1Q/04	2Q/04	3Q/04	4Q/04	1Q/05	2Q/05
Safety System Functional Failures	0	1	0	0	2	0	0	1
Indicator value	**0**	**1**	**1**	**1**	**3**	**2**	**2**	**3**

Licensee Comments:

2Q/05: SSFF reported via LER 528/2005-003 on 5/20/2005.

Reactor Coolant System Activity

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Activity	**7/03**	**8/03**	**9/03**	**10/03**	**11/03**	**12/03**	**1/04**	**2/04**	**3/04**	**4/04**	**5/04**	**6/04**
Maximum activity	0.002000	0.001000	0.002000	0.000948	0.001030	0.000977	0.001080	0.001050	0.001100	0.001120	0.000431	0.000458
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	**0.2**	**0.1**	**0.2**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0**	**0**

Reactor Coolant System Activity	**7/04**	**8/04**	**9/04**	**10/04**	**11/04**	**12/04**	**1/05**	**2/05**	**3/05**	**4/05**	**5/05**	**6/05**
Maximum activity	0.000482	0.000546	0.001620	0.000589	0.000613	0.000643	0.000704	0.000690	0.000724	0.000761	0.000785	0.000813
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**	**0.1**	**0.2**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**

Licensee Comments: none

Reactor Coolant System Leakage

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Leakage	**7/03**	**8/03**	**9/03**	**10/03**	**11/03**	**12/03**	**1/04**	**2/04**	**3/04**	**4/04**	**5/04**	**6/04**
Maximum leakage	0.027	0.068	0.057	0.035	0.050	0.051	0.044	0.055	0.026	N/A	0.022	0.098
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**	**0.7**	**0.6**	**0.4**	**0.5**	**0.5**	**0.4**	**0.6**	**0.3**	**N/A**	**0.2**	**1.0**
Reactor Coolant System Leakage	**7/04**	**8/04**	**9/04**	**10/04**	**11/04**	**12/04**	**1/05**	**2/05**	**3/05**	**4/05**	**5/05**	**6/05**
Maximum leakage	0.108	0.133	0.116	0.119	0.142	0.151	0.136	0.145	0.034	0.031	0.066	0.045
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	**1.1**	**1.3**	**1.2**	**1.2**	**1.4**	**1.5**	**1.4**	**1.5**	**0.3**	**0.3**	**0.7**	**0.5**

Licensee Comments: none

Drill/Exercise Performance

Thresholds: White < 90.0% Yellow < 70.0%

Notes

Drill/Exercise Performance	3Q/03	4Q/03	1Q/04	2Q/04	3Q/04	4Q/04	1Q/05	2Q/05
Successful opportunities	280.0	38.0	17.0	14.0	111.0	97.0	21.0	0
Total opportunities	287.0	38.0	20.0	17.0	112.0	111.0	22.0	0
Indicator value	**96.9%**	**97.1%**	**96.8%**	**96.4%**	**96.6%**	**94.8%**	**95.3%**	**95.2%**

Licensee Comments: none

Thresholds: White < 80.0% Yellow < 60.0%

Notes

ERO Drill Participation	3Q/03	4Q/03	1Q/04	2Q/04	3Q/04	4Q/04	1Q/05	2Q/05
Participating Key personnel	182.0	194.0	189.0	193.0	188.0	187.0	184.0	179.0
Total Key personnel	182.0	200.0	194.0	195.0	191.0	190.0	190.0	188.0
Indicator value	**100.0%**	**97.0%**	**97.4%**	**99.0%**	**98.4%**	**98.4%**	**96.8%**	**95.2%**

Licensee Comments: none

Thresholds: White < 94.0% Yellow < 90.0%

Notes

Alert & Notification System	3Q/03	4Q/03	1Q/04	2Q/04	3Q/04	4Q/04	1Q/05	2Q/05
Successful siren-tests	700	867	712	798	792	872	700	797
Total sirens-tests	714	882	714	798	798	882	714	798
Indicator value	**96.8%**	**97.1%**	**97.4%**	**99.0%**	**99.3%**	**99.4%**	**99.1%**	**99.0%**

Licensee Comments: none

Occupational Exposure Control Effectiveness

Thresholds: White > 2.0 Yellow > 5.0

Notes

Occupational Exposure Control Effectiveness	3Q/03	4Q/03	1Q/04	2Q/04	3Q/04	4Q/04	1Q/05	2Q/05
High radiation area occurrences	0	0	0	0	0	0	0	1
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**	**0**	**0**	**0**	**0**	**0**	**0**	**1**

Licensee Comments: none

RETS/ODCM Radiological Effluent

Thresholds: White > 1.0 Yellow > 3.0

Notes

RETS/ODCM Radiological Effluent	3Q/03	4Q/03	1Q/04	2Q/04	3Q/04	4Q/04	1Q/05	2Q/05
RETS/ODCM occurrences	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Physical Protection information not publicly available.

Last Modified: August 3, 2005

Palo Verde 1

3Q/2005 Performance Indicators

Licensee's General Comments: none

Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

Notes

Unplanned Scrams per 7000 Critical Hrs	4Q/03	1Q/04	2Q/04	3Q/04	4Q/04	1Q/05	2Q/05	3Q/05
Unplanned scrams	0	0	2.0	0	0	0	0	1.0
Critical hours	2208.0	2094.3	1216.0	2208.0	2208.0	1860.4	2184.0	1824.6
Indicator value	**0.8**	**0**	**1.8**	**1.8**	**1.8**	**1.9**	**0**	**0.9**

Licensee Comments: none

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	4Q/03	1Q/04	2Q/04	3Q/04	4Q/04	1Q/05	2Q/05	3Q/05
Scrams	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Thresholds: White > 6.0

Notes

Unplanned Power Changes per 7000 Critical Hrs	4Q/03	1Q/04	2Q/04	3Q/04	4Q/04	1Q/05	2Q/05	3Q/05
Unplanned power changes	1.0	1.0	1.0	0	1.0	2.0	0	0
Critical hours	2208.0	2094.3	1216.0	2208.0	2208.0	1860.4	2184.0	1824.6
Indicator value	**1.6**	**2.4**	**3.6**	**2.7**	**2.7**	**3.7**	**2.5**	**2.6**

Licensee Comments: none

Safety System Unavailability, Emergency AC Power

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

Notes

Safety System Unavailability, Emergency AC Power	4Q/03	1Q/04	2Q/04	3Q/04	4Q/04	1Q/05	2Q/05	3Q/05
Train 1								
Planned unavailable hours	31.67	0.52	0.04	0.08	20.23	29.61	3.74	23.64
Unplanned unavailable hours	0	0	0	0	0	56.23	11.63	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	2208.00	2184.00	2184.00	2208.00	2208.00	2160.00	2184.00	2208.00
Train 2								
Planned unavailable hours	32.24	0.02	0.04	24.49	0.54	68.17	2.81	29.74
Unplanned unavailable hours	0	2.20	0	0	73.71	0	24.20	90.28
Fault exposure hours	0	0	0	0	0	0	0	0
Effective Reset hours	0	0	0	0	0	0	0	0
Required hours	2208.00	2184.00	2184.00	2208.00	2208.00	2160.00	2184.00	2208.00
Indicator value	**0.9%**	**0.8%**	**0.8%**	**0.7%**	**0.9%**	**1.1%**	**1.0%**	**1.2%**

Licensee Comments: none

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)	4Q/03	1Q/04	2Q/04	3Q/04	4Q/04	1Q/05	2Q/05	3Q/05
Train 1								
Planned unavailable hours	15.23	10.90	5.85	27.43	28.32	13.54	16.43	17.46
Unplanned unavailable hours	0	0	0	0	0	15.65	12.52	34.37
Fault exposure hours	0	0	0	0	0	0	0	0
Effective Reset hours	0	0	0	0	0	0	0	0
Required hours	2208.00	2094.30	1216.00	2208.00	2208.00	1860.35	2184.00	1824.55
Train 2								
Planned unavailable hours	15.54	19.57	28.94	33.37	2.27	57.35	3.20	23.76
Unplanned unavailable hours	0	0	2.42	0	0	0.02	0	2.62
Fault exposure hours	0	0	0	0	0	0	0	0
Effective Reset hours	0	0	0	0	0	0	0	0
Required hours	2208.00	2094.30	1216.00	2208.00	2208.00	1860.35	2184.00	1824.55
Indicator value	**0.9%**	**0.8%**	**0.8%**	**0.8%**	**0.9%**	**1.0%**	**1.0%**	**1.1%**

Licensee Comments:

2Q/05: 3Q2005: High Pressure Safety Injection (HPSI) unavailability hours adjusted from 09/2004 through 06/2005 to credit availability during venting that would be promptly restored by an operator in the control room. Restoration actions are contained in written procedure 40ST-9SI07, are uncomplicated and require no diagnosis or repair. The actions are virtually certain to be successful (i.e., probability nearly equal to 1) during accident conditions. The operator in the main control room is in close proximity to restore the equipment when needed. The staffing is identified in advance by the procedure and an operator identified to take the appropriate prompt response for the testing configuration independent of other control room actions that may be required. Reference NEI 99-02, Revision 3, Section 2.2, Clarifying Notes, Planned Unavailable Hours, pg. 25.

1Q/05: An engineering evaluation of HPSI unavailability due to air in the containment recirculation sump piping determined that the HPSI system may not have been able to perform its safety function in response to certain accident scenarios. The deficiency was not capable of being discovered during normal surveillance testing and as such is a discovered condition. The discovered condition has existed since initial plant operation. NEI 99-02, Revision 3, section 2.2, Clarifying Notes, discusses how to handle "Equipment failures or discovered conditions due to design or construction deficiencies." The guidance also

includes, "These failures are amenable to evaluation through the NRC's Significance Determination Process and are excluded from the unavailability indicators." The condition has been evaluated under the NRC's Significance Determination Process in NRC letter ML051010009, dated 11/08/2005, concluding that the inspection finding is most appropriately characterized as a yellow finding. 3Q2005: High Pressure Safety Injection (HPSI) unavailability hours adjusted from 09/2004 through 06/2005 to credit availability during venting that would be promptly restored by an operator in the control room. Restoration actions are contained in written procedure 40ST-9SI07, are uncomplicated and require no diagnosis or repair. The actions are virtually certain to be successful (i.e., probability nearly equal to 1) during accident conditions. The operator in the main control room is in close proximity to restore the equipment when needed. The staffing is identified in advance by the procedure and an operator identified to take the appropriate prompt response for the testing configuration independent of other control room actions that may be required. Reference NEI 99-02, Revision 3, Section 2.2, Clarifying Notes, Planned Unavailable Hours, pg. 25.

4Q/04: An engineering evaluation of HPSI unavailability due to air in the containment recirculation sump piping determined that the HPSI system may not have been able to perform its safety function in response to certain accident scenarios. The deficiency was not capable of being discovered during normal surveillance testing and as such is a design deficiency. The design deficiency has existed since initial plant operation. The condition is being evaluated under the NRC's Significance Determination Process and the associated fault exposure hours are not included in the calculation of the unavailability indicator in accordance with the provisions of NEI 99-02, "Equipment Unavailability due to Design Deficiency." 3Q2005: High Pressure Safety Injection (HPSI) unavailability hours adjusted from 09/2004 through 06/2005 to credit availability during venting that would be promptly restored by an operator in the control room. Restoration actions are contained in written procedure 40ST-9SI07, are uncomplicated and require no diagnosis or repair. The actions are virtually certain to be successful (i.e., probability nearly equal to 1) during accident conditions. The operator in the main control room is in close proximity to restore the equipment when needed. The staffing is identified in advance by the procedure and an operator identified to take the appropriate prompt response for the testing configuration independent of other control room actions that may be required. Reference NEI 99-02, Revision 3, Section 2.2, Clarifying Notes, Planned Unavailable Hours, pg. 25.

3Q/04: Engineering evaluation of HPSI unavailability due to air in containment recirculation sump piping is pending. 3Q2005: High Pressure Safety Injection (HPSI) unavailability hours adjusted from 09/2004 through 06/2005 to credit availability during venting that would be promptly restored by an operator in the control room. Restoration actions are contained in written procedure 40ST-9SI07, are uncomplicated and require no diagnosis or repair. The actions are virtually certain to be successful (i.e., probability nearly equal to 1) during accident conditions. The operator in the main control room is in close proximity to restore the equipment when needed. The staffing is identified in advance by the procedure and an operator identified to take the appropriate prompt response for the testing configuration independent of other control room actions that may be required. Reference NEI 99-02, Revision 3, Section 2.2, Clarifying Notes, Planned Unavailable Hours, pg. 25.

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

Notes

Safety System Unavailability, Heat Removal System (AFW)	4Q/03	1Q/04	2Q/04	3Q/04	4Q/04	1Q/05	2Q/05	3Q/05
Train 1								
Planned unavailable hours	13.65	2.25	0.67	4.88	30.40	12.42	15.16	11.08
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	2208.00	2094.30	1216.00	2208.00	2208.00	1860.35	2184.00	1824.55
Train 2								
Planned unavailable hours	7.70	15.38	0.20	9.83	2.50	35.68	4.03	15.50
Unplanned unavailable hours	0	0	2.42	0	0	0.02	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	2208.00	2094.30	1216.00	2208.00	2208.00	1860.35	2184.00	1824.55
Train 3								
Planned unavailable hours	0.58	0.62	0	0.47	0.75	0.98	0.67	0.83
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	2208.00	2094.30	1216.00	2208.00	2208.00	1860.35	2184.00	1824.55
Indicator value	**0.3%**	**0.3%**	**0.3%**	**0.3%**	**0.3%**	**0.3%**	**0.4%**	**0.4%**

Licensee Comments: none

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	4Q/03	1Q/04	2Q/04	3Q/04	4Q/04	1Q/05	2Q/05	3Q/05
Train 1								
Planned unavailable hours	16.77	2.54	13.30	13.31	11.93	68.07	16.38	26.18
Unplanned unavailable hours	0	0	0	0	0	0	12.62	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	2208.00	2140.32	1387.70	2208.00	2208.00	1950.80	2184.00	1957.03
Train 2								
Planned unavailable hours	14.10	24.82	5.17	26.47	6.75	41.82	5.00	36.97
Unplanned unavailable hours	0	0	2.42	0	14.67	0.02	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	2208.00	2140.32	1387.70	2208.00	2208.00	1950.80	2184.00	1957.03
Train 3								
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	0	0	397.71	0	0	170.53	0	41.98
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	0	33.88	434.17	0	0	30.17	0	186.28
Indicator value	**0.4%**	**0.4%**	**0.4%**	**0.4%**	**0.4%**	**0.5%**	**0.5%**	**0.5%**

Licensee Comments: none

Safety System Functional Failures (PWR)

Thresholds: White > 5.0

Notes

Safety System Functional Failures (PWR)	4Q/03	1Q/04	2Q/04	3Q/04	4Q/04	1Q/05	2Q/05	3Q/05
Safety System Functional Failures	1	0	0	2	0	0	1	0
Indicator value	**1**	**1**	**1**	**3**	**2**	**2**	**3**	**1**

Licensee Comments: none

Reactor Coolant System Activity

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Activity	**10/03**	**11/03**	**12/03**	**1/04**	**2/04**	**3/04**	**4/04**	**5/04**	**6/04**	**7/04**	**8/04**	**9/04**
Maximum activity	0.000948	0.001030	0.000977	0.001080	0.001050	0.001100	0.001120	0.000431	0.000458	0.000482	0.000546	0.001620
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	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0**	**0**	**0**	**0.1**	**0.2**
Reactor Coolant System Activity	**10/04**	**11/04**	**12/04**	**1/05**	**2/05**	**3/05**	**4/05**	**5/05**	**6/05**	**7/05**	**8/05**	**9/05**
Maximum activity	0.000589	0.000613	0.000643	0.000704	0.000690	0.000724	0.000761	0.000785	0.000813	0.001430	0.000816	0.000908
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	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**

Licensee Comments: none

Reactor Coolant System Leakage

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Leakage	**10/03**	**11/03**	**12/03**	**1/04**	**2/04**	**3/04**	**4/04**	**5/04**	**6/04**	**7/04**	**8/04**	**9/04**
Maximum leakage	0.035	0.050	0.051	0.044	0.055	0.026	N/A	0.022	0.098	0.108	0.133	0.116
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	**0.4**	**0.5**	**0.5**	**0.4**	**0.6**	**0.3**	**N/A**	**0.2**	**1.0**	**1.1**	**1.3**	**1.2**
Reactor Coolant System Leakage	**10/04**	**11/04**	**12/04**	**1/05**	**2/05**	**3/05**	**4/05**	**5/05**	**6/05**	**7/05**	**8/05**	**9/05**
Maximum leakage	0.119	0.142	0.151	0.136	0.145	0.034	0.031	0.066	0.045	0.085	0.060	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	**1.2**	**1.4**	**1.5**	**1.4**	**1.5**	**0.3**	**0.3**	**0.7**	**0.5**	**0.9**	**0.6**	**0.5**

Licensee Comments: none

Thresholds: White < 90.0% Yellow < 70.0%

Notes

Drill/Exercise Performance	4Q/03	1Q/04	2Q/04	3Q/04	4Q/04	1Q/05	2Q/05	3Q/05
Successful opportunities	38.0	17.0	14.0	111.0	97.0	21.0	0	75.0
Total opportunities	38.0	20.0	17.0	112.0	111.0	22.0	0	79.0
Indicator value	**97.1%**	**96.8%**	**96.4%**	**96.6%**	**94.8%**	**95.3%**	**95.2%**	**93.5%**

Licensee Comments: none

Thresholds: White < 80.0% Yellow < 60.0%

Notes

ERO Drill Participation	4Q/03	1Q/04	2Q/04	3Q/04	4Q/04	1Q/05	2Q/05	3Q/05
Participating Key personnel	194.0	189.0	193.0	188.0	187.0	184.0	179.0	180.0
Total Key personnel	200.0	194.0	195.0	191.0	190.0	190.0	188.0	190.0
Indicator value	**97.0%**	**97.4%**	**99.0%**	**98.4%**	**98.4%**	**96.8%**	**95.2%**	**94.7%**

Licensee Comments: none

Thresholds: White < 94.0% Yellow < 90.0%

Notes

Alert & Notification System	4Q/03	1Q/04	2Q/04	3Q/04	4Q/04	1Q/05	2Q/05	3Q/05
Successful siren-tests	867	712	798	792	872	700	797	753
Total sirens-tests	882	714	798	798	882	714	798	776
Indicator value	**97.1%**	**97.4%**	**99.0%**	**99.3%**	**99.4%**	**99.1%**	**99.0%**	**98.5%**

Licensee Comments: none

Occupational Exposure Control Effectiveness

Thresholds: White > 2.0 Yellow > 5.0

Notes

Occupational Exposure Control Effectiveness	4Q/03	1Q/04	2Q/04	3Q/04	4Q/04	1Q/05	2Q/05	3Q/05
High radiation area occurrences	0	0	0	0	0	0	1	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**	**0**	**0**	**0**	**0**	**0**	**1**	**1**

Licensee Comments: none

RETS/ODCM Radiological Effluent

Thresholds: White > 1.0 Yellow > 3.0

Notes

RETS/ODCM Radiological Effluent	4Q/03	1Q/04	2Q/04	3Q/04	4Q/04	1Q/05	2Q/05	3Q/05
RETS/ODCM occurrences	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Physical Protection information not publicly available.

Last Modified: November 3, 2005

Palo Verde 1

4Q/2005 Performance Indicators

Licensee's General Comments: none

Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

Notes

Unplanned Scrams per 7000 Critical Hrs	1Q/04	2Q/04	3Q/04	4Q/04	1Q/05	2Q/05	3Q/05	4Q/05
Unplanned scrams	0	2.0	0	0	0	0	1.0	0
Critical hours	2094.3	1216.0	2208.0	2208.0	1860.4	2184.0	1824.6	406.8
Indicator value	**0**	**1.8**	**1.8**	**1.8**	**1.9**	**0**	**0.9**	**1.1**

Licensee Comments: none

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/04	2Q/04	3Q/04	4Q/04	1Q/05	2Q/05	3Q/05	4Q/05
Scrams	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Thresholds: White > 6.0

Notes

Unplanned Power Changes per 7000 Critical Hrs	1Q/04	2Q/04	3Q/04	4Q/04	1Q/05	2Q/05	3Q/05	4Q/05
Unplanned power changes	1.0	1.0	0	1.0	2.0	0	0	0
Critical hours	2094.3	1216.0	2208.0	2208.0	1860.4	2184.0	1824.6	406.8
Indicator value	**2.4**	**3.6**	**2.7**	**2.7**	**3.7**	**2.5**	**2.6**	**2.2**

Licensee Comments: none

Safety System Unavailability, Emergency AC Power

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

Notes

Safety System Unavailability, Emergency AC Power	1Q/04	2Q/04	3Q/04	4Q/04	1Q/05	2Q/05	3Q/05	4Q/05
Train 1								
Planned unavailable hours	0.52	0.04	0.08	20.23	29.61	3.74	23.64	0
Unplanned unavailable hours	0	0	0	0	56.23	11.63	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	2184.00	2184.00	2208.00	2208.00	2160.00	2184.00	2208.00	2208.00
Train 2								
Planned unavailable hours	0.02	0.04	24.49	0.54	68.17	2.81	29.74	0.02
Unplanned unavailable hours	2.20	0	0	73.71	0	24.20	90.28	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	2184.00	2184.00	2208.00	2208.00	2160.00	2184.00	2208.00	2208.00
Indicator value	**0.8%**	**0.8%**	**0.7%**	**0.9%**	**1.1%**	**1.0%**	**1.2%**	**1.1%**

Licensee Comments: none

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/04	2Q/04	3Q/04	4Q/04	1Q/05	2Q/05	3Q/05	4Q/05
Train 1								
Planned unavailable hours	10.90	5.85	27.43	28.32	13.54	16.43	17.46	0.78
Unplanned unavailable hours	0	0	0	0	15.65	12.52	34.37	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	2094.30	1216.00	2208.00	2208.00	1860.35	2184.00	1824.55	406.83
Train 2								
Planned unavailable hours	19.57	28.94	33.37	2.27	57.35	3.20	23.76	9.90
Unplanned unavailable hours	0	2.42	0	0	0.02	0	2.62	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	2094.30	1216.00	2208.00	2208.00	1860.35	2184.00	1824.55	406.83
Indicator value	**0.8%**	**0.8%**	**0.8%**	**0.9%**	**1.0%**	**1.0%**	**1.1%**	**1.1%**

Licensee Comments: none

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)	1Q/04	2Q/04	3Q/04	4Q/04	1Q/05	2Q/05	3Q/05	4Q/05
Train 1								
Planned unavailable hours	2.25	0.67	4.88	30.40	12.42	15.16	11.08	1.60
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	2094.30	1216.00	2208.00	2208.00	1860.35	2184.00	1824.55	406.83
Train 2								
Planned unavailable hours	15.38	0.20	9.83	2.50	35.68	4.03	15.50	0
Unplanned unavailable hours	0	2.42	0	0	0.02	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	2094.30	1216.00	2208.00	2208.00	1860.35	2184.00	1824.55	406.83
Train 3								
Planned unavailable hours	0.62	0	0.47	0.75	0.98	0.67	0.83	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	2094.30	1216.00	2208.00	2208.00	1860.35	2184.00	1824.55	406.83
Indicator value	**0.3%**	**0.3%**	**0.3%**	**0.3%**	**0.3%**	**0.4%**	**0.4%**	**0.4%**

Licensee Comments: none

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	1Q/04	2Q/04	3Q/04	4Q/04	1Q/05	2Q/05	3Q/05	4Q/05
Train 1								
Planned unavailable hours	2.54	13.30	13.31	11.93	68.07	16.38	26.18	18.85
Unplanned unavailable hours	0	0	0	0	0	12.62	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	2140.32	1387.70	2208.00	2208.00	1950.80	2184.00	1957.03	498.15
Train 2								
Planned unavailable hours	24.82	5.17	26.47	6.75	41.82	5.00	36.97	1.67
Unplanned unavailable hours	0	2.42	0	14.67	0.02	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	2140.32	1387.70	2208.00	2208.00	1950.80	2184.00	1957.03	498.15
Train 3								
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	0	397.71	0	0	170.53	0	41.98	211.42
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	33.88	434.17	0	0	30.17	0	186.28	527.37
Indicator value	**0.4%**	**0.4%**	**0.4%**	**0.4%**	**0.5%**	**0.5%**	**0.5%**	**0.5%**

Licensee Comments: none

Thresholds: White > 5.0

Notes

Safety System Functional Failures (PWR)	1Q/04	2Q/04	3Q/04	4Q/04	1Q/05	2Q/05	3Q/05	4Q/05
Safety System Functional Failures	0	0	2	0	0	1	0	0
Indicator value	**1**	**1**	**3**	**2**	**2**	**3**	**1**	**1**

Licensee Comments: none

Reactor Coolant System Activity

Thresholds: White > 50.0 Yellow > 100.0

Notes

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	0.001080	0.001050	0.001100	0.001120	0.000431	0.000458	0.000482	0.000546	0.001620	0.000589	0.000613	0.000643
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	**0.1**	**0.1**	**0.1**	**0.1**	**0**	**0**	**0**	**0.1**	**0.2**	**0.1**	**0.1**	**0.1**

Reactor Coolant System Activity	**1/05**	**2/05**	**3/05**	**4/05**	**5/05**	**6/05**	**7/05**	**8/05**	**9/05**	**10/05**	**11/05**	**12/05**
Maximum activity	0.000704	0.000690	0.000724	0.000761	0.000785	0.000813	0.001430	0.000816	0.000908	0.000883	N/A	0.000118
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	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**N/A**	**0**

Licensee Comments:

12/05: RCS activity data not taken for the month of November due to Unit 1 being in a refueling outage.

Reactor Coolant System Leakage

Thresholds: White > 50.0 Yellow > 100.0

Notes

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	0.044	0.055	0.026	N/A	0.022	0.098	0.108	0.133	0.116	0.119	0.142	0.151
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	**0.4**	**0.6**	**0.3**	**N/A**	**0.2**	**1.0**	**1.1**	**1.3**	**1.2**	**1.2**	**1.4**	**1.5**
Reactor Coolant System Leakage	**1/05**	**2/05**	**3/05**	**4/05**	**5/05**	**6/05**	**7/05**	**8/05**	**9/05**	**10/05**	**11/05**	**12/05**
Maximum leakage	0.136	0.145	0.034	0.031	0.066	0.045	0.085	0.060	0.050	0.085	N/A	0.019
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	**1.4**	**1.5**	**0.3**	**0.3**	**0.7**	**0.5**	**0.9**	**0.6**	**0.5**	**0.9**	**N/A**	**0.2**

Licensee Comments:

12/05: RCS leakage data not taken for the month November due to Unit 1 being in a refueling outage.

Drill/Exercise Performance

Thresholds: White < 90.0% Yellow < 70.0%

Notes

Drill/Exercise Performance	1Q/04	2Q/04	3Q/04	4Q/04	1Q/05	2Q/05	3Q/05	4Q/05
Successful opportunities	17.0	14.0	111.0	97.0	21.0	0	74.0	103.0
Total opportunities	20.0	17.0	112.0	111.0	22.0	0	79.0	104.0
Indicator value	**96.8%**	**96.4%**	**96.6%**	**94.8%**	**95.3%**	**95.2%**	**93.2%**	**94.0%**

Licensee Comments:

4Q/05: In the 3Q2005 data submittal, the Emergency Response Organization (ERO) Drill / Exercise Performance was incorrect. The Successful drill, exercise & event opportunities were 75 out of 79. The numbers have been revised to 74 out of 79. This change did not affect the color of the performance indicator.

Thresholds: White < 80.0% Yellow < 60.0%

Notes

ERO Drill Participation	1Q/04	2Q/04	3Q/04	4Q/04	1Q/05	2Q/05	3Q/05	4Q/05
Participating Key personnel	189.0	193.0	188.0	187.0	184.0	179.0	180.0	175.0
Total Key personnel	194.0	195.0	191.0	190.0	190.0	188.0	190.0	179.0
Indicator value	**97.4%**	**99.0%**	**98.4%**	**98.4%**	**96.8%**	**95.2%**	**94.7%**	**97.8%**

Licensee Comments: none

Alert & Notification System

Thresholds: White < 94.0% Yellow < 90.0%

Notes

Alert & Notification System	1Q/04	2Q/04	3Q/04	4Q/04	1Q/05	2Q/05	3Q/05	4Q/05
Successful siren-tests	712	798	792	872	740	797	753	791
Total sirens-tests	714	798	798	882	755	798	776	798
Indicator value	**97.4%**	**99.0%**	**99.3%**	**99.4%**	**99.0%**	**99.0%**	**98.5%**	**98.5%**

Licensee Comments:

4Q/05: In the 1Q2005 data submittal, the Alert and Notification System (ANS) Reliability was incorrect. The numbers of Successful siren-tests were 700 out of 714. The numbers have been revised to 740 out of 755. This change did not affect the color of the performance indicator.

Occupational Exposure Control Effectiveness

Thresholds: White > 2.0 Yellow > 5.0

Notes

Occupational Exposure Control Effectiveness	1Q/04	2Q/04	3Q/04	4Q/04	1Q/05	2Q/05	3Q/05	4Q/05
High radiation area occurrences	0	0	0	0	0	1	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**	**0**	**0**	**0**	**0**	**1**	**1**	**1**

Licensee Comments: none

RETS/ODCM Radiological Effluent

Thresholds: White > 1.0 Yellow > 3.0

Notes

RETS/ODCM Radiological Effluent	1Q/04	2Q/04	3Q/04	4Q/04	1Q/05	2Q/05	3Q/05	4Q/05
RETS/ODCM occurrences	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Physical Protection information not publicly available.

Last Modified: January 30, 2006

Palo Verde 1

1Q/2006 Performance Indicators

Licensee's General Comments: none

Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

Notes

Unplanned Scrams per 7000 Critical Hrs	2Q/04	3Q/04	4Q/04	1Q/05	2Q/05	3Q/05	4Q/05	1Q/06
Unplanned scrams	2.0	0	0	0	0	1.0	0	0
Critical hours	1216.0	2208.0	2208.0	1860.4	2184.0	1824.6	406.8	1752.6
Indicator value	**1.8**	**1.8**	**1.8**	**1.9**	**0**	**0.9**	**1.1**	**1.1**

Licensee Comments: none

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	2Q/04	3Q/04	4Q/04	1Q/05	2Q/05	3Q/05	4Q/05	1Q/06
Scrams	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Thresholds: White > 6.0

Notes

Unplanned Power Changes per 7000 Critical Hrs	2Q/04	3Q/04	4Q/04	1Q/05	2Q/05	3Q/05	4Q/05	1Q/06
Unplanned power changes	1.0	0	1.0	2.0	0	0	0	0
Critical hours	1216.0	2208.0	2208.0	1860.4	2184.0	1824.6	406.8	1752.6
Indicator value	**3.6**	**2.7**	**2.7**	**3.7**	**2.5**	**2.6**	**2.2**	**0**

Licensee Comments: none

Safety System Unavailability, Emergency AC Power

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

Notes

Safety System Unavailability, Emergency AC Power	2Q/04	3Q/04	4Q/04	1Q/05	2Q/05	3Q/05	4Q/05	1Q/06
Train 1								
Planned unavailable hours	0.04	0.08	20.23	29.61	3.74	23.64	0	14.54
Unplanned unavailable hours	0	0	0	56.23	11.63	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	2184.00	2208.00	2208.00	2160.00	2184.00	2208.00	2208.00	2160.00
Train 2								
Planned unavailable hours	0.04	24.49	0.54	68.17	2.81	29.74	0.02	14.19
Unplanned unavailable hours	0	0	73.71	0	24.20	90.28	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	2184.00	2208.00	2208.00	2160.00	2184.00	2208.00	2208.00	2160.00
Indicator value	**0.8%**	**0.7%**	**0.9%**	**1.1%**	**1.0%**	**1.2%**	**1.1%**	**1.1%**

Licensee Comments: none

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)	2Q/04	3Q/04	4Q/04	1Q/05	2Q/05	3Q/05	4Q/05	1Q/06
Train 1								
Planned unavailable hours	5.85	27.43	28.32	13.54	16.43	17.46	0.78	12.95
Unplanned unavailable hours	0	0	0	15.65	12.52	34.37	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	1216.00	2208.00	2208.00	1860.35	2184.00	1824.55	406.83	1752.58
Train 2								
Planned unavailable hours	28.94	33.37	2.27	57.35	3.20	23.76	9.90	9.22
Unplanned unavailable hours	2.42	0	0	0.02	0	2.62	0	3.63
Fault exposure hours	0	0	0	0	0	0	0	0
Effective Reset hours	0	0	0	0	0	0	0	0
Required hours	1216.00	2208.00	2208.00	1860.35	2184.00	1824.55	406.83	1752.58
Indicator value	**0.8%**	**0.8%**	**0.9%**	**1.0%**	**1.0%**	**1.1%**	**1.1%**	**1.1%**

Licensee Comments: none

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)	2Q/04	3Q/04	4Q/04	1Q/05	2Q/05	3Q/05	4Q/05	1Q/06
Train 1								
Planned unavailable hours	0.67	4.88	30.40	12.42	15.16	11.08	1.60	13.20
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	1216.00	2208.00	2208.00	1860.35	2184.00	1824.55	406.83	1752.58
Train 2								
Planned unavailable hours	0.20	9.83	2.50	35.68	4.03	15.50	0	6.48
Unplanned unavailable hours	2.42	0	0	0.02	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	1216.00	2208.00	2208.00	1860.35	2184.00	1824.55	406.83	1752.58
Train 3								
Planned unavailable hours	0	0.47	0.75	0.98	0.67	0.83	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	1216.00	2208.00	2208.00	1860.35	2184.00	1824.55	406.83	1752.58
Indicator value	**0.3%**	**0.3%**	**0.3%**	**0.3%**	**0.4%**	**0.4%**	**0.4%**	**0.4%**

Licensee Comments: none

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	2Q/04	3Q/04	4Q/04	1Q/05	2Q/05	3Q/05	4Q/05	1Q/06
Train 1								
Planned unavailable hours	13.30	13.31	11.93	68.07	16.38	26.18	18.85	29.85
Unplanned unavailable hours	0	0	0	0	12.62	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	1387.70	2208.00	2208.00	1950.80	2184.00	1957.03	498.15	2136.87
Train 2								
Planned unavailable hours	5.17	26.47	6.75	41.82	5.00	36.97	1.67	36.72
Unplanned unavailable hours	2.42	0	14.67	0.02	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	1387.70	2208.00	2208.00	1950.80	2184.00	1957.03	498.15	2136.87
Train 3								
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	397.71	0	0	170.53	0	41.98	211.42	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	434.17	0	0	30.17	0	186.28	527.37	23.13
Indicator value	**0.4%**	**0.4%**	**0.4%**	**0.5%**	**0.5%**	**0.5%**	**0.5%**	**0.5%**

Licensee Comments: none

Thresholds: White > 5.0

Notes

Safety System Functional Failures (PWR)	2Q/04	3Q/04	4Q/04	1Q/05	2Q/05	3Q/05	4Q/05	1Q/06
Safety System Functional Failures	0	2	0	0	1	0	0	1
Indicator value	**1**	**3**	**2**	**2**	**3**	**1**	**1**	**2**

Licensee Comments:

1Q/06: SSFF reported via LER 528/2005-007 on 2/10/2006.

Reactor Coolant System Activity

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Activity	4/04	5/04	6/04	7/04	8/04	9/04	10/04	11/04	12/04	1/05	2/05	3/05
Maximum activity	0.001120	0.000431	0.000458	0.000482	0.000546	0.001620	0.000589	0.000613	0.000643	0.000704	0.000690	0.000724
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	**0.1**	**0**	**0**	**0**	**0.1**	**0.2**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**

Reactor Coolant System Activity	4/05	5/05	6/05	7/05	8/05	9/05	10/05	11/05	12/05	1/06	2/06	3/06
Maximum activity	0.000761	0.000785	0.000813	0.001430	0.000816	0.000908	0.000883	N/A	0.000118	0.000112	0.000096	0.000091
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	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**N/A**	**0**	**0**	**0**	**0**

Licensee Comments: none

Reactor Coolant System Leakage

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Leakage	**4/04**	**5/04**	**6/04**	**7/04**	**8/04**	**9/04**	**10/04**	**11/04**	**12/04**	**1/05**	**2/05**	**3/05**
Maximum leakage	N/A	0.022	0.098	0.108	0.133	0.116	0.119	0.142	0.151	0.136	0.145	0.034
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**	**1.0**	**1.1**	**1.3**	**1.2**	**1.2**	**1.4**	**1.5**	**1.4**	**1.5**	**0.3**
Reactor Coolant System Leakage	**4/05**	**5/05**	**6/05**	**7/05**	**8/05**	**9/05**	**10/05**	**11/05**	**12/05**	**1/06**	**2/06**	**3/06**
Maximum leakage	0.031	0.066	0.045	0.085	0.060	0.050	0.085	N/A	0.019	0.113	0.047	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**	**0.7**	**0.5**	**0.9**	**0.6**	**0.5**	**0.9**	**N/A**	**0.2**	**1.1**	**0.5**	**0.5**

Licensee Comments: none

Drill/Exercise Performance

Thresholds: White < 90.0% Yellow < 70.0%

Notes

Drill/Exercise Performance	2Q/04	3Q/04	4Q/04	1Q/05	2Q/05	3Q/05	4Q/05	1Q/06
Successful opportunities	14.0	111.0	97.0	21.0	0	74.0	103.0	9.0
Total opportunities	17.0	112.0	111.0	22.0	0	79.0	104.0	11.0
Indicator value	**96.4%**	**96.6%**	**94.8%**	**95.3%**	**95.2%**	**93.2%**	**94.0%**	**94.1%**

Licensee Comments: none

Thresholds: White < 80.0% Yellow < 60.0%

Notes

ERO Drill Participation	2Q/04	3Q/04	4Q/04	1Q/05	2Q/05	3Q/05	4Q/05	1Q/06
Participating Key personnel	193.0	188.0	187.0	184.0	179.0	180.0	175.0	174.0
Total Key personnel	195.0	191.0	190.0	190.0	188.0	190.0	179.0	176.0
Indicator value	**99.0%**	**98.4%**	**98.4%**	**96.8%**	**95.2%**	**94.7%**	**97.8%**	**98.9%**

Licensee Comments: none

Alert & Notification System

Thresholds: White < 94.0% Yellow < 90.0%

Notes

Alert & Notification System	2Q/04	3Q/04	4Q/04	1Q/05	2Q/05	3Q/05	4Q/05	1Q/06
Successful siren-tests	798	792	872	740	797	753	791	778
Total sirens-tests	798	798	882	755	798	776	798	798
Indicator value	**99.0%**	**99.3%**	**99.4%**	**99.0%**	**99.0%**	**98.5%**	**98.5%**	**98.4%**

Licensee Comments: none

Occupational Exposure Control Effectiveness

Thresholds: White > 2.0 Yellow > 5.0

Notes

Occupational Exposure Control Effectiveness	2Q/04	3Q/04	4Q/04	1Q/05	2Q/05	3Q/05	4Q/05	1Q/06
High radiation area occurrences	0	0	0	0	1	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**	**0**	**0**	**0**	**1**	**1**	**1**	**1**

Licensee Comments: none

RETS/ODCM Radiological Effluent

Thresholds: White > 1.0 Yellow > 3.0

Notes

RETS/ODCM Radiological Effluent	2Q/04	3Q/04	4Q/04	1Q/05	2Q/05	3Q/05	4Q/05	1Q/06
RETS/ODCM occurrences	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Physical Protection information not publicly available.

Last Modified: May 5, 2006

Palo Verde 1

2Q/2006 Performance Indicators

Licensee's General Comments: none

Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

Notes

Unplanned Scrams per 7000 Critical Hrs	3Q/04	4Q/04	1Q/05	2Q/05	3Q/05	4Q/05	1Q/06	2Q/06
Unplanned scrams	0	0	0	0	1.0	0	0	0
Critical hours	2208.0	2208.0	1860.4	2184.0	1824.6	406.8	1752.6	0
Indicator value	**1.8**	**1.8**	**1.9**	**0**	**0.9**	**1.1**	**1.1**	**1.8**

Licensee Comments: none

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	3Q/04	4Q/04	1Q/05	2Q/05	3Q/05	4Q/05	1Q/06	2Q/06
Scrams	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Unplanned Power Changes per 7000 Critical Hrs

Thresholds: White > 6.0

Notes

Unplanned Power Changes per 7000 Critical Hrs	3Q/04	4Q/04	1Q/05	2Q/05	3Q/05	4Q/05	1Q/06	2Q/06
Unplanned power changes	0	1.0	2.0	0	0	0	0	0
Critical hours	2208.0	2208.0	1860.4	2184.0	1824.6	406.8	1752.6	0
Indicator value	**2.7**	**2.7**	**3.7**	**2.5**	**2.6**	**2.2**	**0**	**0**

Licensee Comments: none

Thresholds: White > 5.0

Notes

Safety System Functional Failures (PWR)	3Q/04	4Q/04	1Q/05	2Q/05	3Q/05	4Q/05	1Q/06	2Q/06
Safety System Functional Failures	2	0	0	1	0	0	1	0
Indicator value	**3**	**2**	**2**	**3**	**1**	**1**	**2**	**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	3Q/04	4Q/04	1Q/05	2Q/05	3Q/05	4Q/05	1Q/06	2Q/06
UAI (ΔCDF)								2.60E-07
URI (ΔCDF)								-4.40E-07
PLE								NO
Indicator value								**-1.80E-07**

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	3Q/04	4Q/04	1Q/05	2Q/05	3Q/05	4Q/05	1Q/06	2Q/06
UAI (ΔCDF)								9.90E-09
URI (ΔCDF)								1.80E-08
PLE								NO
Indicator value								**2.79E-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	3Q/04	4Q/04	1Q/05	2Q/05	3Q/05	4Q/05	1Q/06	2Q/06
UAI (ΔCDF)								-3.60E-07
URI (ΔCDF)								-6.20E-07
PLE								NO
Indicator value								**-9.80E-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	3Q/04	4Q/04	1Q/05	2Q/05	3Q/05	4Q/05	1Q/06	2Q/06
UAI (ΔCDF)								2.10E-08
URI (ΔCDF)								-3.80E-08
PLE								NO
Indicator value								**-1.70E-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	3Q/04	4Q/04	1Q/05	2Q/05	3Q/05	4Q/05	1Q/06	2Q/06
UAI (ΔCDF)								8.60E-08
URI (ΔCDF)								-2.70E-07
PLE								NO
Indicator value								**-1.84E-07**

Licensee Comments: none

Reactor Coolant System Activity

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Activity	7/04	8/04	9/04	10/04	11/04	12/04	1/05	2/05	3/05	4/05	5/05	6/05
Maximum activity	0.000482	0.000546	0.001620	0.000589	0.000613	0.000643	0.000704	0.000690	0.000724	0.000761	0.000785	0.000813
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**	**0.1**	**0.2**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**

Reactor Coolant System Activity	7/05	8/05	9/05	10/05	11/05	12/05	1/06	2/06	3/06	4/06	5/06	6/06
Maximum activity	0.001430	0.000816	0.000908	0.000883	N/A	0.000118	0.000112	0.000096	0.000091			
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	**0.1**	**0.1**	**0.1**	**0.1**	**N/A**	**0**	**0**	**0**	**0**			

Licensee Comments:

6/06: RCS activity data not taken for the months of April, May, and June due to Unit 1 being in an extended shut down.

Reactor Coolant System Leakage

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Leakage	**7/04**	**8/04**	**9/04**	**10/04**	**11/04**	**12/04**	**1/05**	**2/05**	**3/05**	**4/05**	**5/05**	**6/05**
Maximum leakage	0.108	0.133	0.116	0.119	0.142	0.151	0.136	0.145	0.034	0.031	0.066	0.045
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	**1.1**	**1.3**	**1.2**	**1.2**	**1.4**	**1.5**	**1.4**	**1.5**	**0.3**	**0.3**	**0.7**	**0.5**
Reactor Coolant System Leakage	**7/05**	**8/05**	**9/05**	**10/05**	**11/05**	**12/05**	**1/06**	**2/06**	**3/06**	**4/06**	**5/06**	**6/06**
Maximum leakage	0.085	0.060	0.050	0.085	N/A	0.019	0.113	0.047	0.050	0.027	N/A	N/A
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	**0.9**	**0.6**	**0.5**	**0.9**	**N/A**	**0.2**	**1.1**	**0.5**	**0.5**	**0.3**	**N/A**	**N/A**

Licensee Comments:

6/06: RCS leakage data not taken for the months of May and June due to Unit 1 being in an extended shut down

Drill/Exercise Performance

Thresholds: White < 90.0% Yellow < 70.0%

Notes

Drill/Exercise Performance	3Q/04	4Q/04	1Q/05	2Q/05	3Q/05	4Q/05	1Q/06	2Q/06
Successful opportunities	111.0	97.0	21.0	0	74.0	103.0	9.0	5.0
Total opportunities	112.0	111.0	22.0	0	79.0	104.0	11.0	5.0
Indicator value	**96.6%**	**94.8%**	**95.3%**	**95.2%**	**93.2%**	**94.0%**	**94.1%**	**94.6%**

Licensee Comments: none

Thresholds: White < 80.0% Yellow < 60.0%

Notes

ERO Drill Participation	3Q/04	4Q/04	1Q/05	2Q/05	3Q/05	4Q/05	1Q/06	2Q/06
Participating Key personnel	188.0	187.0	184.0	179.0	180.0	175.0	174.0	168.0
Total Key personnel	191.0	190.0	190.0	188.0	190.0	179.0	176.0	174.0
Indicator value	**98.4%**	**98.4%**	**96.8%**	**95.2%**	**94.7%**	**97.8%**	**98.9%**	**96.6%**

Licensee Comments: none

Alert & Notification System

Thresholds: White < 94.0% Yellow < 90.0%

Notes

Alert & Notification System	3Q/04	4Q/04	1Q/05	2Q/05	3Q/05	4Q/05	1Q/06	2Q/06
Successful siren-tests	792	872	740	797	753	791	778	792
Total sirens-tests	798	882	755	798	776	798	798	798
Indicator value	**99.3%**	**99.4%**	**99.0%**	**99.0%**	**98.5%**	**98.5%**	**98.4%**	**98.2%**

Licensee Comments: none

Occupational Exposure Control Effectiveness

Thresholds: White > 2.0 Yellow > 5.0

Notes

Occupational Exposure Control Effectiveness	3Q/04	4Q/04	1Q/05	2Q/05	3Q/05	4Q/05	1Q/06	2Q/06
High radiation area occurrences	0	0	0	1	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**	**0**	**0**	**1**	**1**	**1**	**1**	**0**

Licensee Comments: none

RETS/ODCM Radiological Effluent

Thresholds: White > 1.0 Yellow > 3.0

Notes

RETS/ODCM Radiological Effluent	3Q/04	4Q/04	1Q/05	2Q/05	3Q/05	4Q/05	1Q/06	2Q/06
RETS/ODCM occurrences	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Physical Protection information not publicly available.

Last Modified: August 2, 2006

Palo Verde 1

3Q/2006 Performance Indicators

Licensee's General Comments: none

Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

Notes

Unplanned Scrams per 7000 Critical Hrs	4Q/04	1Q/05	2Q/05	3Q/05	4Q/05	1Q/06	2Q/06	3Q/06
Unplanned scrams	0	0	0	1.0	0	0	0	0
Critical hours	2208.0	1860.4	2184.0	1824.6	406.8	1752.6	0	1777.3
Indicator value	**1.8**	**1.9**	**0**	**0.9**	**1.1**	**1.1**	**1.8**	**0**

Licensee Comments: none

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	4Q/04	1Q/05	2Q/05	3Q/05	4Q/05	1Q/06	2Q/06	3Q/06
Scrams	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Unplanned Power Changes per 7000 Critical Hrs

Thresholds: White > 6.0

Notes

Unplanned Power Changes per 7000 Critical Hrs	4Q/04	1Q/05	2Q/05	3Q/05	4Q/05	1Q/06	2Q/06	3Q/06
Unplanned power changes	1.0	2.0	0	0	0	0	0	2.0
Critical hours	2208.0	1860.4	2184.0	1824.6	406.8	1752.6	0	1777.3
Indicator value	**2.7**	**3.7**	**2.5**	**2.6**	**2.2**	**0**	**0**	**3.6**

Licensee Comments: none

Safety System Functional Failures (PWR)

Thresholds: White > 5.0

Notes

Safety System Functional Failures (PWR)	4Q/04	1Q/05	2Q/05	3Q/05	4Q/05	1Q/06	2Q/06	3Q/06
Safety System Functional Failures	0	0	1	0	0	1	0	0
Indicator value	**2**	**2**	**3**	**1**	**1**	**2**	**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	**4Q/04**	**1Q/05**	**2Q/05**	**3Q/05**	**4Q/05**	**1Q/06**	**2Q/06**	**3Q/06**
UAI (ΔCDF)							2.60E-07	3.00E-07
URI (ΔCDF)							-4.40E-07	-4.40E-07
PLE							NO	NO
Indicator value							**-1.80E-07**	**-1.40E-07**

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	4Q/04	1Q/05	2Q/05	3Q/05	4Q/05	1Q/06	2Q/06	3Q/06
UAI (ΔCDF)							9.90E-09	1.20E-08
URI (ΔCDF)							1.80E-08	1.80E-08
PLE							NO	NO
Indicator value							**2.79E-08**	**3.00E-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	4Q/04	1Q/05	2Q/05	3Q/05	4Q/05	1Q/06	2Q/06	3Q/06
UAI (ΔCDF)							-3.60E-07	-3.90E-07
URI (ΔCDF)							-6.20E-07	-6.20E-07
PLE							NO	NO
Indicator value							**-9.80E-07**	**-1.01E-06**

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	**4Q/04**	**1Q/05**	**2Q/05**	**3Q/05**	**4Q/05**	**1Q/06**	**2Q/06**	**3Q/06**
UAI (ΔCDF)							2.10E-08	3.40E-08
URI (ΔCDF)							-3.80E-08	-3.80E-08
PLE							NO	NO
Indicator value							**-1.70E-08**	**-4.00E-09**

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	**4Q/04**	**1Q/05**	**2Q/05**	**3Q/05**	**4Q/05**	**1Q/06**	**2Q/06**	**3Q/06**
UAI (ΔCDF)							8.60E-08	1.50E-07
URI (ΔCDF)							-2.70E-07	-2.70E-07
PLE							NO	NO
Indicator value							**-1.84E-07**	**-1.20E-07**

Licensee Comments: none

Reactor Coolant System Activity

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Activity	10/04	11/04	12/04	1/05	2/05	3/05	4/05	5/05	6/05	7/05	8/05	9/05
Maximum activity	0.000589	0.000613	0.000643	0.000704	0.000690	0.000724	0.000761	0.000785	0.000813	0.001430	0.000816	0.000908
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	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**

Reactor Coolant System Activity	10/05	11/05	12/05	1/06	2/06	3/06	4/06	5/06	6/06	7/06	8/06	9/06
Maximum activity	0.000883	N/A	0.000118	0.000112	0.000096	0.000091	N/A	N/A	N/A	0.000320	0.000341	0.000333
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	**0.1**	**N/A**	**0**	**0**	**0**	**0**	**N/A**	**N/A**	**N/A**	**0**	**0**	**0**

Licensee Comments: none

Reactor Coolant System Leakage

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Leakage	**10/04**	**11/04**	**12/04**	**1/05**	**2/05**	**3/05**	**4/05**	**5/05**	**6/05**	**7/05**	**8/05**	**9/05**
Maximum leakage	0.119	0.142	0.151	0.136	0.145	0.034	0.031	0.066	0.045	0.085	0.060	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	**1.2**	**1.4**	**1.5**	**1.4**	**1.5**	**0.3**	**0.3**	**0.7**	**0.5**	**0.9**	**0.6**	**0.5**

Reactor Coolant System Leakage	**10/05**	**11/05**	**12/05**	**1/06**	**2/06**	**3/06**	**4/06**	**5/06**	**6/06**	**7/06**	**8/06**	**9/06**
Maximum leakage	0.085	N/A	0.019	0.113	0.047	0.050	0.027	N/A	N/A	0.056	0.066	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	**0.9**	**N/A**	**0.2**	**1.1**	**0.5**	**0.5**	**0.3**	**N/A**	**N/A**	**0.6**	**0.7**	**0.5**

Licensee Comments: none

Drill/Exercise Performance

Thresholds: White < 90.0% Yellow < 70.0%

Notes

Drill/Exercise Performance	4Q/04	1Q/05	2Q/05	3Q/05	4Q/05	1Q/06	2Q/06	3Q/06
Successful opportunities	97.0	21.0	0	74.0	103.0	9.0	5.0	57.0
Total opportunities	111.0	22.0	0	79.0	104.0	11.0	5.0	64.0
Indicator value	**94.8%**	**95.3%**	**95.2%**	**93.2%**	**94.0%**	**94.1%**	**94.6%**	**92.4%**

Licensee Comments: none

ERO Drill Participation

Thresholds: White < 80.0% Yellow < 60.0%

Notes

ERO Drill Participation	4Q/04	1Q/05	2Q/05	3Q/05	4Q/05	1Q/06	2Q/06	3Q/06
Participating Key personnel	187.0	184.0	179.0	180.0	175.0	174.0	168.0	186.0
Total Key personnel	190.0	190.0	188.0	190.0	179.0	176.0	174.0	190.0
Indicator value	**98.4%**	**96.8%**	**95.2%**	**94.7%**	**97.8%**	**98.9%**	**96.6%**	**97.9%**

Licensee Comments: none

Alert & Notification System

Thresholds: White < 94.0% Yellow < 90.0%

Notes

Alert & Notification System	4Q/04	1Q/05	2Q/05	3Q/05	4Q/05	1Q/06	2Q/06	3Q/06
Successful siren-tests	872	740	797	753	791	778	792	797
Total sirens-tests	882	755	798	776	798	798	798	798
Indicator value	**99.4%**	**99.0%**	**99.0%**	**98.5%**	**98.5%**	**98.4%**	**98.2%**	**98.9%**

Licensee Comments: none

Occupational Exposure Control Effectiveness

Thresholds: White > 2.0 Yellow > 5.0

Notes

Occupational Exposure Control Effectiveness	4Q/04	1Q/05	2Q/05	3Q/05	4Q/05	1Q/06	2Q/06	3Q/06
High radiation area occurrences	0	0	1	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**	**0**	**1**	**1**	**1**	**1**	**0**	**0**

Licensee Comments: none

RETS/ODCM Radiological Effluent

Thresholds: White > 1.0 Yellow > 3.0

Notes

RETS/ODCM Radiological Effluent	4Q/04	1Q/05	2Q/05	3Q/05	4Q/05	1Q/06	2Q/06	3Q/06
RETS/ODCM occurrences	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Physical Protection information not publicly available.

Last Modified: November 6, 2006

Palo Verde 1

4Q/2006 Performance Indicators

Licensee's General Comments: none

Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

Notes

Unplanned Scrams per 7000 Critical Hrs	1Q/05	2Q/05	3Q/05	4Q/05	1Q/06	2Q/06	3Q/06	4Q/06
Unplanned scrams	0	0	1.0	0	0	0	0	1.0
Critical hours	1860.4	2184.0	1824.6	406.8	1752.6	0	1777.3	1823.9
Indicator value	**1.9**	**0**	**0.9**	**1.1**	**1.1**	**1.8**	**0**	**1.3**

Licensee Comments: none

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/05	2Q/05	3Q/05	4Q/05	1Q/06	2Q/06	3Q/06	4Q/06
Scrams	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Unplanned Power Changes per 7000 Critical Hrs

Thresholds: White > 6.0

Notes

Unplanned Power Changes per 7000 Critical Hrs	1Q/05	2Q/05	3Q/05	4Q/05	1Q/06	2Q/06	3Q/06	4Q/06
Unplanned power changes	2.0	0	0	0	0	0	2.0	0
Critical hours	1860.4	2184.0	1824.6	406.8	1752.6	0	1777.3	1823.9
Indicator value	**3.7**	**2.5**	**2.6**	**2.2**	**0**	**0**	**3.6**	**2.6**

Licensee Comments: none

Safety System Functional Failures (PWR)

Thresholds: White > 5.0

Notes

Safety System Functional Failures (PWR)	1Q/05	2Q/05	3Q/05	4Q/05	1Q/06	2Q/06	3Q/06	4Q/06
Safety System Functional Failures	0	1	0	0	1	0	0	1
Indicator value	**2**	**3**	**1**	**1**	**2**	**1**	**1**	**2**

Licensee Comments:

4Q/06: 2006-11 Docket 50-528 (Unit 1) LER 2006-004

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/05**	**2Q/05**	**3Q/05**	**4Q/05**	**1Q/06**	**2Q/06**	**3Q/06**	**4Q/06**
UAI (ΔCDF)						2.60E-07	3.00E-07	3.80E-07
URI (ΔCDF)						-4.40E-07	-4.40E-07	-4.50E-07
PLE						NO	NO	NO
Indicator value						**-1.80E-07**	**-1.40E-07**	**-7.00E-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	**1Q/05**	**2Q/05**	**3Q/05**	**4Q/05**	**1Q/06**	**2Q/06**	**3Q/06**	**4Q/06**
UAI (ΔCDF)						9.90E-09	1.20E-08	1.10E-08
URI (ΔCDF)						1.80E-08	1.80E-08	1.80E-08
PLE						NO	NO	NO
Indicator value						**2.79E-08**	**3.00E-08**	**2.90E-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	1Q/05	2Q/05	3Q/05	4Q/05	1Q/06	2Q/06	3Q/06	4Q/06
UAI (ΔCDF)						-3.60E-07	-3.90E-07	-3.60E-07
URI (ΔCDF)						-6.20E-07	-6.20E-07	-6.20E-07
PLE						NO	NO	NO
Indicator value						**-9.80E-07**	**-1.01E-06**	**-9.80E-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	**1Q/05**	**2Q/05**	**3Q/05**	**4Q/05**	**1Q/06**	**2Q/06**	**3Q/06**	**4Q/06**
UAI (ΔCDF)						2.10E-08	3.40E-08	3.50E-08
URI (ΔCDF)						-3.80E-08	-3.80E-08	-3.80E-08
PLE						NO	NO	NO
Indicator value						**-1.70E-08**	**-4.00E-09**	**-3.00E-09**

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/05	2Q/05	3Q/05	4Q/05	1Q/06	2Q/06	3Q/06	4Q/06
UAI (ΔCDF)						8.60E-08	1.50E-07	4.40E-07
URI (ΔCDF)						-2.70E-07	-2.70E-07	-2.70E-07
PLE						NO	NO	NO
Indicator value						**-1.84E-07**	**-1.20E-07**	**1.70E-07**

Licensee Comments: none

Reactor Coolant System Activity

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Activity	1/05	2/05	3/05	4/05	5/05	6/05	7/05	8/05	9/05	10/05	11/05	12/05
Maximum activity	0.000704	0.000690	0.000724	0.000761	0.000785	0.000813	0.001430	0.000816	0.000908	0.000883	N/A	0.000118
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	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**N/A**	**0**

Reactor Coolant System Activity	1/06	2/06	3/06	4/06	5/06	6/06	7/06	8/06	9/06	10/06	11/06	12/06
Maximum activity	0.000112	0.000096	0.000091	N/A	N/A	N/A	0.000320	0.000341	0.000333	0.000314	0.000396	0.000402
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**	**N/A**	**N/A**	**N/A**	**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	**1/05**	**2/05**	**3/05**	**4/05**	**5/05**	**6/05**	**7/05**	**8/05**	**9/05**	**10/05**	**11/05**	**12/05**
Maximum leakage	0.136	0.145	0.034	0.031	0.066	0.045	0.085	0.060	0.050	0.085	N/A	0.019
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	**1.4**	**1.5**	**0.3**	**0.3**	**0.7**	**0.5**	**0.9**	**0.6**	**0.5**	**0.9**	**N/A**	**0.2**

Reactor Coolant System Leakage	**1/06**	**2/06**	**3/06**	**4/06**	**5/06**	**6/06**	**7/06**	**8/06**	**9/06**	**10/06**	**11/06**	**12/06**
Maximum leakage	0.113	0.047	0.050	0.027	N/A	N/A	0.056	0.066	0.050	0.103	0.056	0.054
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	**1.1**	**0.5**	**0.5**	**0.3**	**N/A**	**N/A**	**0.6**	**0.7**	**0.5**	**1.0**	**0.6**	**0.5**

Licensee Comments: none

Drill/Exercise Performance

Thresholds: White < 90.0% Yellow < 70.0%

Notes

Drill/Exercise Performance	1Q/05	2Q/05	3Q/05	4Q/05	1Q/06	2Q/06	3Q/06	4Q/06
Successful opportunities	21.0	0	74.0	103.0	9.0	5.0	57.0	97.0
Total opportunities	22.0	0	79.0	104.0	11.0	5.0	64.0	102.0
Indicator value	**95.3%**	**95.2%**	**93.2%**	**94.0%**	**94.1%**	**94.6%**	**92.4%**	**94.6%**

Licensee Comments: none

Thresholds: White < 80.0% Yellow < 60.0%

Notes

ERO Drill Participation	1Q/05	2Q/05	3Q/05	4Q/05	1Q/06	2Q/06	3Q/06	4Q/06
Participating Key personnel	184.0	179.0	180.0	175.0	174.0	168.0	186.0	179.0
Total Key personnel	190.0	188.0	190.0	179.0	176.0	174.0	190.0	183.0
Indicator value	**96.8%**	**95.2%**	**94.7%**	**97.8%**	**98.9%**	**96.6%**	**97.9%**	**97.8%**

Licensee Comments: none

Alert & Notification System

Thresholds: White < 94.0% Yellow < 90.0%

Notes

Alert & Notification System	1Q/05	2Q/05	3Q/05	4Q/05	1Q/06	2Q/06	3Q/06	4Q/06
Successful siren-tests	740	797	753	791	778	792	797	792
Total sirens-tests	755	798	776	798	798	798	798	793
Indicator value	**99.0%**	**99.0%**	**98.5%**	**98.5%**	**98.4%**	**98.2%**	**98.9%**	**99.1%**

Licensee Comments: none

Occupational Exposure Control Effectiveness

Thresholds: White > 2.0 Yellow > 5.0

Notes

Occupational Exposure Control Effectiveness	1Q/05	2Q/05	3Q/05	4Q/05	1Q/06	2Q/06	3Q/06	4Q/06
High radiation area occurrences	0	1	0	0	0	0	0	1
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**	**1**	**1**	**1**	**1**	**0**	**0**	**1**

Licensee Comments: none

RETS/ODCM Radiological Effluent

Thresholds: White > 1.0 Yellow > 3.0

Notes

RETS/ODCM Radiological Effluent	1Q/05	2Q/05	3Q/05	4Q/05	1Q/06	2Q/06	3Q/06	4Q/06
RETS/ODCM occurrences	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Physical Protection information not publicly available.

Last Modified: February 7, 2007

Palo Verde 1

1Q/2007 Performance Indicators

Licensee's General Comments: none

Notes

Unplanned Scrams per 7000 Critical Hrs	2Q/05	3Q/05	4Q/05	1Q/06	2Q/06	3Q/06	4Q/06	1Q/07
Unplanned scrams	0	1.0	0	0	0	0	1.0	0
Critical hours	2184.0	1824.6	406.8	1752.6	0	1777.3	1823.9	2160.0
Indicator value	**0**	**0.9**	**1.1**	**1.1**	**1.8**	**0**	**1.3**	**1.2**

Licensee Comments: none

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	2Q/05	3Q/05	4Q/05	1Q/06	2Q/06	3Q/06	4Q/06	1Q/07
Scrams	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Unplanned Power Changes per 7000 Critical Hrs

Thresholds: White > 6.0

Notes

Unplanned Power Changes per 7000 Critical Hrs	2Q/05	3Q/05	4Q/05	1Q/06	2Q/06	3Q/06	4Q/06	1Q/07
Unplanned power changes	0	0	0	0	0	2.0	0	0
Critical hours	2184.0	1824.6	406.8	1752.6	0	1777.3	1823.9	2160.0
Indicator value	**2.5**	**2.6**	**2.2**	**0**	**0**	**3.6**	**2.6**	**2.4**

Licensee Comments: none

Safety System Functional Failures (PWR)

Thresholds: White > 5.0

Notes

Safety System Functional Failures (PWR)	2Q/05	3Q/05	4Q/05	1Q/06	2Q/06	3Q/06	4Q/06	1Q/07
Safety System Functional Failures	1	0	0	1	0	0	1	0
Indicator value	**3**	**1**	**1**	**2**	**1**	**1**	**2**	**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/05**	**3Q/05**	**4Q/05**	**1Q/06**	**2Q/06**	**3Q/06**	**4Q/06**	**1Q/07**
UAI (ΔCDF)					2.60E-07	3.00E-07	3.80E-07	4.80E-07
URI (ΔCDF)					-4.40E-07	-4.40E-07	-4.50E-07	-4.50E-07
PLE					NO	NO	NO	NO
Indicator value					**-1.80E-07**	**-1.40E-07**	**-7.00E-08**	**3.00E-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/05**	**3Q/05**	**4Q/05**	**1Q/06**	**2Q/06**	**3Q/06**	**4Q/06**	**1Q/07**
UAI (ΔCDF)					9.90E-09	1.20E-08	1.10E-08	3.90E-08
URI (ΔCDF)					1.80E-08	1.80E-08	1.80E-08	1.80E-08
PLE					NO	NO	NO	NO
Indicator value					**2.79E-08**	**3.00E-08**	**2.90E-08**	**5.70E-08**

Licensee Comments:

4Q/06: Data revision: Excessive leakage of a single containment recirculation isolation valve that occurred in October 2006 was evaluated in January 2007 and determined to be a maintenance rule functional failure. This impacted MSPI high pressure safety injection and residual heat removal indicators, however indicators' color did not change (green).

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/05**	**3Q/05**	**4Q/05**	**1Q/06**	**2Q/06**	**3Q/06**	**4Q/06**	**1Q/07**
UAI (ΔCDF)					-3.60E-07	-3.90E-07	-3.60E-07	-3.40E-07
URI (ΔCDF)					-6.20E-07	-6.20E-07	-6.20E-07	-6.20E-07
PLE					NO	NO	NO	NO
Indicator value					**-9.80E-07**	**-1.01E-06**	**-9.80E-07**	**-9.60E-07**

Licensee Comments:

4Q/06: Data revision: Excessive leakage of a single containment recirculation isolation valve that occurred in October 2006 was evaluated in January 2007 and determined to be a maintenance rule functional failure. This impacted MSPI high pressure safety injection and residual heat removal indicators, however indicators' color did not change (green).

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/05**	**3Q/05**	**4Q/05**	**1Q/06**	**2Q/06**	**3Q/06**	**4Q/06**	**1Q/07**
UAI (ΔCDF)					2.10E-08	3.40E-08	3.50E-08	5.50E-08
URI (ΔCDF)					-3.80E-08	-3.80E-08	-3.80E-08	-3.80E-08
PLE					NO	NO	NO	NO
Indicator value					**-1.70E-08**	**-4.00E-09**	**-3.00E-09**	**1.70E-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/05**	**3Q/05**	**4Q/05**	**1Q/06**	**2Q/06**	**3Q/06**	**4Q/06**	**1Q/07**
UAI (ΔCDF)					8.60E-08	1.50E-07	4.40E-07	5.70E-07
URI (ΔCDF)					-2.70E-07	-2.70E-07	-2.70E-07	-2.70E-07
PLE					NO	NO	NO	NO
Indicator value					**-1.84E-07**	**-1.20E-07**	**1.70E-07**	**3.00E-07**

Licensee Comments:

1Q/07: Changed PRA Parameter(s).

4Q/06: Changed PRA Parameter(s).

Reactor Coolant System Activity

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Activity	**4/05**	**5/05**	**6/05**	**7/05**	**8/05**	**9/05**	**10/05**	**11/05**	**12/05**	**1/06**	**2/06**	**3/06**
Maximum activity	0.000761	0.000785	0.000813	0.001430	0.000816	0.000908	0.000883	N/A	0.000118	0.000112	0.000096	0.000091
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	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**N/A**	**0**	**0**	**0**	**0**

Reactor Coolant System Activity	**4/06**	**5/06**	**6/06**	**7/06**	**8/06**	**9/06**	**10/06**	**11/06**	**12/06**	**1/07**	**2/07**	**3/07**
Maximum activity	N/A	N/A	N/A	0.000320	0.000341	0.000333	0.000314	0.000396	0.000402	0.000444	0.000441	0.000477
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**	**N/A**	**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	**4/05**	**5/05**	**6/05**	**7/05**	**8/05**	**9/05**	**10/05**	**11/05**	**12/05**	**1/06**	**2/06**	**3/06**
Maximum leakage	0.031	0.066	0.045	0.085	0.060	0.050	0.085	N/A	0.019	0.113	0.047	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**	**0.7**	**0.5**	**0.9**	**0.6**	**0.5**	**0.9**	**N/A**	**0.2**	**1.1**	**0.5**	**0.5**

Reactor Coolant System Leakage	**4/06**	**5/06**	**6/06**	**7/06**	**8/06**	**9/06**	**10/06**	**11/06**	**12/06**	**1/07**	**2/07**	**3/07**
Maximum leakage	0.027	N/A	N/A	0.056	0.066	0.050	0.103	0.056	0.054	0.053	0.045	0.061
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**	**N/A**	**N/A**	**0.6**	**0.7**	**0.5**	**1.0**	**0.6**	**0.5**	**0.5**	**0.5**	**0.6**

Licensee Comments: none

Drill/Exercise Performance

Thresholds: White < 90.0% Yellow < 70.0%

Notes

Drill/Exercise Performance	2Q/05	3Q/05	4Q/05	1Q/06	2Q/06	3Q/06	4Q/06	1Q/07
Successful opportunities	0	74.0	103.0	9.0	5.0	57.0	97.0	18.0
Total opportunities	0	79.0	104.0	11.0	5.0	64.0	102.0	19.0
Indicator value	**95.2%**	**93.2%**	**94.0%**	**94.1%**	**94.6%**	**92.4%**	**94.6%**	**94.5%**

Licensee Comments: none

ERO Drill Participation

Thresholds: White < 80.0% Yellow < 60.0%

Notes

ERO Drill Participation	2Q/05	3Q/05	4Q/05	1Q/06	2Q/06	3Q/06	4Q/06	1Q/07
Participating Key personnel	179.0	180.0	175.0	174.0	168.0	186.0	179.0	175.0
Total Key personnel	188.0	190.0	179.0	176.0	174.0	190.0	183.0	183.0
Indicator value	**95.2%**	**94.7%**	**97.8%**	**98.9%**	**96.6%**	**97.9%**	**97.8%**	**95.6%**

Licensee Comments: none

Alert & Notification System

Thresholds: White < 94.0% Yellow < 90.0%

Notes

Alert & Notification System	2Q/05	3Q/05	4Q/05	1Q/06	2Q/06	3Q/06	4Q/06	1Q/07
Successful siren-tests	797	753	791	778	792	797	792	798
Total sirens-tests	798	776	798	798	798	798	793	798
Indicator value	**99.0%**	**98.5%**	**98.5%**	**98.4%**	**98.2%**	**98.9%**	**99.1%**	**99.7%**

Licensee Comments: none

Occupational Exposure Control Effectiveness

Thresholds: White > 2.0 Yellow > 5.0

Notes

Occupational Exposure Control Effectiveness	2Q/05	3Q/05	4Q/05	1Q/06	2Q/06	3Q/06	4Q/06	1Q/07
High radiation area occurrences	1	0	0	0	0	0	1	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**	**1**	**1**	**0**	**0**	**1**	**1**

Licensee Comments: none

RETS/ODCM Radiological Effluent

Thresholds: White > 1.0 Yellow > 3.0

Notes

RETS/ODCM Radiological Effluent	2Q/05	3Q/05	4Q/05	1Q/06	2Q/06	3Q/06	4Q/06	1Q/07
RETS/ODCM occurrences	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Physical Protection information not publicly available.

Last Modified: June 1, 2007

Palo Verde 1

2Q/2007 Performance Indicators

Licensee's General Comments: none

Notes

Unplanned Scrams per 7000 Critical Hrs	3Q/05	4Q/05	1Q/06	2Q/06	3Q/06	4Q/06	1Q/07	2Q/07
Unplanned scrams	1.0	0	0	0	0	1.0	0	0
Critical hours	1824.6	406.8	1752.6	0	1777.3	1823.9	2160.0	1152.0
Indicator value	**0.9**	**1.1**	**1.1**	**1.8**	**0**	**1.3**	**1.2**	**1.0**

Licensee Comments: none

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	3Q/05	4Q/05	1Q/06	2Q/06	3Q/06	4Q/06	1Q/07	2Q/07
Scrams	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Unplanned Power Changes per 7000 Critical Hrs

Thresholds: White > 6.0

Notes

Unplanned Power Changes per 7000 Critical Hrs	3Q/05	4Q/05	1Q/06	2Q/06	3Q/06	4Q/06	1Q/07	2Q/07
Unplanned power changes	0	0	0	0	2.0	0	0	0
Critical hours	1824.6	406.8	1752.6	0	1777.3	1823.9	2160.0	1152.0
Indicator value	**2.6**	**2.2**	**0**	**0**	**3.6**	**2.6**	**2.4**	**2.0**

Licensee Comments: none

Safety System Functional Failures (PWR)

Thresholds: White > 5.0

Notes

Safety System Functional Failures (PWR)	3Q/05	4Q/05	1Q/06	2Q/06	3Q/06	4Q/06	1Q/07	2Q/07
Safety System Functional Failures	0	0	1	0	0	1	0	0
Indicator value	**1**	**1**	**2**	**1**	**1**	**2**	**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	**3Q/05**	**4Q/05**	**1Q/06**	**2Q/06**	**3Q/06**	**4Q/06**	**1Q/07**	**2Q/07**
UAI (ΔCDF)				2.60E-07	3.00E-07	3.80E-07	4.80E-07	4.80E-07
URI (ΔCDF)				-4.40E-07	-4.40E-07	-4.50E-07	-4.50E-07	-4.40E-07
PLE				NO	NO	NO	NO	NO
Indicator value				**-1.80E-07**	**-1.40E-07**	**-7.00E-08**	**3.00E-08**	**4.00E-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	**3Q/05**	**4Q/05**	**1Q/06**	**2Q/06**	**3Q/06**	**4Q/06**	**1Q/07**	**2Q/07**
UAI (ΔCDF)				9.90E-09	1.20E-08	1.10E-08	3.90E-08	4.00E-08
URI (ΔCDF)				1.80E-08	1.80E-08	1.80E-08	1.80E-08	-7.40E-08
PLE				NO	NO	NO	NO	NO
Indicator value				**2.79E-08**	**3.00E-08**	**2.90E-08**	**5.70E-08**	**-3.40E-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	**3Q/05**	**4Q/05**	**1Q/06**	**2Q/06**	**3Q/06**	**4Q/06**	**1Q/07**	**2Q/07**
UAI (ΔCDF)				-3.60E-07	-3.90E-07	-3.60E-07	-3.40E-07	-3.30E-07
URI (ΔCDF)				-6.20E-07	-6.20E-07	-6.20E-07	-6.20E-07	-6.20E-07
PLE				NO	NO	NO	NO	NO
Indicator value				**-9.80E-07**	**-1.01E-06**	**-9.80E-07**	**-9.60E-07**	**-9.50E-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	**3Q/05**	**4Q/05**	**1Q/06**	**2Q/06**	**3Q/06**	**4Q/06**	**1Q/07**	**2Q/07**
UAI (ΔCDF)				2.10E-08	3.40E-08	3.50E-08	5.50E-08	5.80E-08
URI (ΔCDF)				-3.80E-08	-3.80E-08	-3.80E-08	-3.80E-08	-3.80E-08
PLE				NO	NO	NO	NO	NO
Indicator value				**-1.70E-08**	**-4.00E-09**	**-3.00E-09**	**1.70E-08**	**2.00E-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	**3Q/05**	**4Q/05**	**1Q/06**	**2Q/06**	**3Q/06**	**4Q/06**	**1Q/07**	**2Q/07**
UAI (ΔCDF)				8.60E-08	1.50E-07	4.40E-07	5.70E-07	-2.60E-11
URI (ΔCDF)				-2.70E-07	-2.70E-07	-2.70E-07	-2.70E-07	-2.70E-07
PLE				NO	NO	NO	NO	NO
Indicator value				**-1.84E-07**	**-1.20E-07**	**1.70E-07**	**3.00E-07**	**-2.70E-07**

Licensee Comments: none

Reactor Coolant System Activity

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Activity	**7/05**	**8/05**	**9/05**	**10/05**	**11/05**	**12/05**	**1/06**	**2/06**	**3/06**	**4/06**	**5/06**	**6/06**
Maximum activity	0.001430	0.000816	0.000908	0.000883	N/A	0.000118	0.000112	0.000096	0.000091	N/A	N/A	N/A
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	**0.1**	**0.1**	**0.1**	**0.1**	**N/A**	**0**	**0**	**0**	**0**	**N/A**	**N/A**	**N/A**

Reactor Coolant System Activity	**7/06**	**8/06**	**9/06**	**10/06**	**11/06**	**12/06**	**1/07**	**2/07**	**3/07**	**4/07**	**5/07**	**6/07**
Maximum activity	0.000320	0.000341	0.000333	0.000314	0.000396	0.000402	0.000444	0.000441	0.000477	0.000480	0.000453	N/A
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**	**0**	**0**	**0**	**0**	**0**	**0**	**N/A**

Licensee Comments:

6/07: No data available for Unit 1 in June due to refueling outage

Reactor Coolant System Leakage

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Leakage	**7/05**	**8/05**	**9/05**	**10/05**	**11/05**	**12/05**	**1/06**	**2/06**	**3/06**	**4/06**	**5/06**	**6/06**
Maximum leakage	0.085	0.060	0.050	0.085	N/A	0.019	0.113	0.047	0.050	0.027	N/A	N/A
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	**0.9**	**0.6**	**0.5**	**0.9**	**N/A**	**0.2**	**1.1**	**0.5**	**0.5**	**0.3**	**N/A**	**N/A**
Reactor Coolant System Leakage	**7/06**	**8/06**	**9/06**	**10/06**	**11/06**	**12/06**	**1/07**	**2/07**	**3/07**	**4/07**	**5/07**	**6/07**
Maximum leakage	0.056	0.066	0.050	0.103	0.056	0.054	0.053	0.045	0.061	0.063	0.065	N/A
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	**0.6**	**0.7**	**0.5**	**1.0**	**0.6**	**0.5**	**0.5**	**0.5**	**0.6**	**0.6**	**0.7**	**N/A**

Licensee Comments:

6/07: No data available for Unit 1 in June due to refueling outage

Drill/Exercise Performance

Thresholds: White < 90.0% Yellow < 70.0%

Notes

Drill/Exercise Performance	3Q/05	4Q/05	1Q/06	2Q/06	3Q/06	4Q/06	1Q/07	2Q/07
Successful opportunities	74.0	103.0	9.0	5.0	57.0	97.0	18.0	13.0
Total opportunities	79.0	104.0	11.0	5.0	64.0	102.0	19.0	16.0
Indicator value	**93.2%**	**94.0%**	**94.1%**	**94.6%**	**92.4%**	**94.6%**	**94.5%**	**94.0%**

Licensee Comments: none

ERO Drill Participation

Thresholds: White < 80.0% Yellow < 60.0%

Notes

ERO Drill Participation	3Q/05	4Q/05	1Q/06	2Q/06	3Q/06	4Q/06	1Q/07	2Q/07
Participating Key personnel	180.0	175.0	174.0	168.0	186.0	179.0	175.0	181.0
Total Key personnel	190.0	179.0	176.0	174.0	190.0	183.0	183.0	183.0
Indicator value	**94.7%**	**97.8%**	**98.9%**	**96.6%**	**97.9%**	**97.8%**	**95.6%**	**98.9%**

Licensee Comments: none

Alert & Notification System

Thresholds: White < 94.0% Yellow < 90.0%

Notes

Alert & Notification System	3Q/05	4Q/05	1Q/06	2Q/06	3Q/06	4Q/06	1Q/07	2Q/07
Successful siren-tests	753	791	778	792	797	792	798	798
Total sirens-tests	776	798	798	798	798	793	798	798
Indicator value	**98.5%**	**98.5%**	**98.4%**	**98.2%**	**98.9%**	**99.1%**	**99.7%**	**99.9%**

Licensee Comments: none

Occupational Exposure Control Effectiveness

Thresholds: White > 2.0 Yellow > 5.0

Notes

Occupational Exposure Control Effectiveness	3Q/05	4Q/05	1Q/06	2Q/06	3Q/06	4Q/06	1Q/07	2Q/07
High radiation area occurrences	0	0	0	0	0	1	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**	**1**	**0**	**0**	**1**	**1**	**1**

Licensee Comments: none

RETS/ODCM Radiological Effluent

Thresholds: White > 1.0 Yellow > 3.0

Notes

RETS/ODCM Radiological Effluent	3Q/05	4Q/05	1Q/06	2Q/06	3Q/06	4Q/06	1Q/07	2Q/07
RETS/ODCM occurrences	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Physical Protection information not publicly available.

Last Modified: August 6, 2007

Palo Verde 1

3Q/2007 Performance Indicators

Licensee's General Comments: none

Notes

Unplanned Scrams per 7000 Critical Hrs	4Q/05	1Q/06	2Q/06	3Q/06	4Q/06	1Q/07	2Q/07	3Q/07
Unplanned scrams	0	0	0	0	1.0	0	0	0
Critical hours	406.8	1752.6	0	1777.3	1823.9	2160.0	1152.0	1878.4
Indicator value	**1.1**	**1.1**	**1.8**	**0**	**1.3**	**1.2**	**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	4Q/05	1Q/06	2Q/06	3Q/06	4Q/06	1Q/07	2Q/07	3Q/07
Unplanned power changes	0	0	0	2.0	0	0	0	0
Critical hours	406.8	1752.6	0	1777.3	1823.9	2160.0	1152.0	1878.4
Indicator value	**2.2**	**0**	**0**	**3.6**	**2.6**	**2.4**	**2.0**	**0**

Licensee Comments: none

Unplanned Scrams with Complications

Thresholds: White > 1.0

Notes

Unplanned Scrams with Complications	4Q/05	1Q/06	2Q/06	3Q/06	4Q/06	1Q/07	2Q/07	3Q/07
Scrams with complications					0	0	0	0
Indicator value								**0.0**

Licensee Comments: none

Safety System Functional Failures (PWR)

Thresholds: White > 5.0

Notes

Safety System Functional Failures (PWR)	4Q/05	1Q/06	2Q/06	3Q/06	4Q/06	1Q/07	2Q/07	3Q/07
Safety System Functional Failures	0	1	0	0	1	0	0	0
Indicator value	**1**	**2**	**1**	**1**	**2**	**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	**4Q/05**	**1Q/06**	**2Q/06**	**3Q/06**	**4Q/06**	**1Q/07**	**2Q/07**	**3Q/07**
UAI (ΔCDF)			2.60E-07	3.00E-07	3.80E-07	4.80E-07	4.80E-07	5.70E-07
URI (ΔCDF)			-4.40E-07	-4.40E-07	-4.50E-07	-4.50E-07	-4.40E-07	-4.40E-07
PLE			NO	NO	NO	NO	NO	NO
Indicator value			**-1.80E-07**	**-1.40E-07**	**-7.00E-08**	**3.00E-08**	**4.00E-08**	**1.30E-07**

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	**4Q/05**	**1Q/06**	**2Q/06**	**3Q/06**	**4Q/06**	**1Q/07**	**2Q/07**	**3Q/07**
UAI (ΔCDF)			9.90E-09	1.20E-08	1.10E-08	3.90E-08	4.00E-08	3.80E-08
URI (ΔCDF)			1.80E-08	1.80E-08	1.80E-08	1.80E-08	-7.40E-08	-7.40E-08
PLE			NO	NO	NO	NO	NO	NO
Indicator value			**2.79E-08**	**3.00E-08**	**2.90E-08**	**5.70E-08**	**-3.40E-08**	**-3.60E-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	**4Q/05**	**1Q/06**	**2Q/06**	**3Q/06**	**4Q/06**	**1Q/07**	**2Q/07**	**3Q/07**
UAI (ΔCDF)			-3.60E-07	-3.90E-07	-3.60E-07	-3.40E-07	-3.30E-07	-2.20E-07
URI (ΔCDF)			-6.20E-07	-6.20E-07	-6.20E-07	-6.20E-07	-6.20E-07	-6.20E-07
PLE			NO	NO	NO	NO	NO	NO
Indicator value			**-9.80E-07**	**-1.01E-06**	**-9.80E-07**	**-9.60E-07**	**-9.50E-07**	**-8.40E-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	**4Q/05**	**1Q/06**	**2Q/06**	**3Q/06**	**4Q/06**	**1Q/07**	**2Q/07**	**3Q/07**
UAI (ΔCDF)			2.10E-08	3.40E-08	3.50E-08	5.50E-08	5.80E-08	7.00E-08
URI (ΔCDF)			-3.80E-08	-3.80E-08	-3.80E-08	-3.80E-08	-3.80E-08	-3.80E-08
PLE			NO	NO	NO	NO	NO	NO
Indicator value			**-1.70E-08**	**-4.00E-09**	**-3.00E-09**	**1.70E-08**	**2.00E-08**	**3.20E-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	**4Q/05**	**1Q/06**	**2Q/06**	**3Q/06**	**4Q/06**	**1Q/07**	**2Q/07**	**3Q/07**
UAI (ΔCDF)			8.60E-08	1.50E-07	4.40E-07	5.70E-07	-2.60E-11	-2.50E-11
URI (ΔCDF)			-2.70E-07	-2.70E-07	-2.70E-07	-2.70E-07	-2.70E-07	-2.70E-07
PLE			NO	NO	NO	NO	NO	NO
Indicator value			**-1.84E-07**	**-1.20E-07**	**1.70E-07**	**3.00E-07**	**-2.70E-07**	**-2.70E-07**

Licensee Comments: none

Reactor Coolant System Activity

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Activity	**10/05**	**11/05**	**12/05**	**1/06**	**2/06**	**3/06**	**4/06**	**5/06**	**6/06**	**7/06**	**8/06**	**9/06**
Maximum activity	0.000883	N/A	0.000118	0.000112	0.000096	0.000091	N/A	N/A	N/A	0.000320	0.000341	0.000333
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	**0.1**	**N/A**	**0**	**0**	**0**	**0**	**N/A**	**N/A**	**N/A**	**0**	**0**	**0**

Reactor Coolant System Activity	**10/06**	**11/06**	**12/06**	**1/07**	**2/07**	**3/07**	**4/07**	**5/07**	**6/07**	**7/07**	**8/07**	**9/07**
Maximum activity	0.000314	0.000396	0.000402	0.000444	0.000441	0.000477	0.000480	0.000453	N/A	0.000253	0.000279	0.000296
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**	**0**	**0**	**0**	**N/A**	**0**	**0**	**0**

Licensee Comments: none

Reactor Coolant System Leakage

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Leakage	**10/05**	**11/05**	**12/05**	**1/06**	**2/06**	**3/06**	**4/06**	**5/06**	**6/06**	**7/06**	**8/06**	**9/06**
Maximum leakage	0.085	N/A	0.019	0.113	0.047	0.050	0.027	N/A	N/A	0.056	0.066	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	**0.9**	**N/A**	**0.2**	**1.1**	**0.5**	**0.5**	**0.3**	**N/A**	**N/A**	**0.6**	**0.7**	**0.5**
Reactor Coolant System Leakage	**10/06**	**11/06**	**12/06**	**1/07**	**2/07**	**3/07**	**4/07**	**5/07**	**6/07**	**7/07**	**8/07**	**9/07**
Maximum leakage	0.103	0.056	0.054	0.053	0.045	0.061	0.063	0.065	N/A	0.089	0.042	0.052
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	**1.0**	**0.6**	**0.5**	**0.5**	**0.5**	**0.6**	**0.6**	**0.7**	**N/A**	**0.9**	**0.4**	**0.5**

Licensee Comments: none

Drill/Exercise Performance

Thresholds: White < 90.0% Yellow < 70.0%

Notes

Drill/Exercise Performance	4Q/05	1Q/06	2Q/06	3Q/06	4Q/06	1Q/07	2Q/07	3Q/07
Successful opportunities	103.0	9.0	5.0	57.0	97.0	18.0	13.0	191.0
Total opportunities	104.0	11.0	5.0	64.0	102.0	19.0	16.0	200.0
Indicator value	**94.0%**	**94.1%**	**94.6%**	**92.4%**	**94.6%**	**94.5%**	**94.0%**	**94.6%**

Licensee Comments: none

ERO Drill Participation

Thresholds: White < 80.0% Yellow < 60.0%

Notes

ERO Drill Participation	4Q/05	1Q/06	2Q/06	3Q/06	4Q/06	1Q/07	2Q/07	3Q/07
Participating Key personnel	175.0	174.0	168.0	186.0	179.0	175.0	181.0	199.0
Total Key personnel	179.0	176.0	174.0	190.0	183.0	183.0	183.0	200.0
Indicator value	**97.8%**	**98.9%**	**96.6%**	**97.9%**	**97.8%**	**95.6%**	**98.9%**	**99.5%**

Licensee Comments: none

Alert & Notification System

Thresholds: White < 94.0% Yellow < 90.0%

Notes

Alert & Notification System	4Q/05	1Q/06	2Q/06	3Q/06	4Q/06	1Q/07	2Q/07	3Q/07
Successful siren-tests	791	778	792	797	792	798	798	756
Total sirens-tests	798	798	798	798	793	798	798	756
Indicator value	**98.5%**	**98.4%**	**98.2%**	**98.9%**	**99.1%**	**99.7%**	**99.9%**	**100.0%**

Licensee Comments: none

Occupational Exposure Control Effectiveness

Thresholds: White > 2.0 Yellow > 5.0

Notes

Occupational Exposure Control Effectiveness	4Q/05	1Q/06	2Q/06	3Q/06	4Q/06	1Q/07	2Q/07	3Q/07
High radiation area occurrences	0	0	0	0	1	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**	**1**	**1**	**1**	**1**

Licensee Comments: none

RETS/ODCM Radiological Effluent

Thresholds: White > 1.0 Yellow > 3.0

Notes

RETS/ODCM Radiological Effluent	4Q/05	1Q/06	2Q/06	3Q/06	4Q/06	1Q/07	2Q/07	3Q/07
RETS/ODCM occurrences	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Physical Protection information not publicly available.

Last Modified: December 7, 2007

Palo Verde 1

4Q/2007 Performance Indicators

Licensee's General Comments: none

Notes

Unplanned Scrams per 7000 Critical Hrs	1Q/06	2Q/06	3Q/06	4Q/06	1Q/07	2Q/07	3Q/07	4Q/07
Unplanned scrams	0	0	0	1.0	0	0	0	0
Critical hours	1752.6	0	1777.3	1823.9	2160.0	1152.0	1878.4	1803.3
Indicator value	**1.1**	**1.8**	**0**	**1.3**	**1.2**	**1.0**	**1.0**	**0**

Licensee Comments: none

Unplanned Power Changes per 7000 Critical Hrs

Thresholds: White > 6.0

Notes

Unplanned Power Changes per 7000 Critical Hrs	1Q/06	2Q/06	3Q/06	4Q/06	1Q/07	2Q/07	3Q/07	4Q/07
Unplanned power changes	0	0	2.0	0	0	0	0	2.0
Critical hours	1752.6	0	1777.3	1823.9	2160.0	1152.0	1878.4	1803.3
Indicator value	**0**	**0**	**3.6**	**2.6**	**2.4**	**2.0**	**0**	**2.0**

Licensee Comments: none

Unplanned Scrams with Complications

Thresholds: White > 1.0

Notes

Unplanned Scrams with Complications	1Q/06	2Q/06	3Q/06	4Q/06	1Q/07	2Q/07	3Q/07	4Q/07
Scrams with complications				0	0	0	0	0
Indicator value							**0.0**	**0.0**

Licensee Comments: none

Safety System Functional Failures (PWR)

Thresholds: White > 5.0

Notes

Safety System Functional Failures (PWR)	1Q/06	2Q/06	3Q/06	4Q/06	1Q/07	2Q/07	3Q/07	4Q/07
Safety System Functional Failures	1	0	0	1	0	0	0	0
Indicator value	**2**	**1**	**1**	**2**	**1**	**1**	**1**	**0**

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	**1Q/06**	**2Q/06**	**3Q/06**	**4Q/06**	**1Q/07**	**2Q/07**	**3Q/07**	**4Q/07**
UAI (ΔCDF)		2.60E-07	3.00E-07	3.80E-07	4.80E-07	4.80E-07	5.70E-07	3.50E-07
URI (ΔCDF)		-4.40E-07	-4.40E-07	-4.50E-07	-4.50E-07	-4.40E-07	-4.40E-07	-9.00E-08
PLE		NO	NO	NO	NO	NO	NO	NO
Indicator value		**-1.80E-07**	**-1.40E-07**	**-7.00E-08**	**3.00E-08**	**4.00E-08**	**1.30E-07**	**2.60E-07**

Licensee Comments:

4Q/07: Changed PRA Parameter(s).

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/06**	**2Q/06**	**3Q/06**	**4Q/06**	**1Q/07**	**2Q/07**	**3Q/07**	**4Q/07**
UAI (ΔCDF)		9.90E-09	1.20E-08	1.10E-08	3.90E-08	4.00E-08	3.80E-08	1.70E-08
URI (ΔCDF)		1.80E-08	1.80E-08	1.80E-08	1.80E-08	-7.40E-08	-7.40E-08	-1.50E-08
PLE		NO	NO	NO	NO	NO	NO	NO
Indicator value		**2.79E-08**	**3.00E-08**	**2.90E-08**	**5.70E-08**	**-3.40E-08**	**-3.60E-08**	**2.00E-09**

Licensee Comments:

4Q/07: Changed PRA Parameter(s).

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/06**	**2Q/06**	**3Q/06**	**4Q/06**	**1Q/07**	**2Q/07**	**3Q/07**	**4Q/07**
UAI (ΔCDF)		-3.60E-07	-3.90E-07	-3.60E-07	-3.40E-07	-3.30E-07	-2.20E-07	7.00E-08
URI (ΔCDF)		-6.20E-07	-6.20E-07	-6.20E-07	-6.20E-07	-6.20E-07	-6.20E-07	-2.30E-07
PLE		NO	NO	NO	NO	NO	NO	NO
Indicator value		**-9.80E-07**	**-1.01E-06**	**-9.80E-07**	**-9.60E-07**	**-9.50E-07**	**-8.40E-07**	**-1.60E-07**

Licensee Comments:

4Q/07: Changed PRA Parameter(s).

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/06**	**2Q/06**	**3Q/06**	**4Q/06**	**1Q/07**	**2Q/07**	**3Q/07**	**4Q/07**
UAI (ΔCDF)		2.10E-08	3.40E-08	3.50E-08	5.50E-08	5.80E-08	7.00E-08	4.00E-08
URI (ΔCDF)		-3.80E-08	-3.80E-08	-3.80E-08	-3.80E-08	-3.80E-08	-3.80E-08	-9.00E-09
PLE		NO	NO	NO	NO	NO	NO	NO
Indicator value		**-1.70E-08**	**-4.00E-09**	**-3.00E-09**	**1.70E-08**	**2.00E-08**	**3.20E-08**	**3.10E-08**

Licensee Comments:

4Q/07: Changed PRA Parameter(s).

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/06**	**2Q/06**	**3Q/06**	**4Q/06**	**1Q/07**	**2Q/07**	**3Q/07**	**4Q/07**
UAI (ΔCDF)		8.60E-08	1.50E-07	4.40E-07	5.70E-07	-2.60E-11	-2.50E-11	-2.20E-11
URI (ΔCDF)		-2.70E-07	-2.70E-07	-2.70E-07	-2.70E-07	-2.70E-07	-2.70E-07	-1.00E-07
PLE		NO	NO	NO	NO	NO	NO	NO
Indicator value		**-1.84E-07**	**-1.20E-07**	**1.70E-07**	**3.00E-07**	**-2.70E-07**	**-2.70E-07**	**-1.00E-07**

Licensee Comments:

4Q/07: Changed PRA Parameter(s).

Reactor Coolant System Activity

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Activity	**1/06**	**2/06**	**3/06**	**4/06**	**5/06**	**6/06**	**7/06**	**8/06**	**9/06**	**10/06**	**11/06**	**12/06**
Maximum activity	0.000112	0.000096	0.000091	N/A	N/A	N/A	0.000320	0.000341	0.000333	0.000314	0.000396	0.000402
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**	**N/A**	**N/A**	**N/A**	**0**	**0**	**0**	**0**	**0**	**0**

Reactor Coolant System Activity	**1/07**	**2/07**	**3/07**	**4/07**	**5/07**	**6/07**	**7/07**	**8/07**	**9/07**	**10/07**	**11/07**	**12/07**
Maximum activity	0.000444	0.000441	0.000477	0.000480	0.000453	N/A	0.000253	0.000279	0.000296	0.000303	0.000281	0.000322
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**	**N/A**	**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	**1/06**	**2/06**	**3/06**	**4/06**	**5/06**	**6/06**	**7/06**	**8/06**	**9/06**	**10/06**	**11/06**	**12/06**
Maximum leakage	0.113	0.047	0.050	0.027	N/A	N/A	0.056	0.066	0.050	0.103	0.056	0.054
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	**1.1**	**0.5**	**0.5**	**0.3**	**N/A**	**N/A**	**0.6**	**0.7**	**0.5**	**1.0**	**0.6**	**0.5**
Reactor Coolant System Leakage	**1/07**	**2/07**	**3/07**	**4/07**	**5/07**	**6/07**	**7/07**	**8/07**	**9/07**	**10/07**	**11/07**	**12/07**
Maximum leakage	0.053	0.045	0.061	0.063	0.065	N/A	0.089	0.042	0.052	0.019	0.024	0.037
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	**0.5**	**0.5**	**0.6**	**0.6**	**0.7**	**N/A**	**0.9**	**0.4**	**0.5**	**0.2**	**0.2**	**0.4**

Licensee Comments: none

Drill/Exercise Performance

Thresholds: White < 90.0% Yellow < 70.0%

Notes

Drill/Exercise Performance	1Q/06	2Q/06	3Q/06	4Q/06	1Q/07	2Q/07	3Q/07	4Q/07
Successful opportunities	9.0	5.0	57.0	97.0	18.0	13.0	191.0	12.0
Total opportunities	11.0	5.0	64.0	102.0	19.0	16.0	200.0	12.0
Indicator value	**94.1%**	**94.6%**	**92.4%**	**94.6%**	**94.5%**	**94.0%**	**94.6%**	**93.7%**

Licensee Comments: none

ERO Drill Participation

Thresholds: White < 80.0% Yellow < 60.0%

Notes

ERO Drill Participation	1Q/06	2Q/06	3Q/06	4Q/06	1Q/07	2Q/07	3Q/07	4Q/07
Participating Key personnel	174.0	168.0	186.0	179.0	175.0	181.0	199.0	192.0
Total Key personnel	176.0	174.0	190.0	183.0	183.0	183.0	200.0	193.0
Indicator value	**98.9%**	**96.6%**	**97.9%**	**97.8%**	**95.6%**	**98.9%**	**99.5%**	**99.5%**

Licensee Comments: none

Alert & Notification System

Thresholds: White < 94.0% Yellow < 90.0%

Notes

Alert & Notification System	1Q/06	2Q/06	3Q/06	4Q/06	1Q/07	2Q/07	3Q/07	4Q/07
Successful siren-tests	778	792	797	792	798	798	756	882
Total sirens-tests	798	798	798	793	798	798	756	882
Indicator value	**98.4%**	**98.2%**	**98.9%**	**99.1%**	**99.7%**	**99.9%**	**100.0%**	**100.0%**

Licensee Comments: none

Occupational Exposure Control Effectiveness

Thresholds: White > 2.0 Yellow > 5.0

Notes

Occupational Exposure Control Effectiveness	1Q/06	2Q/06	3Q/06	4Q/06	1Q/07	2Q/07	3Q/07	4Q/07
High radiation area occurrences	0	0	0	1	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**	**0**	**0**	**1**	**1**	**1**	**1**	**0**

Licensee Comments: none

RETS/ODCM Radiological Effluent

Thresholds: White > 1.0 Yellow > 3.0

Notes

RETS/ODCM Radiological Effluent	1Q/06	2Q/06	3Q/06	4Q/06	1Q/07	2Q/07	3Q/07	4Q/07
RETS/ODCM occurrences	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Physical Protection information not publicly available.

Last Modified: February 4, 2008

Palo Verde 1

1Q/2008 Performance Indicators

Licensee's General Comments: PP01 data from 1Q2006 through 4Q2007 was revised based on corrective actions related to equipment log keeping practices. No color change occurred as a result of the revisions. This file is a reconstruction and time of generation is approximate since the data was corrupted during generation.

Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

Notes

Unplanned Scrams per 7000 Critical Hrs	2Q/06	3Q/06	4Q/06	1Q/07	2Q/07	3Q/07	4Q/07	1Q/08
Unplanned scrams	0	0	1.0	0	0	0	0	0
Critical hours	0	1777.3	1823.9	2160.0	1152.0	1878.4	1803.3	2184.0
Indicator value	**1.8**	**0**	**1.3**	**1.2**	**1.0**	**1.0**	**0**	**0**

Licensee Comments: none

Unplanned Power Changes per 7000 Critical Hrs

Thresholds: White > 6.0

Notes

Unplanned Power Changes per 7000 Critical Hrs	2Q/06	3Q/06	4Q/06	1Q/07	2Q/07	3Q/07	4Q/07	1Q/08
Unplanned power changes	0	2.0	0	0	0	0	2.0	0
Critical hours	0	1777.3	1823.9	2160.0	1152.0	1878.4	1803.3	2184.0
Indicator value	**0**	**3.6**	**2.6**	**2.4**	**2.0**	**0**	**2.0**	**2.0**

Licensee Comments: none

Unplanned Scrams with Complications

Thresholds: White > 1.0

Notes

Unplanned Scrams with Complications	2Q/06	3Q/06	4Q/06	1Q/07	2Q/07	3Q/07	4Q/07	1Q/08
Scrams with complications			0	0	0	0	0	0
Indicator value						**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/06	3Q/06	4Q/06	1Q/07	2Q/07	3Q/07	4Q/07	1Q/08
Safety System Functional Failures	0	0	1	0	0	0	0	0
Indicator value	**1**	**1**	**2**	**1**	**1**	**1**	**0**	**0**

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/06	3Q/06	4Q/06	1Q/07	2Q/07	3Q/07	4Q/07	1Q/08
UAI (ΔCDF)	2.60E-07	3.00E-07	3.80E-07	4.80E-07	4.80E-07	5.70E-07	3.50E-07	3.20E-07
URI (ΔCDF)	-4.40E-07	-4.40E-07	-4.50E-07	-4.50E-07	-4.40E-07	-4.40E-07	-9.00E-08	-2.20E-07
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-1.80E-07**	**-1.40E-07**	**-7.00E-08**	**3.00E-08**	**4.00E-08**	**1.30E-07**	**2.60E-07**	**1.00E-07**

Licensee Comments:

1Q/08: Changed PRA Parameter(s).

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/06	3Q/06	4Q/06	1Q/07	2Q/07	3Q/07	4Q/07	1Q/08
UAI (ΔCDF)	9.90E-09	1.20E-08	1.10E-08	3.90E-08	4.00E-08	3.80E-08	1.70E-08	1.60E-08
URI (ΔCDF)	1.80E-08	1.80E-08	1.80E-08	1.80E-08	-7.40E-08	-7.40E-08	-1.50E-08	-1.50E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**2.79E-08**	**3.00E-08**	**2.90E-08**	**5.70E-08**	**-3.40E-08**	**-3.60E-08**	**2.00E-09**	**1.00E-09**

Licensee Comments:

1Q/08: Changed PRA Parameter(s).

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/06**	**3Q/06**	**4Q/06**	**1Q/07**	**2Q/07**	**3Q/07**	**4Q/07**	**1Q/08**
UAI (ΔCDF)	-3.60E-07	-3.90E-07	-3.60E-07	-3.40E-07	-3.30E-07	-2.20E-07	7.00E-08	4.60E-08
URI (ΔCDF)	-6.20E-07	-6.20E-07	-6.20E-07	-6.20E-07	-6.20E-07	-6.20E-07	-2.30E-07	-2.30E-07
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-9.80E-07**	**-1.01E-06**	**-9.80E-07**	**-9.60E-07**	**-9.50E-07**	**-8.40E-07**	**-1.60E-07**	**-1.84E-07**

Licensee Comments:

1Q/08: Changed PRA Parameter(s).

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/06	3Q/06	4Q/06	1Q/07	2Q/07	3Q/07	4Q/07	1Q/08
UAI (ΔCDF)	2.10E-08	3.40E-08	3.50E-08	5.50E-08	5.80E-08	7.00E-08	4.00E-08	2.90E-08
URI (ΔCDF)	-3.80E-08	-3.80E-08	-3.80E-08	-3.80E-08	-3.80E-08	-3.80E-08	-9.00E-09	-9.00E-09
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-1.70E-08**	**-4.00E-09**	**-3.00E-09**	**1.70E-08**	**2.00E-08**	**3.20E-08**	**3.10E-08**	**2.00E-08**

Licensee Comments:

1Q/08: Changed PRA Parameter(s).

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/06	3Q/06	4Q/06	1Q/07	2Q/07	3Q/07	4Q/07	1Q/08
UAI (ΔCDF)	8.60E-08	1.50E-07	4.40E-07	5.70E-07	-2.60E-11	-2.50E-11	-2.20E-11	-5.20E-11
URI (ΔCDF)	-2.70E-07	-2.70E-07	-2.70E-07	-2.70E-07	-2.70E-07	-2.70E-07	-1.00E-07	-1.60E-07
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-1.84E-07**	**-1.20E-07**	**1.70E-07**	**3.00E-07**	**-2.70E-07**	**-2.70E-07**	**-1.00E-07**	**-1.60E-07**

Licensee Comments:

1Q/08: Changed PRA Parameter(s).

Reactor Coolant System Activity

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Activity	4/06	5/06	6/06	7/06	8/06	9/06	10/06	11/06	12/06	1/07	2/07	3/07
Maximum activity	N/A	N/A	N/A	0.000320	0.000341	0.000333	0.000314	0.000396	0.000402	0.000444	0.000441	0.000477
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**	**N/A**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

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	0.000480	0.000453	N/A	0.000253	0.000279	0.000296	0.000303	0.000281	0.000322	0.000338	0.000331	0.000348
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**	**N/A**	**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	4/06	5/06	6/06	7/06	8/06	9/06	10/06	11/06	12/06	1/07	2/07	3/07
Maximum leakage	0.027	N/A	N/A	0.056	0.066	0.050	0.103	0.056	0.054	0.053	0.045	0.061
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**	**N/A**	**N/A**	**0.6**	**0.7**	**0.5**	**1.0**	**0.6**	**0.5**	**0.5**	**0.5**	**0.6**
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	0.063	0.065	N/A	0.089	0.042	0.052	0.019	0.024	0.037	0.100	0.040	0.031
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	**0.6**	**0.7**	**N/A**	**0.9**	**0.4**	**0.5**	**0.2**	**0.2**	**0.4**	**1.0**	**0.4**	**0.3**

Licensee Comments: none

Drill/Exercise Performance

Thresholds: White < 90.0% Yellow < 70.0%

Notes

Drill/Exercise Performance	2Q/06	3Q/06	4Q/06	1Q/07	2Q/07	3Q/07	4Q/07	1Q/08
Successful opportunities	5.0	57.0	97.0	18.0	13.0	191.0	12.0	130.0
Total opportunities	5.0	64.0	102.0	19.0	16.0	200.0	12.0	133.0
Indicator value	**94.6%**	**92.4%**	**94.6%**	**94.5%**	**94.0%**	**94.6%**	**93.7%**	**94.9%**

Licensee Comments: none

ERO Drill Participation

Thresholds: White < 80.0% Yellow < 60.0%

Notes

ERO Drill Participation	2Q/06	3Q/06	4Q/06	1Q/07	2Q/07	3Q/07	4Q/07	1Q/08
Participating Key personnel	168.0	186.0	179.0	175.0	181.0	199.0	192.0	188.0
Total Key personnel	174.0	190.0	183.0	183.0	183.0	200.0	193.0	190.0
Indicator value	**96.6%**	**97.9%**	**97.8%**	**95.6%**	**98.9%**	**99.5%**	**99.5%**	**98.9%**

Licensee Comments: none

Alert & Notification System

Thresholds: White < 94.0% Yellow < 90.0%

Notes

Alert & Notification System	2Q/06	3Q/06	4Q/06	1Q/07	2Q/07	3Q/07	4Q/07	1Q/08
Successful siren-tests	792	797	792	798	798	756	882	755
Total sirens-tests	798	798	793	798	798	756	882	756
Indicator value	**98.2%**	**98.9%**	**99.1%**	**99.7%**	**99.9%**	**100.0%**	**100.0%**	**100.0%**

Licensee Comments: none

Occupational Exposure Control Effectiveness

Thresholds: White > 2.0 Yellow > 5.0

Notes

Occupational Exposure Control Effectiveness	2Q/06	3Q/06	4Q/06	1Q/07	2Q/07	3Q/07	4Q/07	1Q/08
High radiation area occurrences	0	0	1	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**	**0**	**1**	**1**	**1**	**1**	**0**	**0**

Licensee Comments: none

RETS/ODCM Radiological Effluent

Thresholds: White > 1.0 Yellow > 3.0

Notes

RETS/ODCM Radiological Effluent	2Q/06	3Q/06	4Q/06	1Q/07	2Q/07	3Q/07	4Q/07	1Q/08
RETS/ODCM occurrences	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Physical Protection information not publicly available.

Last Modified: April 30, 2008

Palo Verde 1

2Q/2008 Performance Indicators

Licensee's General Comments: none

Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

Notes

Unplanned Scrams per 7000 Critical Hrs	3Q/06	4Q/06	1Q/07	2Q/07	3Q/07	4Q/07	1Q/08	2Q/08
Unplanned scrams	0	1.0	0	0	0	0	0	0
Critical hours	1777.3	1823.9	2160.0	1152.0	1878.4	1803.3	2184.0	2131.1
Indicator value	**0**	**1.3**	**1.2**	**1.0**	**1.0**	**0**	**0**	**0**

Licensee Comments: none

Unplanned Power Changes per 7000 Critical Hrs

Thresholds: White > 6.0

Notes

Unplanned Power Changes per 7000 Critical Hrs	3Q/06	4Q/06	1Q/07	2Q/07	3Q/07	4Q/07	1Q/08	2Q/08
Unplanned power changes	2.0	0	0	0	0	2.0	0	1.0
Critical hours	1777.3	1823.9	2160.0	1152.0	1878.4	1803.3	2184.0	2131.1
Indicator value	**3.6**	**2.6**	**2.4**	**2.0**	**0**	**2.0**	**2.0**	**2.6**

Licensee Comments: none

Unplanned Scrams with Complications

Thresholds: White > 1.0

Notes

Unplanned Scrams with Complications	3Q/06	4Q/06	1Q/07	2Q/07	3Q/07	4Q/07	1Q/08	2Q/08
Scrams with complications		0	0	0	0	0	0	0
Indicator value					**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)	3Q/06	4Q/06	1Q/07	2Q/07	3Q/07	4Q/07	1Q/08	2Q/08
Safety System Functional Failures	0	1	0	0	0	0	0	0
Indicator value	**1**	**2**	**1**	**1**	**1**	**0**	**0**	**0**

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	3Q/06	4Q/06	1Q/07	2Q/07	3Q/07	4Q/07	1Q/08	2Q/08
UAI (ΔCDF)	3.00E-07	3.80E-07	4.80E-07	4.80E-07	5.70E-07	3.50E-07	3.20E-07	2.90E-07
URI (ΔCDF)	-4.40E-07	-4.50E-07	-4.50E-07	-4.40E-07	-4.40E-07	-9.00E-08	-2.20E-07	-2.20E-07
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-1.40E-07**	**-7.00E-08**	**3.00E-08**	**4.00E-08**	**1.30E-07**	**2.60E-07**	**1.00E-07**	**7.00E-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	3Q/06	4Q/06	1Q/07	2Q/07	3Q/07	4Q/07	1Q/08	2Q/08
UAI (ΔCDF)	1.20E-08	1.10E-08	3.90E-08	4.00E-08	3.80E-08	1.70E-08	1.60E-08	1.30E-08
URI (ΔCDF)	1.80E-08	1.80E-08	1.80E-08	-7.40E-08	-7.40E-08	-1.50E-08	-1.50E-08	-1.50E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**3.00E-08**	**2.90E-08**	**5.70E-08**	**-3.40E-08**	**-3.60E-08**	**2.00E-09**	**1.00E-09**	**-2.00E-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	**3Q/06**	**4Q/06**	**1Q/07**	**2Q/07**	**3Q/07**	**4Q/07**	**1Q/08**	**2Q/08**
UAI (ΔCDF)	-3.90E-07	-3.60E-07	-3.40E-07	-3.30E-07	-2.20E-07	7.00E-08	4.60E-08	9.50E-10
URI (ΔCDF)	-6.20E-07	-6.20E-07	-6.20E-07	-6.20E-07	-6.20E-07	-2.30E-07	-2.30E-07	-2.30E-07
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-1.01E-06**	**-9.80E-07**	**-9.60E-07**	**-9.50E-07**	**-8.40E-07**	**-1.60E-07**	**-1.84E-07**	**-2.29E-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	3Q/06	4Q/06	1Q/07	2Q/07	3Q/07	4Q/07	1Q/08	2Q/08
UAI (ΔCDF)	3.40E-08	3.50E-08	5.50E-08	5.80E-08	7.00E-08	4.00E-08	2.90E-08	2.80E-08
URI (ΔCDF)	-3.80E-08	-3.80E-08	-3.80E-08	-3.80E-08	-3.80E-08	-9.00E-09	-9.00E-09	-9.00E-09
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-4.00E-09**	**-3.00E-09**	**1.70E-08**	**2.00E-08**	**3.20E-08**	**3.10E-08**	**2.00E-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	3Q/06	4Q/06	1Q/07	2Q/07	3Q/07	4Q/07	1Q/08	2Q/08
UAI (ΔCDF)	1.50E-07	4.40E-07	5.70E-07	-2.60E-11	-2.50E-11	-2.20E-11	-5.20E-11	-5.20E-11
URI (ΔCDF)	-2.70E-07	-2.70E-07	-2.70E-07	-2.70E-07	-2.70E-07	-1.00E-07	-1.60E-07	-1.60E-07
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-1.20E-07**	**1.70E-07**	**3.00E-07**	**-2.70E-07**	**-2.70E-07**	**-1.00E-07**	**-1.60E-07**	**-1.60E-07**

Licensee Comments: none

Reactor Coolant System Activity

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Activity	**7/06**	**8/06**	**9/06**	**10/06**	**11/06**	**12/06**	**1/07**	**2/07**	**3/07**	**4/07**	**5/07**	**6/07**
Maximum activity	0.000320	0.000341	0.000333	0.000314	0.000396	0.000402	0.000444	0.000441	0.000477	0.000480	0.000453	N/A
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**	**0**	**0**	**0**	**0**	**0**	**0**	**N/A**

Reactor Coolant System Activity	**7/07**	**8/07**	**9/07**	**10/07**	**11/07**	**12/07**	**1/08**	**2/08**	**3/08**	**4/08**	**5/08**	**6/08**
Maximum activity	0.000253	0.000279	0.000296	0.000303	0.000281	0.000322	0.000338	0.000331	0.000348	0.000347	0.000360	0.000378
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**	**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	7/06	8/06	9/06	10/06	11/06	12/06	1/07	2/07	3/07	4/07	5/07	6/07
Maximum leakage	0.056	0.066	0.050	0.103	0.056	0.054	0.053	0.045	0.061	0.063	0.065	N/A
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	**0.6**	**0.7**	**0.5**	**1.0**	**0.6**	**0.5**	**0.5**	**0.5**	**0.6**	**0.6**	**0.7**	**N/A**

Reactor Coolant System Leakage	7/07	8/07	9/07	10/07	11/07	12/07	1/08	2/08	3/08	4/08	5/08	6/08
Maximum leakage	0.089	0.042	0.052	0.019	0.024	0.037	0.100	0.040	0.031	0.043	0.033	0.039
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	**0.9**	**0.4**	**0.5**	**0.2**	**0.2**	**0.4**	**1.0**	**0.4**	**0.3**	**0.4**	**0.3**	**0.4**

Licensee Comments: none

Drill/Exercise Performance

Thresholds: White < 90.0% Yellow < 70.0%

Notes

Drill/Exercise Performance	3Q/06	4Q/06	1Q/07	2Q/07	3Q/07	4Q/07	1Q/08	2Q/08
Successful opportunities	57.0	97.0	18.0	13.0	188.0	12.0	130.0	35.0
Total opportunities	64.0	102.0	19.0	16.0	200.0	12.0	133.0	39.0
Indicator value	**92.4%**	**94.6%**	**94.5%**	**94.0%**	**94.0%**	**93.0%**	**94.4%**	**94.0%**

Licensee Comments:

3Q/07: Revised drill performance results (3 less successes) based on errors identified on NAN forms for activities in August and September 2007. No color change.

ERO Drill Participation

Thresholds: White < 80.0% Yellow < 60.0%

Notes

ERO Drill Participation	3Q/06	4Q/06	1Q/07	2Q/07	3Q/07	4Q/07	1Q/08	2Q/08
Participating Key personnel	186.0	179.0	175.0	181.0	199.0	192.0	188.0	191.0
Total Key personnel	190.0	183.0	183.0	183.0	200.0	193.0	190.0	191.0
Indicator value	**97.9%**	**97.8%**	**95.6%**	**98.9%**	**99.5%**	**99.5%**	**98.9%**	**100.0%**

Licensee Comments: none

Alert & Notification System

Thresholds: White < 94.0% Yellow < 90.0%

Notes

Alert & Notification System	3Q/06	4Q/06	1Q/07	2Q/07	3Q/07	4Q/07	1Q/08	2Q/08
Successful siren-tests	797	792	798	798	756	882	755	756
Total sirens-tests	798	793	798	798	756	882	756	756
Indicator value	**98.9%**	**99.1%**	**99.7%**	**99.9%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Licensee Comments: none

Occupational Exposure Control Effectiveness

Thresholds: White > 2.0 Yellow > 5.0

Notes

Occupational Exposure Control Effectiveness	3Q/06	4Q/06	1Q/07	2Q/07	3Q/07	4Q/07	1Q/08	2Q/08
High radiation area occurrences	0	1	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**	**1**	**1**	**1**	**1**	**0**	**0**	**0**

Licensee Comments: none

RETS/ODCM Radiological Effluent

Thresholds: White > 1.0 Yellow > 3.0

Notes

RETS/ODCM Radiological Effluent	3Q/06	4Q/06	1Q/07	2Q/07	3Q/07	4Q/07	1Q/08	2Q/08
RETS/ODCM occurrences	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Physical Protection information not publicly available.

Palo Verde 1

3Q/2008 Performance Indicators

Licensee's General Comments: none

Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

Notes

Unplanned Scrams per 7000 Critical Hrs	4Q/06	1Q/07	2Q/07	3Q/07	4Q/07	1Q/08	2Q/08	3Q/08
Unplanned scrams	1.0	0	0	0	0	0	0	0
Critical hours	1823.9	2160.0	1152.0	1878.4	1803.3	2184.0	2131.1	2208.0
Indicator value	**1.3**	**1.2**	**1.0**	**1.0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Thresholds: White > 6.0

Notes

Unplanned Power Changes per 7000 Critical Hrs	4Q/06	1Q/07	2Q/07	3Q/07	4Q/07	1Q/08	2Q/08	3Q/08
Unplanned power changes	0	0	0	0	2.0	0	1.0	1.0
Critical hours	1823.9	2160.0	1152.0	1878.4	1803.3	2184.0	2131.1	2208.0
Indicator value	**2.6**	**2.4**	**2.0**	**0**	**2.0**	**2.0**	**2.6**	**3.4**

Licensee Comments: none

Unplanned Scrams with Complications

Thresholds: White > 1.0

Notes

Unplanned Scrams with Complications	4Q/06	1Q/07	2Q/07	3Q/07	4Q/07	1Q/08	2Q/08	3Q/08
Scrams with complications	0	0	0	0	0	0	0	0
Indicator value				**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Licensee Comments: none

Thresholds: White > 5.0

Notes

Safety System Functional Failures (PWR)	4Q/06	1Q/07	2Q/07	3Q/07	4Q/07	1Q/08	2Q/08	3Q/08
Safety System Functional Failures	1	0	0	0	0	0	0	0
Indicator value	**2**	**1**	**1**	**1**	**0**	**0**	**0**	**0**

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	**4Q/06**	**1Q/07**	**2Q/07**	**3Q/07**	**4Q/07**	**1Q/08**	**2Q/08**	**3Q/08**
UAI (ΔCDF)	3.80E-07	4.80E-07	4.80E-07	5.70E-07	3.50E-07	3.20E-07	2.90E-07	1.80E-07
URI (ΔCDF)	-4.50E-07	-4.50E-07	-4.40E-07	-4.40E-07	-9.00E-08	-2.20E-07	-2.20E-07	-3.80E-07
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-7.00E-08**	**3.00E-08**	**4.00E-08**	**1.30E-07**	**2.60E-07**	**1.00E-07**	**7.00E-08**	**-2.00E-07**

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	**4Q/06**	**1Q/07**	**2Q/07**	**3Q/07**	**4Q/07**	**1Q/08**	**2Q/08**	**3Q/08**
UAI (ΔCDF)	1.10E-08	3.90E-08	4.00E-08	3.80E-08	1.70E-08	1.60E-08	1.30E-08	7.50E-09
URI (ΔCDF)	1.80E-08	1.80E-08	-7.40E-08	-7.40E-08	-1.50E-08	-1.50E-08	-1.50E-08	-1.50E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**2.90E-08**	**5.70E-08**	**-3.40E-08**	**-3.60E-08**	**2.00E-09**	**1.00E-09**	**-2.00E-09**	**-7.50E-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	**4Q/06**	**1Q/07**	**2Q/07**	**3Q/07**	**4Q/07**	**1Q/08**	**2Q/08**	**3Q/08**
UAI (ΔCDF)	-3.60E-07	-3.40E-07	-3.30E-07	-2.20E-07	7.00E-08	4.60E-08	9.50E-10	-2.30E-08
URI (ΔCDF)	-6.20E-07	-6.20E-07	-6.20E-07	-6.20E-07	-2.30E-07	-2.30E-07	-2.30E-07	-2.30E-07
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-9.80E-07**	**-9.60E-07**	**-9.50E-07**	**-8.40E-07**	**-1.60E-07**	**-1.84E-07**	**-2.29E-07**	**-2.53E-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	4Q/06	1Q/07	2Q/07	3Q/07	4Q/07	1Q/08	2Q/08	3Q/08
UAI (ΔCDF)	3.50E-08	5.50E-08	5.80E-08	7.00E-08	4.00E-08	2.90E-08	2.80E-08	2.30E-08
URI (ΔCDF)	-3.80E-08	-3.80E-08	-3.80E-08	-3.80E-08	-9.00E-09	-9.00E-09	-9.00E-09	-9.00E-09
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-3.00E-09**	**1.70E-08**	**2.00E-08**	**3.20E-08**	**3.10E-08**	**2.00E-08**	**1.90E-08**	**1.40E-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	**4Q/06**	**1Q/07**	**2Q/07**	**3Q/07**	**4Q/07**	**1Q/08**	**2Q/08**	**3Q/08**
UAI (ΔCDF)	4.40E-07	5.70E-07	-2.60E-11	-2.50E-11	-2.20E-11	-5.20E-11	-5.20E-11	-5.20E-11
URI (ΔCDF)	-2.70E-07	-2.70E-07	-2.70E-07	-2.70E-07	-1.00E-07	-1.60E-07	-1.60E-07	-1.60E-07
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**1.70E-07**	**3.00E-07**	**-2.70E-07**	**-2.70E-07**	**-1.00E-07**	**-1.60E-07**	**-1.60E-07**	**-1.60E-07**

Licensee Comments: none

Reactor Coolant System Activity

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Activity	10/06	11/06	12/06	1/07	2/07	3/07	4/07	5/07	6/07	7/07	8/07	9/07
Maximum activity	0.000314	0.000396	0.000402	0.000444	0.000441	0.000477	0.000480	0.000453	N/A	0.000253	0.000279	0.000296
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**	**0**	**0**	**0**	**N/A**	**0**	**0**	**0**

Reactor Coolant System Activity	10/07	11/07	12/07	1/08	2/08	3/08	4/08	5/08	6/08	7/08	8/08	9/08
Maximum activity	0.000303	0.000281	0.000322	0.000338	0.000331	0.000348	0.000347	0.000360	0.000378	0.000386	0.000388	0.000405
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**	**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	10/06	11/06	12/06	1/07	2/07	3/07	4/07	5/07	6/07	7/07	8/07	9/07
Maximum leakage	0.103	0.056	0.054	0.053	0.045	0.061	0.063	0.065	N/A	0.089	0.042	0.052
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	**1.0**	**0.6**	**0.5**	**0.5**	**0.5**	**0.6**	**0.6**	**0.7**	**N/A**	**0.9**	**0.4**	**0.5**
Reactor Coolant System Leakage	**10/07**	**11/07**	**12/07**	**1/08**	**2/08**	**3/08**	**4/08**	**5/08**	**6/08**	**7/08**	**8/08**	**9/08**
Maximum leakage	0.019	0.024	0.037	0.100	0.040	0.031	0.043	0.033	0.039	0.052	0.035	0.048
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**	**0.2**	**0.4**	**1.0**	**0.4**	**0.3**	**0.4**	**0.3**	**0.4**	**0.5**	**0.4**	**0.5**

Licensee Comments: none

Drill/Exercise Performance

Thresholds: White < 90.0% Yellow < 70.0%

Notes

Drill/Exercise Performance	4Q/06	1Q/07	2Q/07	3Q/07	4Q/07	1Q/08	2Q/08	3Q/08
Successful opportunities	97.0	18.0	13.0	188.0	12.0	130.0	35.0	43.0
Total opportunities	102.0	19.0	16.0	200.0	12.0	133.0	39.0	43.0
Indicator value	**94.6%**	**94.5%**	**94.0%**	**94.0%**	**93.0%**	**94.4%**	**94.0%**	**95.0%**

Licensee Comments: none

Thresholds: White < 80.0% Yellow < 60.0%

Notes

ERO Drill Participation	4Q/06	1Q/07	2Q/07	3Q/07	4Q/07	1Q/08	2Q/08	3Q/08
Participating Key personnel	179.0	175.0	181.0	199.0	192.0	188.0	191.0	183.0
Total Key personnel	183.0	183.0	183.0	200.0	193.0	190.0	191.0	183.0
Indicator value	**97.8%**	**95.6%**	**98.9%**	**99.5%**	**99.5%**	**98.9%**	**100.0%**	**100.0%**

Licensee Comments: none

Alert & Notification System

Thresholds: White < 94.0% Yellow < 90.0%

Notes

Alert & Notification System	4Q/06	1Q/07	2Q/07	3Q/07	4Q/07	1Q/08	2Q/08	3Q/08
Successful siren-tests	792	798	798	756	882	755	756	798
Total sirens-tests	793	798	798	756	882	756	756	798
Indicator value	**99.1%**	**99.7%**	**99.9%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Licensee Comments: none

Occupational Exposure Control Effectiveness

Thresholds: White > 2.0 Yellow > 5.0

Notes

Occupational Exposure Control Effectiveness	4Q/06	1Q/07	2Q/07	3Q/07	4Q/07	1Q/08	2Q/08	3Q/08
High radiation area occurrences	1	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**	**1**	**1**	**0**	**0**	**0**	**0**

Licensee Comments: none

RETS/ODCM Radiological Effluent

Thresholds: White > 1.0 Yellow > 3.0

Notes

RETS/ODCM Radiological Effluent	4Q/06	1Q/07	2Q/07	3Q/07	4Q/07	1Q/08	2Q/08	3Q/08
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.

Last Modified: November 26, 2008

Palo Verde 1

4Q/2008 Performance Indicators

Licensee's General Comments: none

Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

Notes

Unplanned Scrams per 7000 Critical Hrs	1Q/07	2Q/07	3Q/07	4Q/07	1Q/08	2Q/08	3Q/08	4Q/08
Unplanned scrams	0	0	0	0	0	0	0	0
Critical hours	2160.0	1152.0	1878.4	1803.3	2184.0	2131.1	2208.0	1155.6
Indicator value	**1.2**	**1.0**	**1.0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Unplanned Power Changes per 7000 Critical Hrs

Thresholds: White > 6.0

Notes

Unplanned Power Changes per 7000 Critical Hrs	1Q/07	2Q/07	3Q/07	4Q/07	1Q/08	2Q/08	3Q/08	4Q/08
Unplanned power changes	0	0	0	2.0	0	1.0	1.0	0
Critical hours	2160.0	1152.0	1878.4	1803.3	2184.0	2131.1	2208.0	1155.6
Indicator value	**2.4**	**2.0**	**0**	**2.0**	**2.0**	**2.6**	**3.4**	**1.8**

Licensee Comments: none

Unplanned Scrams with Complications

Thresholds: White > 1.0

Notes

Unplanned Scrams with Complications	1Q/07	2Q/07	3Q/07	4Q/07	1Q/08	2Q/08	3Q/08	4Q/08
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**

Licensee Comments: none

Safety System Functional Failures (PWR)

Thresholds: White > 5.0

Notes

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

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	1Q/07	2Q/07	3Q/07	4Q/07	1Q/08	2Q/08	3Q/08	4Q/08
UAI (ΔCDF)	4.80E-07	4.80E-07	5.70E-07	3.50E-07	3.20E-07	2.90E-07	1.80E-07	2.00E-07
URI (ΔCDF)	-4.50E-07	-4.40E-07	-4.40E-07	-9.00E-08	-2.20E-07	-2.20E-07	-3.80E-07	-3.80E-07
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**3.00E-08**	**4.00E-08**	**1.30E-07**	**2.60E-07**	**1.00E-07**	**7.00E-08**	**-2.00E-07**	**-1.80E-07**

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/07**	**2Q/07**	**3Q/07**	**4Q/07**	**1Q/08**	**2Q/08**	**3Q/08**	**4Q/08**
UAI (ΔCDF)	3.90E-08	4.00E-08	3.80E-08	1.70E-08	1.60E-08	1.30E-08	7.50E-09	6.70E-09
URI (ΔCDF)	3.80E-08	-5.30E-08	-5.30E-08	-1.20E-08	-1.20E-08	-1.20E-08	-1.20E-08	-1.20E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**7.70E-08**	**-1.30E-08**	**-1.50E-08**	**5.00E-09**	**4.00E-09**	**1.00E-09**	**-4.50E-09**	**-5.30E-09**

Licensee Comments:

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.

3Q/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.

4Q/06: Data revision: Excessive leakage of a single containment recirculation isolation valve that occurred in October 2006 was evaluated in January 2007 and determined to be a maintenance rule functional failure. This impacted MSPI high pressure safety injection and residual heat removal indicators, however indicators' color did not change (green).

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/07	2Q/07	3Q/07	4Q/07	1Q/08	2Q/08	3Q/08	4Q/08
UAI (ΔCDF)	-3.40E-07	-3.30E-07	-2.20E-07	7.00E-08	4.60E-08	9.50E-10	-2.30E-08	-3.20E-08
URI (ΔCDF)	-6.20E-07	-6.20E-07	-6.20E-07	-2.30E-07	-2.30E-07	-2.30E-07	-2.30E-07	-2.30E-07
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-9.60E-07**	**-9.50E-07**	**-8.40E-07**	**-1.60E-07**	**-1.84E-07**	**-2.29E-07**	**-2.53E-07**	**-2.62E-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	**1Q/07**	**2Q/07**	**3Q/07**	**4Q/07**	**1Q/08**	**2Q/08**	**3Q/08**	**4Q/08**
UAI (ΔCDF)	5.50E-08	5.80E-08	7.00E-08	4.00E-08	2.90E-08	2.80E-08	2.30E-08	2.30E-08
URI (ΔCDF)	-2.60E-08	-2.60E-08	-2.60E-08	-6.70E-09	-6.70E-09	-6.70E-09	-6.70E-09	-6.70E-09
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**2.90E-08**	**3.20E-08**	**4.40E-08**	**3.33E-08**	**2.23E-08**	**2.13E-08**	**1.63E-08**	**1.63E-08**

Licensee Comments:

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.

3Q/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	1Q/07	2Q/07	3Q/07	4Q/07	1Q/08	2Q/08	3Q/08	4Q/08
UAI (ΔCDF)	5.70E-07	-2.60E-11	-2.50E-11	-2.20E-11	-5.20E-11	-5.20E-11	-5.20E-11	-5.20E-11
URI (ΔCDF)	-2.70E-07	-2.70E-07	-2.70E-07	-1.00E-07	-1.60E-07	-1.60E-07	-1.60E-07	-1.60E-07
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**3.00E-07**	**-2.70E-07**	**-2.70E-07**	**-1.00E-07**	**-1.60E-07**	**-1.60E-07**	**-1.60E-07**	**-1.60E-07**

Licensee Comments: none

Reactor Coolant System Activity

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Activity	**1/07**	**2/07**	**3/07**	**4/07**	**5/07**	**6/07**	**7/07**	**8/07**	**9/07**	**10/07**	**11/07**	**12/07**
Maximum activity	0.000444	0.000441	0.000477	0.000480	0.000453	N/A	0.000253	0.000279	0.000296	0.000303	0.000281	0.000322
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**	**N/A**	**0**	**0**	**0**	**0**	**0**	**0**

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	0.000338	0.000331	0.000348	0.000347	0.000360	0.000378	0.000386	0.000388	0.000405	0.000385	0.000225	0.000246
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**	**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	**1/07**	**2/07**	**3/07**	**4/07**	**5/07**	**6/07**	**7/07**	**8/07**	**9/07**	**10/07**	**11/07**	**12/07**
Maximum leakage	0.053	0.045	0.061	0.063	0.065	N/A	0.089	0.042	0.052	0.019	0.024	0.037
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	**0.5**	**0.5**	**0.6**	**0.6**	**0.7**	**N/A**	**0.9**	**0.4**	**0.5**	**0.2**	**0.2**	**0.4**
Reactor Coolant System Leakage	**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 leakage	0.100	0.040	0.031	0.043	0.033	0.039	0.052	0.035	0.048	0.024	0.028	0.025
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	**1.0**	**0.4**	**0.3**	**0.4**	**0.3**	**0.4**	**0.5**	**0.4**	**0.5**	**0.2**	**0.3**	**0.3**

Licensee Comments: none

Drill/Exercise Performance

Thresholds: White < 90.0% Yellow < 70.0%

Notes

Drill/Exercise Performance	1Q/07	2Q/07	3Q/07	4Q/07	1Q/08	2Q/08	3Q/08	4Q/08
Successful opportunities	18.0	13.0	188.0	12.0	130.0	35.0	43.0	35.0
Total opportunities	19.0	16.0	200.0	12.0	133.0	39.0	43.0	39.0
Indicator value	**94.5%**	**94.0%**	**94.0%**	**93.0%**	**94.4%**	**94.0%**	**95.0%**	**94.6%**

Licensee Comments: none

Thresholds: White < 80.0% Yellow < 60.0%

Notes

ERO Drill Participation	1Q/07	2Q/07	3Q/07	4Q/07	1Q/08	2Q/08	3Q/08	4Q/08
Participating Key personnel	175.0	181.0	199.0	192.0	188.0	191.0	183.0	85.0
Total Key personnel	183.0	183.0	200.0	193.0	190.0	191.0	183.0	85.0
Indicator value	**95.6%**	**98.9%**	**99.5%**	**99.5%**	**98.9%**	**100.0%**	**100.0%**	**100.0%**

Licensee Comments:

4Q/08: The station changed the number of ERO key personnel by consolidating similar key functions into one single control room position. There is an open question concerning counting participations this position. NEI 99-02 is not clear and additional industry reasearch is required with possible FAQ. This has been entered into site corrective action program. Resolution will not result in a color change.

Alert & Notification System

Thresholds: White < 94.0% Yellow < 90.0%

Notes

Alert & Notification System	1Q/07	2Q/07	3Q/07	4Q/07	1Q/08	2Q/08	3Q/08	4Q/08
Successful siren-tests	798	798	756	882	755	756	798	879
Total sirens-tests	798	798	756	882	756	756	798	882
Indicator value	**99.7%**	**99.9%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**99.9%**

Licensee Comments: none

Occupational Exposure Control Effectiveness

Thresholds: White > 2.0 Yellow > 5.0

Notes

Occupational Exposure Control Effectiveness	1Q/07	2Q/07	3Q/07	4Q/07	1Q/08	2Q/08	3Q/08	4Q/08
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**	**1**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

RETS/ODCM Radiological Effluent

Thresholds: White > 1.0 Yellow > 3.0

Notes

RETS/ODCM Radiological Effluent	1Q/07	2Q/07	3Q/07	4Q/07	1Q/08	2Q/08	3Q/08	4Q/08
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.

Last Modified: February 4, 2009

Palo Verde 1

1Q/2009 Performance Indicators

Licensee's General Comments: none

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	0	0	0	0	0	0
Critical hours	1152.0	1878.4	1803.3	2184.0	2131.1	2208.0	1155.6	2160.0
Indicator value	**1.0**	**1.0**	**0**	**0**	**0**	**0**	**0**	**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	0	0	2.0	0	1.0	1.0	0	1.0
Critical hours	1152.0	1878.4	1803.3	2184.0	2131.1	2208.0	1155.6	2160.0
Indicator value	**2.0**	**0**	**2.0**	**2.0**	**2.6**	**3.4**	**1.8**	**2.7**

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	0	0	0
Indicator value	**1**	**1**	**0**	**0**	**0**	**0**	**0**	**0**

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)	4.80E-07	5.70E-07	3.50E-07	3.20E-07	2.90E-07	1.80E-07	2.00E-07	5.10E-08
URI (ΔCDF)	-4.40E-07	-4.40E-07	-9.00E-08	-2.20E-07	-2.20E-07	-3.80E-07	-3.80E-07	-1.70E-07
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**4.00E-08**	**1.30E-07**	**2.60E-07**	**1.00E-07**	**7.00E-08**	**-2.00E-07**	**-1.80E-07**	**-1.19E-07**

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 (ΔCDF)	4.00E-08	3.80E-08	1.70E-08	1.60E-08	1.30E-08	7.50E-09	6.70E-09	5.70E-09
URI (ΔCDF)	-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	**-1.30E-08**	**-1.50E-08**	**5.00E-09**	**4.00E-09**	**1.00E-09**	**-4.50E-09**	**-5.30E-09**	**-1.23E-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 (ΔCDF)	-3.30E-07	-2.20E-07	7.00E-08	4.60E-08	9.50E-10	-2.30E-08	-3.20E-08	-3.80E-09
URI (ΔCDF)	-6.20E-07	-6.20E-07	-2.30E-07	-2.30E-07	-2.30E-07	-2.30E-07	-2.30E-07	-9.80E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-9.50E-07**	**-8.40E-07**	**-1.60E-07**	**-1.84E-07**	**-2.29E-07**	**-2.53E-07**	**-2.62E-07**	**-1.02E-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 (ΔCDF)	7.10E-08	8.70E-08	4.80E-08	3.80E-08	3.70E-08	3.40E-08	3.30E-08	1.10E-08
URI (ΔCDF)	-2.60E-08	-2.60E-08	-6.70E-09	-6.70E-09	-6.70E-09	-6.70E-09	-6.70E-09	-2.00E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**4.50E-08**	**6.10E-08**	**4.13E-08**	**3.13E-08**	**3.03E-08**	**2.73E-08**	**2.63E-08**	**-9.00E-09**

Licensee Comments:

1Q/09: Unavailabilty 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.

3Q/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 (ΔCDF)	-2.60E-11	-2.50E-11	-2.20E-11	-5.20E-11	-5.20E-11	-5.20E-11	-5.20E-11	-1.50E-11
URI (ΔCDF)	-2.70E-07	-2.70E-07	-1.00E-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	**-2.70E-07**	**-2.70E-07**	**-1.00E-07**	**-1.60E-07**	**-1.60E-07**	**-1.60E-07**	**-1.60E-07**	**-1.90E-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	0.000480	0.000453	N/A	0.000253	0.000279	0.000296	0.000303	0.000281	0.000322	0.000338	0.000331	0.000348
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**	**N/A**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

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	0.000347	0.000360	0.000378	0.000386	0.000388	0.000405	0.000385	0.000225	0.000246	0.000262	0.000265	0.000277
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**	**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	0.063	0.065	N/A	0.089	0.042	0.052	0.019	0.024	0.037	0.100	0.040	0.031
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	**0.6**	**0.7**	**N/A**	**0.9**	**0.4**	**0.5**	**0.2**	**0.2**	**0.4**	**1.0**	**0.4**	**0.3**
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	0.043	0.033	0.039	0.052	0.035	0.048	0.024	0.028	0.025	0.044	0.067	0.058
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	**0.4**	**0.3**	**0.4**	**0.5**	**0.4**	**0.5**	**0.2**	**0.3**	**0.3**	**0.4**	**0.7**	**0.6**

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

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:

1Q/09: Drill participation results were revised to correctly account for key personnel that fulfill multiple positions: e.g. Emergency Coordinator as Communicator. No color change occurred.

4Q/08: The station changed the number of ERO key personnel by consolidating similar key functions into one single control room position. There is an open question concerning counting participations this position. NEI 99-02 is not clear and additional industry reasearch is required with possible FAQ. This has been entered into site corrective action program. Resolution will not result in a color change.

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:

1Q/09: Siren test results were recalculated to count only those credited in the FEMA ANS Design Report. No color change occurred.

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.

Last Modified: May 1, 2009

Palo Verde 1

2Q/2009 Performance Indicators

Licensee's General Comments: none

Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

Notes

Unplanned Scrams per 7000 Critical Hrs	3Q/07	4Q/07	1Q/08	2Q/08	3Q/08	4Q/08	1Q/09	2Q/09
Unplanned scrams	0	0	0	0	0	0	0	0
Critical hours	1878.4	1803.3	2184.0	2131.1	2208.0	1155.6	2160.0	2184.0
Indicator value	**1.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Unplanned Power Changes per 7000 Critical Hrs

Thresholds: White > 6.0

Notes

Unplanned Power Changes per 7000 Critical Hrs	3Q/07	4Q/07	1Q/08	2Q/08	3Q/08	4Q/08	1Q/09	2Q/09
Unplanned power changes	0	2.0	0	1.0	1.0	0	1.0	0
Critical hours	1878.4	1803.3	2184.0	2131.1	2208.0	1155.6	2160.0	2184.0
Indicator value	**0**	**2.0**	**2.0**	**2.6**	**3.4**	**1.8**	**2.7**	**1.8**

Licensee Comments: none

Unplanned Scrams with Complications

Thresholds: White > 1.0

Notes

Unplanned Scrams with Complications	3Q/07	4Q/07	1Q/08	2Q/08	3Q/08	4Q/08	1Q/09	2Q/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 (PWR)

Thresholds: White > 5.0

Notes

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

Licensee Comments:

2Q/09: LER 50-528/529/530-2009-001-00 for April 2009 SSFF

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	**3Q/07**	**4Q/07**	**1Q/08**	**2Q/08**	**3Q/08**	**4Q/08**	**1Q/09**	**2Q/09**
UAI (ΔCDF)	5.70E-07	3.50E-07	3.20E-07	2.90E-07	1.80E-07	2.00E-07	5.10E-08	5.80E-08
URI (ΔCDF)	-4.40E-07	-9.00E-08	-2.20E-07	-2.20E-07	-3.80E-07	-3.80E-07	-1.70E-07	-1.70E-07
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**1.30E-07**	**2.60E-07**	**1.00E-07**	**7.00E-08**	**-2.00E-07**	**-1.80E-07**	**-1.19E-07**	**-1.12E-07**

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	**3Q/07**	**4Q/07**	**1Q/08**	**2Q/08**	**3Q/08**	**4Q/08**	**1Q/09**	**2Q/09**
UAI (ΔCDF)	3.80E-08	1.70E-08	1.60E-08	1.30E-08	7.50E-09	6.70E-09	5.70E-09	4.30E-09
URI (ΔCDF)	-5.30E-08	-1.20E-08	-1.20E-08	-1.20E-08	-1.20E-08	-1.20E-08	-1.80E-08	-1.80E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-1.50E-08**	**5.00E-09**	**4.00E-09**	**1.00E-09**	**-4.50E-09**	**-5.30E-09**	**-1.23E-08**	**-1.37E-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	**3Q/07**	**4Q/07**	**1Q/08**	**2Q/08**	**3Q/08**	**4Q/08**	**1Q/09**	**2Q/09**
UAI (ΔCDF)	-2.20E-07	7.00E-08	4.60E-08	9.50E-10	-2.30E-08	-3.20E-08	-3.80E-09	-1.40E-08
URI (ΔCDF)	-6.20E-07	-2.30E-07	-2.30E-07	-2.30E-07	-2.30E-07	-2.30E-07	-9.80E-08	-9.80E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-8.40E-07**	**-1.60E-07**	**-1.84E-07**	**-2.29E-07**	**-2.53E-07**	**-2.62E-07**	**-1.02E-07**	**-1.12E-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	3Q/07	4Q/07	1Q/08	2Q/08	3Q/08	4Q/08	1Q/09	2Q/09
UAI (ΔCDF)	8.70E-08	4.80E-08	3.80E-08	3.70E-08	3.40E-08	3.30E-08	1.10E-08	9.60E-09
URI (ΔCDF)	-2.60E-08	-6.70E-09	-6.70E-09	-6.70E-09	-6.70E-09	-6.70E-09	-2.00E-08	-2.00E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**6.10E-08**	**4.13E-08**	**3.13E-08**	**3.03E-08**	**2.73E-08**	**2.63E-08**	**-9.00E-09**	**-1.04E-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	3Q/07	4Q/07	1Q/08	2Q/08	3Q/08	4Q/08	1Q/09	2Q/09
UAI (ΔCDF)	-2.50E-11	-2.20E-11	-5.20E-11	-5.20E-11	-5.20E-11	-5.20E-11	-1.50E-11	-1.50E-11
URI (ΔCDF)	-2.70E-07	-1.00E-07	-1.60E-07	-1.60E-07	-1.60E-07	-1.60E-07	-1.90E-07	-1.90E-07
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-2.70E-07**	**-1.00E-07**	**-1.60E-07**	**-1.60E-07**	**-1.60E-07**	**-1.60E-07**	**-1.90E-07**	**-1.90E-07**

Licensee Comments: none

Reactor Coolant System Activity

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Activity	**7/07**	**8/07**	**9/07**	**10/07**	**11/07**	**12/07**	**1/08**	**2/08**	**3/08**	**4/08**	**5/08**	**6/08**
Maximum activity	0.000253	0.000279	0.000296	0.000303	0.000281	0.000322	0.000338	0.000331	0.000348	0.000347	0.000360	0.000378
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**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Reactor Coolant System Activity	**7/08**	**8/08**	**9/08**	**10/08**	**11/08**	**12/08**	**1/09**	**2/09**	**3/09**	**4/09**	**5/09**	**6/09**
Maximum activity	0.000386	0.000388	0.000405	0.000385	0.000225	0.000246	0.000262	0.000265	0.000277	0.000289	0.000298	0.000307
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**	**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	**7/07**	**8/07**	**9/07**	**10/07**	**11/07**	**12/07**	**1/08**	**2/08**	**3/08**	**4/08**	**5/08**	**6/08**
Maximum leakage	0.089	0.042	0.052	0.019	0.024	0.037	0.100	0.040	0.031	0.043	0.033	0.039
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	**0.9**	**0.4**	**0.5**	**0.2**	**0.2**	**0.4**	**1.0**	**0.4**	**0.3**	**0.4**	**0.3**	**0.4**
Reactor Coolant System Leakage	**7/08**	**8/08**	**9/08**	**10/08**	**11/08**	**12/08**	**1/09**	**2/09**	**3/09**	**4/09**	**5/09**	**6/09**
Maximum leakage	0.052	0.035	0.048	0.024	0.028	0.025	0.044	0.067	0.058	0.038	0.047	0.060
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	**0.5**	**0.4**	**0.5**	**0.2**	**0.3**	**0.3**	**0.4**	**0.7**	**0.6**	**0.4**	**0.5**	**0.6**

Licensee Comments: none

Drill/Exercise Performance

Thresholds: White < 90.0% Yellow < 70.0%

Notes

Drill/Exercise Performance	3Q/07	4Q/07	1Q/08	2Q/08	3Q/08	4Q/08	1Q/09	2Q/09
Successful opportunities	188.0	12.0	129.0	35.0	43.0	35.0	75.0	109.0
Total opportunities	200.0	12.0	132.0	39.0	43.0	39.0	79.0	112.0
Indicator value	**94.0%**	**93.0%**	**94.4%**	**94.0%**	**95.0%**	**94.6%**	**94.6%**	**95.4%**

Licensee Comments: none

Thresholds: White < 80.0% Yellow < 60.0%

Notes

ERO Drill Participation	3Q/07	4Q/07	1Q/08	2Q/08	3Q/08	4Q/08	1Q/09	2Q/09
Participating Key personnel	199.0	192.0	188.0	191.0	183.0	72.0	78.0	87.0
Total Key personnel	200.0	193.0	190.0	191.0	183.0	85.0	78.0	87.0
Indicator value	**99.5%**	**99.5%**	**98.9%**	**100.0%**	**100.0%**	**84.7%**	**100.0%**	**100.0%**

Licensee Comments: none

Alert & Notification System

Thresholds: White < 94.0% Yellow < 90.0%

Notes

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

Licensee Comments: none

Occupational Exposure Control Effectiveness

Thresholds: White > 2.0 Yellow > 5.0

Notes

Occupational Exposure Control Effectiveness	3Q/07	4Q/07	1Q/08	2Q/08	3Q/08	4Q/08	1Q/09	2Q/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**	**0**	**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	3Q/07	4Q/07	1Q/08	2Q/08	3Q/08	4Q/08	1Q/09	2Q/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.

Last Modified: July 22, 2009

Palo Verde 1

3Q/2009 Performance Indicators

Licensee's General Comments: During an update of reliability record demand estimates to take effect in the 4th quarter 2009, the station discovered that the manner of input for reliability record demand estimates revised in the 4th quarter 2008 inadvertently changed historical high pressure safety injection and residual heat removal reliability index reported values reported since 2006. The corrected values were submitted in an October 2009 change report. The differences between the results were minor and did not result in a color change. Corresponding comments in 4th Quarter 2008 were revised for clarity and an unnecessary comment put in 3rd Quarter 2008 was deleted.

Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

Notes

Unplanned Scrams per 7000 Critical Hrs	4Q/07	1Q/08	2Q/08	3Q/08	4Q/08	1Q/09	2Q/09	3Q/09
Unplanned scrams	0	0	0	0	0	0	0	0
Critical hours	1803.3	2184.0	2131.1	2208.0	1155.6	2160.0	2184.0	2208.0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Unplanned Power Changes per 7000 Critical Hrs

Thresholds: White > 6.0

Notes

Unplanned Power Changes per 7000 Critical Hrs	4Q/07	1Q/08	2Q/08	3Q/08	4Q/08	1Q/09	2Q/09	3Q/09
Unplanned power changes	2.0	0	1.0	1.0	0	1.0	0	0
Critical hours	1803.3	2184.0	2131.1	2208.0	1155.6	2160.0	2184.0	2208.0
Indicator value	**2.0**	**2.0**	**2.6**	**3.4**	**1.8**	**2.7**	**1.8**	**0.9**

Licensee Comments: none

Unplanned Scrams with Complications

Thresholds: White > 1.0

Notes

Unplanned Scrams with Complications	4Q/07	1Q/08	2Q/08	3Q/08	4Q/08	1Q/09	2Q/09	3Q/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 (PWR)

Thresholds: White > 5.0

Notes

Safety System Functional Failures (PWR)	4Q/07	1Q/08	2Q/08	3Q/08	4Q/08	1Q/09	2Q/09	3Q/09
Safety System Functional Failures	0	0	0	0	0	0	1	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**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	4Q/07	1Q/08	2Q/08	3Q/08	4Q/08	1Q/09	2Q/09	3Q/09
UAI (ΔCDF)	3.50E-07	3.20E-07	2.90E-07	1.80E-07	2.00E-07	5.10E-08	5.80E-08	5.60E-08
URI (ΔCDF)	-9.00E-08	-2.20E-07	-2.20E-07	-3.80E-07	-3.80E-07	-1.70E-07	-1.70E-07	-1.70E-07
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**2.60E-07**	**1.00E-07**	**7.00E-08**	**-2.00E-07**	**-1.80E-07**	**-1.19E-07**	**-1.12E-07**	**-1.14E-07**

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	**4Q/07**	**1Q/08**	**2Q/08**	**3Q/08**	**4Q/08**	**1Q/09**	**2Q/09**	**3Q/09**
UAI (ΔCDF)	1.70E-08	1.60E-08	1.30E-08	7.50E-09	6.70E-09	5.70E-09	4.30E-09	3.50E-09
URI (ΔCDF)	-1.50E-08	-1.50E-08	-1.50E-08	-1.50E-08	-1.50E-08	-2.30E-08	-2.30E-08	-2.20E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**2.00E-09**	**1.00E-09**	**-2.00E-09**	**-7.50E-09**	**-8.30E-09**	**-1.73E-08**	**-1.87E-08**	**-1.85E-08**

Licensee Comments:

3Q/09: During an update of reliability record demand estimates to take effect in the 4th quarter 2009, the station discovered that the manner of input for reliability record demand estimates revised in the 4th quarter 2008 inadvertently changed historical high pressure safety injection and residual heat removal reliability index reported values reported since 2006. The corrected values were submitted in an October 2009 change report. The differences between the results were minor and did not result in a color change.

1Q/09: Effective 1st Quarter 2009, MSPI model changes accomodated changes in the PRA model: Diesel generator failure modes have been changed from start and run failures to start, load and run for one hour; and run for greater than one hour; recovery rules associated with AF vs. Alternate Feedwater and those with power recovery for the new DG failure modes are updated; crediting MFW for the full 24-hour mission time, as well as recovering loss of all feedwater with restarting Main Feedwater. Also, unavailability values used in the PRA model were updated with MSPI system unavailability parameters. Finally, estimated valve test demands for the HPSI and RHR systems were adjusted to comply with the changes to testing procedures.

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

4Q/07: The MSPI Model was revised, effective 4 quarter 2007. The model resulted in major shifts in auxiliary feedwater importance impacting MSPI coefficients.

4Q/06: Data revision: Excessive leakage of a single containment recirculation isolation valve that occurred in October 2006 was evaluated in January 2007 and determined to be a maintenance rule functional failure. This

impacted MSPI high pressure safety injection and residual heat removal indicators, however indicators' color did not change (green).

Notes

Mitigating Systems Performance Index, Heat Removal System	4Q/07	1Q/08	2Q/08	3Q/08	4Q/08	1Q/09	2Q/09	3Q/09
UAI (ΔCDF)	7.00E-08	4.60E-08	9.50E-10	-2.30E-08	-3.20E-08	-3.80E-09	-1.40E-08	-1.40E-08
URI (ΔCDF)	-2.30E-07	-2.30E-07	-2.30E-07	-2.30E-07	-2.30E-07	-9.80E-08	-9.80E-08	-9.80E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-1.60E-07**	**-1.84E-07**	**-2.29E-07**	**-2.53E-07**	**-2.62E-07**	**-1.02E-07**	**-1.12E-07**	**-1.12E-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	**4Q/07**	**1Q/08**	**2Q/08**	**3Q/08**	**4Q/08**	**1Q/09**	**2Q/09**	**3Q/09**
UAI (ΔCDF)	4.80E-08	3.80E-08	3.70E-08	3.40E-08	3.30E-08	1.10E-08	9.60E-09	9.70E-09
URI (ΔCDF)	-9.00E-09	-9.00E-09	-9.00E-09	-9.00E-09	-9.00E-09	-2.30E-08	-2.30E-08	-2.20E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**3.90E-08**	**2.90E-08**	**2.80E-08**	**2.50E-08**	**2.40E-08**	**-1.20E-08**	**-1.34E-08**	**-1.23E-08**

Licensee Comments:

3Q/09: During an update of reliability record demand estimates to take effect in the 4th quarter 2009, the station discovered that the manner of input for reliability record demand estimates revised in the 4th quarter 2008 inadvertently changed historical high pressure safety injection and residual heat removal reliability index reported values reported since 2006. The corrected values were submitted in an October 2009 change report. The differences between the results were minor and did not result in a color change.

1Q/09: Unavailabilty 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. Effective 1st Quarter 2009, MSPI model changes accomodated changes in the PRA model: Diesel generator failure modes have been changed from start and run failures to start, load and run for one hour; and run for greater than one hour; recovery rules associated with AF vs. Alternate Feedwater and those with power recovery for the new DG failure modes are updated; crediting MFW for the full 24-hour mission time, as well as recovering loss of all feedwater with restarting Main Feedwater. Also, unavailability values used in the PRA model were updated with MSPI system unavailability parameters. Finally, estimated valve test demands for the HPSI and RHR systems were adjusted to comply with the changes to testing procedures.

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

3Q/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.

4Q/07: The MSPI Model was revised, effective 4 quarter 2007. The model resulted in major shifts in auxiliary feedwater importance impacting MSPI coefficients.

Notes

Mitigating Systems Performance Index, Cooling Water Systems	**4Q/07**	**1Q/08**	**2Q/08**	**3Q/08**	**4Q/08**	**1Q/09**	**2Q/09**	**3Q/09**
UAI (ΔCDF)	-2.20E-11	-5.20E-11	-5.20E-11	-5.20E-11	-5.20E-11	-1.50E-11	-1.50E-11	-1.50E-11
URI (ΔCDF)	-1.00E-07	-1.60E-07	-1.60E-07	-1.60E-07	-1.60E-07	-1.90E-07	-1.90E-07	-1.90E-07
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-1.00E-07**	**-1.60E-07**	**-1.60E-07**	**-1.60E-07**	**-1.60E-07**	**-1.90E-07**	**-1.90E-07**	**-1.90E-07**

Licensee Comments: none

Reactor Coolant System Activity

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Activity	**10/07**	**11/07**	**12/07**	**1/08**	**2/08**	**3/08**	**4/08**	**5/08**	**6/08**	**7/08**	**8/08**	**9/08**
Maximum activity	0.000303	0.000281	0.000322	0.000338	0.000331	0.000348	0.000347	0.000360	0.000378	0.000386	0.000388	0.000405
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**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Reactor Coolant System Activity	**10/08**	**11/08**	**12/08**	**1/09**	**2/09**	**3/09**	**4/09**	**5/09**	**6/09**	**7/09**	**8/09**	**9/09**
Maximum activity	0.000385	0.000225	0.000246	0.000262	0.000265	0.000277	0.000289	0.000298	0.000307	0.000399	0.000313	0.000332
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**	**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	**10/07**	**11/07**	**12/07**	**1/08**	**2/08**	**3/08**	**4/08**	**5/08**	**6/08**	**7/08**	**8/08**	**9/08**
Maximum leakage	0.019	0.024	0.037	0.100	0.040	0.031	0.043	0.033	0.039	0.052	0.035	0.048
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**	**0.2**	**0.4**	**1.0**	**0.4**	**0.3**	**0.4**	**0.3**	**0.4**	**0.5**	**0.4**	**0.5**
Reactor Coolant System Leakage	**10/08**	**11/08**	**12/08**	**1/09**	**2/09**	**3/09**	**4/09**	**5/09**	**6/09**	**7/09**	**8/09**	**9/09**
Maximum leakage	0.024	0.028	0.025	0.044	0.067	0.058	0.038	0.047	0.060	0.045	0.054	0.055
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**	**0.3**	**0.3**	**0.4**	**0.7**	**0.6**	**0.4**	**0.5**	**0.6**	**0.5**	**0.5**	**0.6**

Licensee Comments: none

Drill/Exercise Performance

Thresholds: White < 90.0% Yellow < 70.0%

Notes

Drill/Exercise Performance	4Q/07	1Q/08	2Q/08	3Q/08	4Q/08	1Q/09	2Q/09	3Q/09
Successful opportunities	12.0	129.0	35.0	43.0	35.0	75.0	109.0	49.0
Total opportunities	12.0	132.0	39.0	43.0	39.0	79.0	112.0	50.0
Indicator value	**93.0%**	**94.4%**	**94.0%**	**95.0%**	**94.6%**	**94.6%**	**95.4%**	**96.2%**

Licensee Comments: none

Thresholds: White < 80.0% Yellow < 60.0%

Notes

ERO Drill Participation	4Q/07	1Q/08	2Q/08	3Q/08	4Q/08	1Q/09	2Q/09	3Q/09
Participating Key personnel	192.0	188.0	191.0	183.0	72.0	78.0	87.0	95.0
Total Key personnel	193.0	190.0	191.0	183.0	85.0	78.0	87.0	95.0
Indicator value	**99.5%**	**98.9%**	**100.0%**	**100.0%**	**84.7%**	**100.0%**	**100.0%**	**100.0%**

Licensee Comments: none

Alert & Notification System

Thresholds: White < 94.0% Yellow < 90.0%

Notes

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

Licensee Comments: none

Occupational Exposure Control Effectiveness

Thresholds: White > 2.0 Yellow > 5.0

Notes

Occupational Exposure Control Effectiveness	4Q/07	1Q/08	2Q/08	3Q/08	4Q/08	1Q/09	2Q/09	3Q/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	**0**	**0**	**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	4Q/07	1Q/08	2Q/08	3Q/08	4Q/08	1Q/09	2Q/09	3Q/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.

Last Modified: November 30, 2009

Palo Verde 1

4Q/2009 Performance Indicators

Licensee's General Comments: none

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	2184.0	2131.1	2208.0	1155.6	2160.0	2184.0	2208.0	2208.0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

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	0	0	0
Critical hours	2184.0	2131.1	2208.0	1155.6	2160.0	2184.0	2208.0	2208.0
Indicator value	**2.0**	**2.6**	**3.4**	**1.8**	**2.7**	**1.8**	**0.9**	**0.8**

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 (PWR)

Thresholds: White > 5.0

Notes

Safety System Functional Failures (PWR)	1Q/08	2Q/08	3Q/08	4Q/08	1Q/09	2Q/09	3Q/09	4Q/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	**1Q/08**	**2Q/08**	**3Q/08**	**4Q/08**	**1Q/09**	**2Q/09**	**3Q/09**	**4Q/09**
UAI (ΔCDF)	3.20E-07	2.90E-07	1.80E-07	2.00E-07	5.10E-08	5.80E-08	5.60E-08	4.10E-08
URI (ΔCDF)	-2.20E-07	-2.20E-07	-3.80E-07	-3.80E-07	-1.70E-07	-1.70E-07	-1.70E-07	-1.70E-07
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**1.00E-07**	**7.00E-08**	**-2.00E-07**	**-1.80E-07**	**-1.19E-07**	**-1.12E-07**	**-1.14E-07**	**-1.29E-07**

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 (ΔCDF)	1.60E-08	1.30E-08	7.50E-09	6.70E-09	5.70E-09	4.30E-09	3.50E-09	3.20E-09
URI (ΔCDF)	-1.50E-08	-1.50E-08	-1.50E-08	-1.50E-08	-2.30E-08	-2.30E-08	-2.20E-08	-2.20E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**1.00E-09**	**-2.00E-09**	**-7.50E-09**	**-8.30E-09**	**-1.73E-08**	**-1.87E-08**	**-1.85E-08**	**-1.88E-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	**1Q/08**	**2Q/08**	**3Q/08**	**4Q/08**	**1Q/09**	**2Q/09**	**3Q/09**	**4Q/09**
UAI (ΔCDF)	4.60E-08	9.50E-10	-2.30E-08	-3.20E-08	-3.80E-09	-1.40E-08	-1.40E-08	-1.70E-08
URI (ΔCDF)	-2.30E-07	-2.30E-07	-2.30E-07	-2.30E-07	-9.80E-08	-9.80E-08	-9.80E-08	-1.00E-07
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-1.84E-07**	**-2.29E-07**	**-2.53E-07**	**-2.62E-07**	**-1.02E-07**	**-1.12E-07**	**-1.12E-07**	**-1.17E-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	**1Q/08**	**2Q/08**	**3Q/08**	**4Q/08**	**1Q/09**	**2Q/09**	**3Q/09**	**4Q/09**
UAI (ΔCDF)	3.80E-08	3.70E-08	3.40E-08	3.30E-08	1.10E-08	9.60E-09	9.70E-09	9.10E-09
URI (ΔCDF)	-9.00E-09	-9.00E-09	-9.00E-09	-9.00E-09	-2.30E-08	-2.30E-08	-2.20E-08	-2.20E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**2.90E-08**	**2.80E-08**	**2.50E-08**	**2.40E-08**	**-1.20E-08**	**-1.34E-08**	**-1.23E-08**	**-1.29E-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 (ΔCDF)	-5.20E-11	-5.20E-11	-5.20E-11	-5.20E-11	-1.50E-11	-1.50E-11	-1.50E-11	-1.50E-11
URI (ΔCDF)	-1.60E-07	-1.60E-07	-1.60E-07	-1.60E-07	-1.90E-07	-1.90E-07	-1.90E-07	-1.90E-07
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-1.60E-07**	**-1.60E-07**	**-1.60E-07**	**-1.60E-07**	**-1.90E-07**	**-1.90E-07**	**-1.90E-07**	**-1.90E-07**

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	0.000338	0.000331	0.000348	0.000347	0.000360	0.000378	0.000386	0.000388	0.000405	0.000385	0.000225	0.000246
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**	**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	0.000262	0.000265	0.000277	0.000289	0.000298	0.000307	0.000399	0.000313	0.000332	0.000340	0.000339	0.000344
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**	**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	**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 leakage	0.100	0.040	0.031	0.043	0.033	0.039	0.052	0.035	0.048	0.024	0.028	0.025
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	**1.0**	**0.4**	**0.3**	**0.4**	**0.3**	**0.4**	**0.5**	**0.4**	**0.5**	**0.2**	**0.3**	**0.3**
Reactor Coolant System Leakage	**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 leakage	0.044	0.067	0.058	0.038	0.047	0.060	0.045	0.054	0.055	0.056	0.043	0.049
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	**0.4**	**0.7**	**0.6**	**0.4**	**0.5**	**0.6**	**0.5**	**0.5**	**0.6**	**0.6**	**0.4**	**0.5**

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	129.0	35.0	43.0	35.0	75.0	109.0	49.0	13.0
Total opportunities	132.0	39.0	43.0	39.0	79.0	112.0	50.0	14.0
Indicator value	**94.4%**	**94.0%**	**95.0%**	**94.6%**	**94.6%**	**95.4%**	**96.2%**	**96.1%**

Licensee Comments: none

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	188.0	191.0	183.0	72.0	78.0	87.0	95.0	92.0
Total Key personnel	190.0	191.0	183.0	85.0	78.0	87.0	95.0	92.0
Indicator value	**98.9%**	**100.0%**	**100.0%**	**84.7%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Licensee Comments: none

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	296	296	296	331	296	296	296	333
Total sirens-tests	296	296	296	333	296	296	296	333
Indicator value	**100.0%**	**100.0%**	**100.0%**	**99.8%**	**99.8%**	**99.8%**	**99.8%**	**100.0%**

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
Indicator value	**0**	**0**	**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	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.

Last Modified: January 22, 2010

Palo Verde 1

1Q/2010 Performance Indicators

Licensee's General Comments: none

Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

Notes

Unplanned Scrams per 7000 Critical Hrs	2Q/08	3Q/08	4Q/08	1Q/09	2Q/09	3Q/09	4Q/09	1Q/10
Unplanned scrams	0	0	0	0	0	0	0	1.0
Critical hours	2131.1	2208.0	1155.6	2160.0	2184.0	2208.0	2208.0	1880.6
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/08	3Q/08	4Q/08	1Q/09	2Q/09	3Q/09	4Q/09	1Q/10
Unplanned power changes	1.0	1.0	0	1.0	0	0	0	1.0
Critical hours	2131.1	2208.0	1155.6	2160.0	2184.0	2208.0	2208.0	1880.6
Indicator value	**2.6**	**3.4**	**1.8**	**2.7**	**1.8**	**0.9**	**0.8**	**0.8**

Licensee Comments: none

Unplanned Scrams with Complications

Thresholds: White > 1.0

Notes

Unplanned Scrams with Complications	2Q/08	3Q/08	4Q/08	1Q/09	2Q/09	3Q/09	4Q/09	1Q/10
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 (PWR)

Thresholds: White > 5.0

Notes

Safety System Functional Failures (PWR)	2Q/08	3Q/08	4Q/08	1Q/09	2Q/09	3Q/09	4Q/09	1Q/10
Safety System Functional Failures	0	0	0	0	1	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**1**	**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/08**	**3Q/08**	**4Q/08**	**1Q/09**	**2Q/09**	**3Q/09**	**4Q/09**	**1Q/10**
UAI (ΔCDF)	2.90E-07	1.80E-07	2.00E-07	5.10E-08	5.80E-08	5.60E-08	4.13E-08	2.92E-09
URI (ΔCDF)	-2.20E-07	-3.80E-07	-3.80E-07	-1.70E-07	-1.70E-07	-1.70E-07	-1.67E-07	-8.32E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**7.00E-08**	**-2.00E-07**	**-1.80E-07**	**-1.19E-07**	**-1.12E-07**	**-1.14E-07**	**-1.30E-07**	**-8.00E-08**

Licensee Comments:

1Q/10: MSPI base CDF changes occurred as a result of PRA updates in January and March 2010. These affected Unavailibility and Unreliability values for all MSPI systems. No color change occurred.

4Q/09: MSPI base CDF changes occurred as a result of PRA updates in January and March 2010. These affected Unavailibility and Unreliability values for all MSPI systems. No color change occurred.

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/08**	**3Q/08**	**4Q/08**	**1Q/09**	**2Q/09**	**3Q/09**	**4Q/09**	**1Q/10**
UAI (ΔCDF)	1.37E-08	8.24E-09	7.39E-09	6.10E-09	4.67E-09	3.82E-09	3.59E-09	-3.98E-10
URI (ΔCDF)	-1.54E-08	-1.54E-08	-1.54E-08	-2.33E-08	-2.29E-08	-2.24E-08	-2.20E-08	-1.40E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-1.80E-09**	**-7.20E-09**	**-8.00E-09**	**-1.70E-08**	**-1.80E-08**	**-1.90E-08**	**-1.80E-08**	**-1.40E-08**

Licensee Comments:

1Q/10: MSPI base CDF changes occurred as a result of PRA updates in January and March 2010. These affected Unavailibility and Unreliability values for all MSPI systems. No color change occurred. Prior Safety Injection System availability credit which had been used to determine unavailability that accrued during surveillance tests was removed. The time was related to the use of a dedicated operator to restore system function if required during the surveillance tests. The additional unavailability time was added back into respective quarters through 2007. No color change occurred.

4Q/09: MSPI base CDF changes occurred as a result of PRA updates in January and March 2010. These affected Unavailibility and Unreliability values for all MSPI systems. No color change occurred.

3Q/09: During an update of reliability record demand estimates to take effect in the 4th quarter 2009, the station discovered that the manner of input for reliability record demand estimates revised in the 4th quarter 2008 inadvertantly changed historical high pressure safety inection and residual heat removal reliability index reported values reported since 2006. The corrected values were submitted in an October 2009 change report. The differences between the results were minor and did not result in a color change.

1Q/09: Effective 1st Quarter 2009, MSPI model changes accomodated changes in the PRA model: Diesel generator failure modes have been changed from start and run failures to start, load and run for one hour; and run for greater than one hour; recovery rules associated with AF vs. Alternate Feedwater and those with power recovery for the new DG failure modes are updated; crediting MFW for the full 24-hour mission time, as well as recovering loss of all feedwater with restarting Main Feedwater. Also, unavailability values used in the PRA model

were updated with MSPI system unavailability parameters. Finally, estimated valve test demands for the HPSI and RHR systems were adjusted to comply with the changes to testing procedures.

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

4Q/07: The MSPI Model was revised, effective 4 quarter 2007. The model resulted in major shifts in auxiliary feedwater importance impacting MSPI coefficients.

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/08**	**3Q/08**	**4Q/08**	**1Q/09**	**2Q/09**	**3Q/09**	**4Q/09**	**1Q/10**
UAI (ΔCDF)	9.50E-10	-2.30E-08	-3.20E-08	-3.80E-09	-1.40E-08	-1.40E-08	-1.71E-08	-2.45E-08
URI (ΔCDF)	-2.30E-07	-2.30E-07	-2.30E-07	-9.80E-08	-9.80E-08	-9.80E-08	-9.96E-08	-1.42E-07
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-2.29E-07**	**-2.53E-07**	**-2.62E-07**	**-1.02E-07**	**-1.12E-07**	**-1.12E-07**	**-1.20E-07**	**-1.70E-07**

Licensee Comments:

1Q/10: MSPI base CDF changes occurred as a result of PRA updates in January and March 2010. These affected Unavailibility and Unreliability values for all MSPI systems. No color change occurred.

4Q/09: MSPI base CDF changes occurred as a result of PRA updates in January and March 2010. These affected Unavailibility and Unreliability values for all MSPI systems. No color change occurred.

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/08	3Q/08	4Q/08	1Q/09	2Q/09	3Q/09	4Q/09	1Q/10
UAI (ΔCDF)	3.74E-08	3.50E-08	3.45E-08	1.16E-08	1.01E-08	1.03E-08	9.83E-09	-5.24E-10
URI (ΔCDF)	-8.96E-09	-8.96E-09	-8.96E-09	-2.31E-08	-2.28E-08	-2.25E-08	-2.23E-08	-7.14E-09
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**2.80E-08**	**2.60E-08**	**2.60E-08**	**-1.10E-08**	**-1.30E-08**	**-1.20E-08**	**-1.30E-08**	**-7.70E-09**

Licensee Comments:

1Q/10: MSPI base CDF changes occurred as a result of PRA updates in January and March 2010. These affected Unavailibility and Unreliability values for all MSPI systems. No color change occurred. Prior Safety Injection System availability credit which had been used to determine unavailability that accrued during surveillance tests was removed. The time was related to the use of a dedicated operator to restore system function if required during the surveillance tests. The additional unavailability time was added back into respective quarters through 2007. No color change occurred.

4Q/09: MSPI base CDF changes occurred as a result of PRA updates in January and March 2010. These affected Unavailibility and Unreliability values for all MSPI systems. No color change occurred.

3Q/09: During an update of reliability record demand estimates to take effect in the 4th quarter 2009, the station discovered that the manner of input for reliability record demand estimates revised in the 4th quarter 2008 inadvertantly changed historical high pressure safety inection and residual heat removal reliability index reported values reported since 2006. The corrected values were submitted in an October 2009 change report. The differences between the results were minor and did not result in a color change.

1Q/09: Unavailabilty 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. Effective 1st Quarter 2009, MSPI model changes accomodated changes in the PRA model: Diesel generator failure modes have been changed from start and run failures to start, load and run for one hour; and run for greater than one hour; recovery rules associated with AF vs. Alternate Feedwater and those with power recovery for the new DG failure modes are updated; crediting MFW for the full 24-hour mission time, as well as recovering loss of all feedwater with restarting Main Feedwater. Also, unavailability values used in the PRA model were updated with MSPI system unavailability parameters. Finally, estimated valve test demands for the HPSI and RHR systems were adjusted to comply with the changes to testing procedures.

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

3Q/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/08**	**3Q/08**	**4Q/08**	**1Q/09**	**2Q/09**	**3Q/09**	**4Q/09**	**1Q/10**
UAI (ΔCDF)	-5.20E-11	-5.20E-11	-5.20E-11	-1.50E-11	-1.50E-11	-1.50E-11	-1.47E-11	0.00E+00
URI (ΔCDF)	-1.60E-07	-1.60E-07	-1.60E-07	-1.90E-07	-1.90E-07	-1.90E-07	-1.94E-07	-4.99E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-1.60E-07**	**-1.60E-07**	**-1.60E-07**	**-1.90E-07**	**-1.90E-07**	**-1.90E-07**	**-1.90E-07**	**-5.00E-08**

Licensee Comments:

1Q/10: MSPI base CDF changes occurred as a result of PRA updates in January and March 2010. These affected Unavailibility and Unreliability values for all MSPI systems. No color change occurred.

4Q/09: MSPI base CDF changes occurred as a result of PRA updates in January and March 2010. These affected Unavailibility and Unreliability values for all MSPI systems. No color change occurred.

Thresholds: White > 50.0 Yellow > 100.0

Notes

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	0.000347	0.000360	0.000378	0.000386	0.000388	0.000405	0.000385	0.000225	0.000246	0.000262	0.000265	0.000277
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**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Reactor Coolant System Activity	**4/09**	**5/09**	**6/09**	**7/09**	**8/09**	**9/09**	**10/09**	**11/09**	**12/09**	**1/10**	**2/10**	**3/10**
Maximum activity	0.000289	0.000298	0.000307	0.000399	0.000313	0.000332	0.000340	0.000339	0.000344	0.000349	0.000370	0.000363
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**	**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	**4/08**	**5/08**	**6/08**	**7/08**	**8/08**	**9/08**	**10/08**	**11/08**	**12/08**	**1/09**	**2/09**	**3/09**
Maximum leakage	0.043	0.033	0.039	0.052	0.035	0.048	0.024	0.028	0.025	0.044	0.067	0.058
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	**0.4**	**0.3**	**0.4**	**0.5**	**0.4**	**0.5**	**0.2**	**0.3**	**0.3**	**0.4**	**0.7**	**0.6**
Reactor Coolant System Leakage	**4/09**	**5/09**	**6/09**	**7/09**	**8/09**	**9/09**	**10/09**	**11/09**	**12/09**	**1/10**	**2/10**	**3/10**
Maximum leakage	0.038	0.047	0.060	0.045	0.054	0.055	0.056	0.043	0.049	0.071	0.076	0.079
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	**0.4**	**0.5**	**0.6**	**0.5**	**0.5**	**0.6**	**0.6**	**0.4**	**0.5**	**0.7**	**0.8**	**0.8**

Licensee Comments: none

Drill/Exercise Performance

Thresholds: White < 90.0% Yellow < 70.0%

Notes

Drill/Exercise Performance	2Q/08	3Q/08	4Q/08	1Q/09	2Q/09	3Q/09	4Q/09	1Q/10
Successful opportunities	35.0	43.0	35.0	75.0	109.0	49.0	13.0	87.0
Total opportunities	39.0	43.0	39.0	79.0	112.0	50.0	14.0	90.0
Indicator value	**94.0%**	**95.0%**	**94.6%**	**94.6%**	**95.4%**	**96.2%**	**96.1%**	**95.7%**

Licensee Comments: none

Thresholds: White < 80.0% Yellow < 60.0%

Notes

ERO Drill Participation	2Q/08	3Q/08	4Q/08	1Q/09	2Q/09	3Q/09	4Q/09	1Q/10
Participating Key personnel	191.0	183.0	72.0	78.0	87.0	95.0	92.0	97.0
Total Key personnel	191.0	183.0	85.0	78.0	87.0	95.0	92.0	97.0
Indicator value	**100.0%**	**100.0%**	**84.7%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Licensee Comments: none

Alert & Notification System

Thresholds: White < 94.0% Yellow < 90.0%

Notes

Alert & Notification System	2Q/08	3Q/08	4Q/08	1Q/09	2Q/09	3Q/09	4Q/09	1Q/10
Successful siren-tests	296	296	331	296	296	296	333	959
Total sirens-tests	296	296	333	296	296	296	333	960
Indicator value	**100.0%**	**100.0%**	**99.8%**	**99.8%**	**99.8%**	**99.8%**	**100.0%**	**99.9%**

Licensee Comments: none

Occupational Exposure Control Effectiveness

Thresholds: White > 2.0 Yellow > 5.0

Notes

Occupational Exposure Control Effectiveness	2Q/08	3Q/08	4Q/08	1Q/09	2Q/09	3Q/09	4Q/09	1Q/10
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**	**0**	**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/08	3Q/08	4Q/08	1Q/09	2Q/09	3Q/09	4Q/09	1Q/10
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.

Last Modified: April 26, 2010

Palo Verde 1

2Q/2010 Performance Indicators

Licensee's General Comments: none

Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

Notes

Unplanned Scrams per 7000 Critical Hrs	3Q/08	4Q/08	1Q/09	2Q/09	3Q/09	4Q/09	1Q/10	2Q/10
Unplanned scrams	0	0	0	0	0	0	1.0	0
Critical hours	2208.0	1155.6	2160.0	2184.0	2208.0	2208.0	1880.6	1006.6
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0.8**	**1.0**

Licensee Comments: none

Unplanned Power Changes per 7000 Critical Hrs

Thresholds: White > 6.0

Notes

Unplanned Power Changes per 7000 Critical Hrs	3Q/08	4Q/08	1Q/09	2Q/09	3Q/09	4Q/09	1Q/10	2Q/10
Unplanned power changes	1.0	0	1.0	0	0	0	1.0	1.0
Critical hours	2208.0	1155.6	2160.0	2184.0	2208.0	2208.0	1880.6	1006.6
Indicator value	**3.4**	**1.8**	**2.7**	**1.8**	**0.9**	**0.8**	**0.8**	**1.9**

Licensee Comments: none

Unplanned Scrams with Complications

Thresholds: White > 1.0

Notes

Unplanned Scrams with Complications	3Q/08	4Q/08	1Q/09	2Q/09	3Q/09	4Q/09	1Q/10	2Q/10
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 (PWR)

Thresholds: White > 5.0

Notes

Safety System Functional Failures (PWR)	3Q/08	4Q/08	1Q/09	2Q/09	3Q/09	4Q/09	1Q/10	2Q/10
Safety System Functional Failures	0	0	0	1	0	0	0	0
Indicator value	**0**	**0**	**0**	**1**	**1**	**1**	**1**	**0**

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	**3Q/08**	**4Q/08**	**1Q/09**	**2Q/09**	**3Q/09**	**4Q/09**	**1Q/10**	**2Q/10**
UAI (ΔCDF)	1.80E-07	2.00E-07	5.10E-08	5.80E-08	5.60E-08	4.13E-08	2.92E-09	2.37E-09
URI (ΔCDF)	-3.80E-07	-3.80E-07	-1.70E-07	-1.70E-07	-1.70E-07	-1.67E-07	-8.32E-08	-5.88E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-2.00E-07**	**-1.80E-07**	**-1.19E-07**	**-1.12E-07**	**-1.14E-07**	**-1.30E-07**	**-8.00E-08**	**-5.60E-08**

Licensee Comments:

2Q/10: PRA model was revised March 25, 2010 with corresponding MSPI Model revision. This resulted in revision to plant base CDF values and corresponding Fussel-Vessely, Unavailability, and Unreliability values for monitored systems.

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	**3Q/08**	**4Q/08**	**1Q/09**	**2Q/09**	**3Q/09**	**4Q/09**	**1Q/10**	**2Q/10**
UAI (ΔCDF)	8.24E-09	7.39E-09	6.10E-09	4.67E-09	3.82E-09	3.59E-09	-3.98E-10	6.78E-10
URI (ΔCDF)	-1.54E-08	-1.54E-08	-2.33E-08	-2.29E-08	-2.24E-08	-2.20E-08	-1.40E-08	-1.34E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-7.20E-09**	**-8.00E-09**	**-1.70E-08**	**-1.80E-08**	**-1.90E-08**	**-1.80E-08**	**-1.40E-08**	**-1.30E-08**

Licensee Comments:

2Q/10: PRA model was revised March 25, 2010 with corresponding MSPI Model revision. This resulted in revision to plant base CDF values and corresponding Fussel-Vessely, Unavailability, and Unreliability values for monitored systems.

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	3Q/08	4Q/08	1Q/09	2Q/09	3Q/09	4Q/09	1Q/10	2Q/10
UAI (ΔCDF)	-2.30E-08	-3.20E-08	-3.80E-09	-1.40E-08	-1.40E-08	-1.71E-08	-2.45E-08	4.18E-08
URI (ΔCDF)	-2.30E-07	-2.30E-07	-9.80E-08	-9.80E-08	-9.80E-08	-9.96E-08	-1.42E-07	-5.81E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-2.53E-07**	**-2.62E-07**	**-1.02E-07**	**-1.12E-07**	**-1.12E-07**	**-1.20E-07**	**-1.70E-07**	**-1.60E-08**

Licensee Comments:

2Q/10: PRA model was revised March 25, 2010 with corresponding MSPI Model revision. This resulted in revision to plant base CDF values and corresponding Fussel-Vessely, Unavailability, and Unreliability values for monitored systems.

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	**3Q/08**	**4Q/08**	**1Q/09**	**2Q/09**	**3Q/09**	**4Q/09**	**1Q/10**	**2Q/10**
UAI (ΔCDF)	3.50E-08	3.45E-08	1.16E-08	1.01E-08	1.03E-08	9.83E-09	-5.24E-10	-4.94E-10
URI (ΔCDF)	-8.96E-09	-8.96E-09	-2.31E-08	-2.28E-08	-2.25E-08	-2.23E-08	-7.14E-09	-6.90E-09
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**2.60E-08**	**2.60E-08**	**-1.10E-08**	**-1.30E-08**	**-1.20E-08**	**-1.30E-08**	**-7.70E-09**	**-7.40E-09**

Licensee Comments:

2Q/10: PRA model was revised March 25, 2010 with corresponding MSPI Model revision. This resulted in revision to plant base CDF values and corresponding Fussel-Vessely, Unavailability, and Unreliability values for monitored systems.

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	**3Q/08**	**4Q/08**	**1Q/09**	**2Q/09**	**3Q/09**	**4Q/09**	**1Q/10**	**2Q/10**
UAI (ΔCDF)	-5.20E-11	-5.20E-11	-1.50E-11	-1.50E-11	-1.50E-11	-1.47E-11	0.00E+00	0.00E+00
URI (ΔCDF)	-1.60E-07	-1.60E-07	-1.90E-07	-1.90E-07	-1.90E-07	-1.94E-07	-4.99E-08	-4.06E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-1.60E-07**	**-1.60E-07**	**-1.90E-07**	**-1.90E-07**	**-1.90E-07**	**-1.90E-07**	**-5.00E-08**	**-4.10E-08**

Licensee Comments:

2Q/10: PRA model was revised March 25, 2010 with corresponding MSPI Model revision. This resulted in revision to plant base CDF values and corresponding Fussel-Vessely, Unavailability, and Unreliability values for monitored systems.

Reactor Coolant System Activity

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Activity	**7/08**	**8/08**	**9/08**	**10/08**	**11/08**	**12/08**	**1/09**	**2/09**	**3/09**	**4/09**	**5/09**	**6/09**
Maximum activity	0.000386	0.000388	0.000405	0.000385	0.000225	0.000246	0.000262	0.000265	0.000277	0.000289	0.000298	0.000307
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**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Reactor Coolant System Activity	**7/09**	**8/09**	**9/09**	**10/09**	**11/09**	**12/09**	**1/10**	**2/10**	**3/10**	**4/10**	**5/10**	**6/10**
Maximum activity	0.000399	0.000313	0.000332	0.000340	0.000339	0.000344	0.000349	0.000370	0.000363	0.000332	N/A	0.000257
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**	**0**	**0**	**0**	**0**	**0**	**N/A**	**0**

Licensee Comments:

6/10: Unit 1 Maximum I-131 activity was not obtained in May 2010 because of the refueling outage.

Reactor Coolant System Leakage

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Leakage	**7/08**	**8/08**	**9/08**	**10/08**	**11/08**	**12/08**	**1/09**	**2/09**	**3/09**	**4/09**	**5/09**	**6/09**
Maximum leakage	0.052	0.035	0.048	0.024	0.028	0.025	0.044	0.067	0.058	0.038	0.047	0.060
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	**0.5**	**0.4**	**0.5**	**0.2**	**0.3**	**0.3**	**0.4**	**0.7**	**0.6**	**0.4**	**0.5**	**0.6**
Reactor Coolant System Leakage	**7/09**	**8/09**	**9/09**	**10/09**	**11/09**	**12/09**	**1/10**	**2/10**	**3/10**	**4/10**	**5/10**	**6/10**
Maximum leakage	0.045	0.054	0.055	0.056	0.043	0.049	0.071	0.076	0.079	N/A	0.046	0.021
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	**0.5**	**0.5**	**0.6**	**0.6**	**0.4**	**0.5**	**0.7**	**0.8**	**0.8**	**N/A**	**0.5**	**0.2**

Licensee Comments:

6/10: Unit 1 RCS leak rate was not obtained in April 2010 because of the refueling outage.

Drill/Exercise Performance

Thresholds: White < 90.0% Yellow < 70.0%

Notes

Drill/Exercise Performance	3Q/08	4Q/08	1Q/09	2Q/09	3Q/09	4Q/09	1Q/10	2Q/10
Successful opportunities	43.0	35.0	75.0	109.0	49.0	13.0	87.0	81.0
Total opportunities	43.0	39.0	79.0	112.0	50.0	14.0	90.0	84.0
Indicator value	**95.0%**	**94.6%**	**94.6%**	**95.4%**	**96.2%**	**96.1%**	**95.7%**	**96.3%**

Licensee Comments: none

Thresholds: White < 80.0% Yellow < 60.0%

Notes

ERO Drill Participation	3Q/08	4Q/08	1Q/09	2Q/09	3Q/09	4Q/09	1Q/10	2Q/10
Participating Key personnel	183.0	72.0	78.0	87.0	95.0	92.0	97.0	102.0
Total Key personnel	183.0	85.0	78.0	87.0	95.0	92.0	97.0	102.0
Indicator value	**100.0%**	**84.7%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Licensee Comments: none

Alert & Notification System

Thresholds: White < 94.0% Yellow < 90.0%

Notes

Alert & Notification System	3Q/08	4Q/08	1Q/09	2Q/09	3Q/09	4Q/09	1Q/10	2Q/10
Successful siren-tests	296	331	296	296	296	333	959	909
Total sirens-tests	296	333	296	296	296	333	960	912
Indicator value	**100.0%**	**99.8%**	**99.8%**	**99.8%**	**99.8%**	**100.0%**	**99.9%**	**99.8%**

Licensee Comments: none

Occupational Exposure Control Effectiveness

Thresholds: White > 2.0 Yellow > 5.0

Notes

Occupational Exposure Control Effectiveness	3Q/08	4Q/08	1Q/09	2Q/09	3Q/09	4Q/09	1Q/10	2Q/10
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**	**0**	**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	3Q/08	4Q/08	1Q/09	2Q/09	3Q/09	4Q/09	1Q/10	2Q/10
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.

Last Modified: July 26, 2010

Palo Verde 1

3Q/2010 Performance Indicators

Licensee's General Comments: none

Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

Notes

Unplanned Scrams per 7000 Critical Hrs	4Q/08	1Q/09	2Q/09	3Q/09	4Q/09	1Q/10	2Q/10	3Q/10
Unplanned scrams	0	0	0	0	0	1.0	0	0
Critical hours	1155.6	2160.0	2184.0	2208.0	2208.0	1880.6	1006.6	2208.0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0.8**	**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	4Q/08	1Q/09	2Q/09	3Q/09	4Q/09	1Q/10	2Q/10	3Q/10
Unplanned power changes	0	1.0	0	0	0	1.0	1.0	0
Critical hours	1155.6	2160.0	2184.0	2208.0	2208.0	1880.6	1006.6	2208.0
Indicator value	**1.8**	**2.7**	**1.8**	**0.9**	**0.8**	**0.8**	**1.9**	**1.9**

Licensee Comments: none

Unplanned Scrams with Complications

Thresholds: White > 1.0

Notes

Unplanned Scrams with Complications	4Q/08	1Q/09	2Q/09	3Q/09	4Q/09	1Q/10	2Q/10	3Q/10
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 (PWR)

Thresholds: White > 5.0

Notes

Safety System Functional Failures (PWR)	4Q/08	1Q/09	2Q/09	3Q/09	4Q/09	1Q/10	2Q/10	3Q/10
Safety System Functional Failures	0	0	1	0	0	0	0	0
Indicator value	**0**	**0**	**1**	**1**	**1**	**1**	**0**	**0**

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	**4Q/08**	**1Q/09**	**2Q/09**	**3Q/09**	**4Q/09**	**1Q/10**	**2Q/10**	**3Q/10**
UAI (ΔCDF)	2.00E-07	5.10E-08	5.80E-08	5.60E-08	4.13E-08	2.92E-09	2.37E-09	5.24E-10
URI (ΔCDF)	-3.80E-07	-1.70E-07	-1.70E-07	-1.70E-07	-1.67E-07	-8.32E-08	-5.88E-08	-5.96E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-1.80E-07**	**-1.19E-07**	**-1.12E-07**	**-1.14E-07**	**-1.30E-07**	**-8.00E-08**	**-5.60E-08**	**-5.90E-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	**4Q/08**	**1Q/09**	**2Q/09**	**3Q/09**	**4Q/09**	**1Q/10**	**2Q/10**	**3Q/10**
UAI (ΔCDF)	7.39E-09	6.10E-09	4.67E-09	3.82E-09	3.59E-09	-3.98E-10	6.78E-10	-4.64E-10
URI (ΔCDF)	-1.54E-08	-2.33E-08	-2.29E-08	-2.24E-08	-2.20E-08	-1.40E-08	-1.34E-08	-1.32E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-8.00E-09**	**-1.70E-08**	**-1.80E-08**	**-1.90E-08**	**-1.80E-08**	**-1.40E-08**	**-1.30E-08**	**-1.40E-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	4Q/08	1Q/09	2Q/09	3Q/09	4Q/09	1Q/10	2Q/10	3Q/10
UAI (ΔCDF)	-3.20E-08	-3.80E-09	-1.40E-08	-1.40E-08	-1.71E-08	-2.45E-08	4.18E-08	1.65E-08
URI (ΔCDF)	-2.30E-07	-9.80E-08	-9.80E-08	-9.80E-08	-9.96E-08	-1.42E-07	-5.81E-08	-5.98E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-2.62E-07**	**-1.02E-07**	**-1.12E-07**	**-1.12E-07**	**-1.20E-07**	**-1.70E-07**	**-1.60E-08**	**-4.30E-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	4Q/08	1Q/09	2Q/09	3Q/09	4Q/09	1Q/10	2Q/10	3Q/10
UAI (ΔCDF)	3.45E-08	1.16E-08	1.01E-08	1.03E-08	9.83E-09	-5.24E-10	-4.94E-10	-1.04E-09
URI (ΔCDF)	-8.96E-09	-2.31E-08	-2.28E-08	-2.25E-08	-2.23E-08	-7.14E-09	-6.90E-09	-6.78E-09
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**2.60E-08**	**-1.10E-08**	**-1.30E-08**	**-1.20E-08**	**-1.30E-08**	**-7.70E-09**	**-7.40E-09**	**-7.80E-09**

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	**4Q/08**	**1Q/09**	**2Q/09**	**3Q/09**	**4Q/09**	**1Q/10**	**2Q/10**	**3Q/10**
UAI (ΔCDF)	-5.20E-11	-1.50E-11	-1.50E-11	-1.50E-11	-1.47E-11	0.00E+00	0.00E+00	0.00E+00
URI (ΔCDF)	-1.60E-07	-1.90E-07	-1.90E-07	-1.90E-07	-1.94E-07	-4.99E-08	-4.06E-08	-4.09E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-1.60E-07**	**-1.90E-07**	**-1.90E-07**	**-1.90E-07**	**-1.90E-07**	**-5.00E-08**	**-4.10E-08**	**-4.10E-08**

Licensee Comments: none

Reactor Coolant System Activity

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Activity	**10/08**	**11/08**	**12/08**	**1/09**	**2/09**	**3/09**	**4/09**	**5/09**	**6/09**	**7/09**	**8/09**	**9/09**
Maximum activity	0.000385	0.000225	0.000246	0.000262	0.000265	0.000277	0.000289	0.000298	0.000307	0.000399	0.000313	0.000332
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**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Reactor Coolant System Activity	**10/09**	**11/09**	**12/09**	**1/10**	**2/10**	**3/10**	**4/10**	**5/10**	**6/10**	**7/10**	**8/10**	**9/10**
Maximum activity	0.000340	0.000339	0.000344	0.000349	0.000370	0.000363	0.000332	N/A	0.000257	0.000294	0.000281	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	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**N/A**	**0**	**0**	**0**	**0**

Licensee Comments: none

Reactor Coolant System Leakage

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Leakage	**10/08**	**11/08**	**12/08**	**1/09**	**2/09**	**3/09**	**4/09**	**5/09**	**6/09**	**7/09**	**8/09**	**9/09**
Maximum leakage	0.024	0.028	0.025	0.044	0.067	0.058	0.038	0.047	0.060	0.045	0.054	0.055
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**	**0.3**	**0.3**	**0.4**	**0.7**	**0.6**	**0.4**	**0.5**	**0.6**	**0.5**	**0.5**	**0.6**
Reactor Coolant System Leakage	**10/09**	**11/09**	**12/09**	**1/10**	**2/10**	**3/10**	**4/10**	**5/10**	**6/10**	**7/10**	**8/10**	**9/10**
Maximum leakage	0.056	0.043	0.049	0.071	0.076	0.079	N/A	0.046	0.021	0.027	0.036	0.019
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	**0.6**	**0.4**	**0.5**	**0.7**	**0.8**	**0.8**	**N/A**	**0.5**	**0.2**	**0.3**	**0.4**	**0.2**

Licensee Comments: none

Drill/Exercise Performance

Thresholds: White < 90.0% Yellow < 70.0%

Notes

Drill/Exercise Performance	4Q/08	1Q/09	2Q/09	3Q/09	4Q/09	1Q/10	2Q/10	3Q/10
Successful opportunities	35.0	75.0	109.0	49.0	13.0	86.0	81.0	126.0
Total opportunities	39.0	79.0	112.0	50.0	14.0	90.0	84.0	127.0
Indicator value	**94.6%**	**94.6%**	**95.4%**	**96.2%**	**96.1%**	**95.5%**	**96.1%**	**96.5%**

Licensee Comments:

1Q/10: The March 22, 2010 actual Notification of an Unusual Event, originally thought to be a correct classification was finally determined to be incorrect. No color change resulted.

Thresholds: White < 80.0% Yellow < 60.0%

Notes

ERO Drill Participation	4Q/08	1Q/09	2Q/09	3Q/09	4Q/09	1Q/10	2Q/10	3Q/10
Participating Key personnel	72.0	78.0	87.0	95.0	92.0	97.0	102.0	97.0
Total Key personnel	85.0	78.0	87.0	95.0	92.0	97.0	102.0	97.0
Indicator value	**84.7%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Licensee Comments: none

Alert & Notification System

Thresholds: White < 94.0% Yellow < 90.0%

Notes

Alert & Notification System	4Q/08	1Q/09	2Q/09	3Q/09	4Q/09	1Q/10	2Q/10	3Q/10
Successful siren-tests	331	296	296	296	333	959	909	864
Total sirens-tests	333	296	296	296	333	960	912	912
Indicator value	**99.8%**	**99.8%**	**99.8%**	**99.8%**	**100.0%**	**99.9%**	**99.8%**	**98.3%**

Licensee Comments:

3Q/10: The regularly scheduled test of the sirens for September 9, 2010, from the Arizona Department of Public Safety was not conducted.

Occupational Exposure Control Effectiveness

Thresholds: White > 2.0 Yellow > 5.0

Notes

Occupational Exposure Control Effectiveness	4Q/08	1Q/09	2Q/09	3Q/09	4Q/09	1Q/10	2Q/10	3Q/10
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**	**0**	**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	4Q/08	1Q/09	2Q/09	3Q/09	4Q/09	1Q/10	2Q/10	3Q/10
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.

Last Modified: October 25, 2010

Palo Verde 1

4Q/2010 Performance Indicators

Licensee's General Comments: none

Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

Notes

Unplanned Scrams per 7000 Critical Hrs	1Q/09	2Q/09	3Q/09	4Q/09	1Q/10	2Q/10	3Q/10	4Q/10
Unplanned scrams	0	0	0	0	1.0	0	0	0
Critical hours	2160.0	2184.0	2208.0	2208.0	1880.6	1006.6	2208.0	2208.0
Indicator value	**0**	**0**	**0**	**0**	**0.8**	**1.0**	**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	1Q/09	2Q/09	3Q/09	4Q/09	1Q/10	2Q/10	3Q/10	4Q/10
Unplanned power changes	1.0	0	0	0	1.0	1.0	0	0
Critical hours	2160.0	2184.0	2208.0	2208.0	1880.6	1006.6	2208.0	2208.0
Indicator value	**2.7**	**1.8**	**0.9**	**0.8**	**0.8**	**1.9**	**1.9**	**1.9**

Licensee Comments: none

Unplanned Scrams with Complications

Thresholds: White > 1.0

Notes

Unplanned Scrams with Complications	1Q/09	2Q/09	3Q/09	4Q/09	1Q/10	2Q/10	3Q/10	4Q/10
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 (PWR)

Thresholds: White > 5.0

Notes

Safety System Functional Failures (PWR)	1Q/09	2Q/09	3Q/09	4Q/09	1Q/10	2Q/10	3Q/10	4Q/10
Safety System Functional Failures	0	1	0	0	0	0	0	0
Indicator value	**0**	**1**	**1**	**1**	**1**	**0**	**0**	**0**

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	**1Q/09**	**2Q/09**	**3Q/09**	**4Q/09**	**1Q/10**	**2Q/10**	**3Q/10**	**4Q/10**
UAI (ΔCDF)	5.10E-08	5.80E-08	5.60E-08	4.13E-08	2.92E-09	2.37E-09	5.24E-10	-2.07E-09
URI (ΔCDF)	-1.70E-07	-1.70E-07	-1.70E-07	-1.67E-07	-8.32E-08	-5.88E-08	-5.96E-08	-6.02E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-1.19E-07**	**-1.12E-07**	**-1.14E-07**	**-1.30E-07**	**-8.00E-08**	**-5.60E-08**	**-5.90E-08**	**-6.20E-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	**1Q/09**	**2Q/09**	**3Q/09**	**4Q/09**	**1Q/10**	**2Q/10**	**3Q/10**	**4Q/10**
UAI (ΔCDF)	6.10E-09	4.67E-09	3.82E-09	3.59E-09	-3.98E-10	6.78E-10	-4.64E-10	-2.79E-11
URI (ΔCDF)	-2.33E-08	-2.29E-08	-2.24E-08	-2.20E-08	-1.40E-08	-1.34E-08	-1.32E-08	-1.29E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-1.70E-08**	**-1.80E-08**	**-1.90E-08**	**-1.80E-08**	**-1.40E-08**	**-1.30E-08**	**-1.40E-08**	**-1.30E-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	1Q/09	2Q/09	3Q/09	4Q/09	1Q/10	2Q/10	3Q/10	4Q/10
UAI (ΔCDF)	-3.80E-09	-1.40E-08	-1.40E-08	-1.71E-08	-2.45E-08	4.18E-08	1.65E-08	-4.89E-08
URI (ΔCDF)	-9.80E-08	-9.80E-08	-9.80E-08	-9.96E-08	-1.42E-07	-5.81E-08	-5.98E-08	-6.15E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-1.02E-07**	**-1.12E-07**	**-1.12E-07**	**-1.20E-07**	**-1.70E-07**	**-1.60E-08**	**-4.30E-08**	**-1.10E-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	**1Q/09**	**2Q/09**	**3Q/09**	**4Q/09**	**1Q/10**	**2Q/10**	**3Q/10**	**4Q/10**
UAI (ΔCDF)	1.16E-08	1.01E-08	1.03E-08	9.83E-09	-5.24E-10	-4.94E-10	-1.04E-09	-1.45E-09
URI (ΔCDF)	-2.31E-08	-2.28E-08	-2.25E-08	-2.23E-08	-7.14E-09	-6.90E-09	-6.78E-09	-6.67E-09
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-1.10E-08**	**-1.30E-08**	**-1.20E-08**	**-1.30E-08**	**-7.70E-09**	**-7.40E-09**	**-7.80E-09**	**-8.10E-09**

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/09**	**2Q/09**	**3Q/09**	**4Q/09**	**1Q/10**	**2Q/10**	**3Q/10**	**4Q/10**
UAI (ΔCDF)	-1.50E-11	-1.50E-11	-1.50E-11	-1.47E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00
URI (ΔCDF)	-1.90E-07	-1.90E-07	-1.90E-07	-1.94E-07	-4.99E-08	-4.06E-08	-4.09E-08	-4.13E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-1.90E-07**	**-1.90E-07**	**-1.90E-07**	**-1.90E-07**	**-5.00E-08**	**-4.10E-08**	**-4.10E-08**	**-4.10E-08**

Licensee Comments: none

Reactor Coolant System Activity

Thresholds: White > 50.0 Yellow > 100.0

Notes

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	0.000262	0.000265	0.000277	0.000289	0.000298	0.000307	0.000399	0.000313	0.000332	0.000340	0.000339	0.000344
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**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Reactor Coolant System Activity	**1/10**	**2/10**	**3/10**	**4/10**	**5/10**	**6/10**	**7/10**	**8/10**	**9/10**	**10/10**	**11/10**	**12/10**
Maximum activity	0.000349	0.000370	0.000363	0.000332	N/A	0.000257	0.000294	0.000281	0.000267	0.000282	0.000289	0.000589
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**	**N/A**	**0**	**0**	**0**	**0**	**0**	**0**	**0.1**

Licensee Comments: none

Reactor Coolant System Leakage

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Leakage	**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 leakage	0.044	0.067	0.058	0.038	0.047	0.060	0.045	0.054	0.055	0.056	0.043	0.049
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	**0.4**	**0.7**	**0.6**	**0.4**	**0.5**	**0.6**	**0.5**	**0.5**	**0.6**	**0.6**	**0.4**	**0.5**
Reactor Coolant System Leakage	**1/10**	**2/10**	**3/10**	**4/10**	**5/10**	**6/10**	**7/10**	**8/10**	**9/10**	**10/10**	**11/10**	**12/10**
Maximum leakage	0.071	0.076	0.079	N/A	0.046	0.021	0.027	0.036	0.019	0.035	0.018	0.041
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	**0.7**	**0.8**	**0.8**	**N/A**	**0.5**	**0.2**	**0.3**	**0.4**	**0.2**	**0.4**	**0.2**	**0.4**

Licensee Comments: none

Drill/Exercise Performance

Thresholds: White < 90.0% Yellow < 70.0%

Notes

Drill/Exercise Performance	1Q/09	2Q/09	3Q/09	4Q/09	1Q/10	2Q/10	3Q/10	4Q/10
Successful opportunities	75.0	109.0	49.0	13.0	86.0	81.0	126.0	20.0
Total opportunities	79.0	112.0	50.0	14.0	90.0	84.0	127.0	20.0
Indicator value	**94.6%**	**95.4%**	**96.2%**	**96.1%**	**95.5%**	**96.1%**	**96.5%**	**97.0%**

Licensee Comments: none

ERO Drill Participation

Thresholds: White < 80.0% Yellow < 60.0%

Notes

ERO Drill Participation	1Q/09	2Q/09	3Q/09	4Q/09	1Q/10	2Q/10	3Q/10	4Q/10
Participating Key personnel	78.0	87.0	95.0	92.0	97.0	102.0	97.0	101.0
Total Key personnel	78.0	87.0	95.0	92.0	97.0	102.0	97.0	101.0
Indicator value	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Licensee Comments: none

Alert & Notification System

Thresholds: White < 94.0% Yellow < 90.0%

Notes

Alert & Notification System	1Q/09	2Q/09	3Q/09	4Q/09	1Q/10	2Q/10	3Q/10	4Q/10
Successful siren-tests	296	296	296	333	911	909	864	1000
Total sirens-tests	296	296	296	333	912	912	912	1008
Indicator value	**99.8%**	**99.8%**	**99.8%**	**100.0%**	**99.9%**	**99.8%**	**98.3%**	**98.4%**

Licensee Comments:

1Q/10: The ANS total number of siren tests conducted in March 2010 was correct. The number of successes and total were revised. No color change resulted.

Occupational Exposure Control Effectiveness

Thresholds: White > 2.0 Yellow > 5.0

Notes

Occupational Exposure Control Effectiveness	1Q/09	2Q/09	3Q/09	4Q/09	1Q/10	2Q/10	3Q/10	4Q/10
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**	**0**	**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	1Q/09	2Q/09	3Q/09	4Q/09	1Q/10	2Q/10	3Q/10	4Q/10
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.

Last Modified: January 24, 2011

Palo Verde 1

1Q/2011 Performance Indicators

Licensee's General Comments: none

Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

Notes

Unplanned Scrams per 7000 Critical Hrs	2Q/09	3Q/09	4Q/09	1Q/10	2Q/10	3Q/10	4Q/10	1Q/11
Unplanned scrams	0	0	0	1.0	0	0	0	0
Critical hours	2184.0	2208.0	2208.0	1880.6	1006.6	2208.0	2208.0	2160.0
Indicator value	**0**	**0**	**0**	**0.8**	**1.0**	**1.0**	**1.0**	**0**

Licensee Comments: none

Unplanned Power Changes per 7000 Critical Hrs

Thresholds: White > 6.0

Notes

Unplanned Power Changes per 7000 Critical Hrs	2Q/09	3Q/09	4Q/09	1Q/10	2Q/10	3Q/10	4Q/10	1Q/11
Unplanned power changes	0	0	0	1.0	1.0	0	0	1.0
Critical hours	2184.0	2208.0	2208.0	1880.6	1006.6	2208.0	2208.0	2160.0
Indicator value	**1.8**	**0.9**	**0.8**	**0.8**	**1.9**	**1.9**	**1.9**	**1.8**

Licensee Comments: none

Unplanned Scrams with Complications

Thresholds: White > 1.0

Notes

Unplanned Scrams with Complications	2Q/09	3Q/09	4Q/09	1Q/10	2Q/10	3Q/10	4Q/10	1Q/11
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 (PWR)

Thresholds: White > 5.0

Notes

Safety System Functional Failures (PWR)	2Q/09	3Q/09	4Q/09	1Q/10	2Q/10	3Q/10	4Q/10	1Q/11
Safety System Functional Failures	1	0	0	0	0	0	0	0
Indicator value	**1**	**1**	**1**	**1**	**0**	**0**	**0**	**0**

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/09**	**3Q/09**	**4Q/09**	**1Q/10**	**2Q/10**	**3Q/10**	**4Q/10**	**1Q/11**
UAI (ΔCDF)	5.80E-08	5.60E-08	4.13E-08	2.92E-09	2.37E-09	5.24E-10	-2.07E-09	-3.28E-09
URI (ΔCDF)	-1.70E-07	-1.70E-07	-1.67E-07	-8.32E-08	-5.88E-08	-5.96E-08	-6.02E-08	-6.11E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-1.12E-07**	**-1.14E-07**	**-1.30E-07**	**-8.00E-08**	**-5.60E-08**	**-5.90E-08**	**-6.20E-08**	**-6.40E-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/09**	**3Q/09**	**4Q/09**	**1Q/10**	**2Q/10**	**3Q/10**	**4Q/10**	**1Q/11**
UAI (ΔCDF)	4.67E-09	3.82E-09	3.59E-09	-3.98E-10	6.78E-10	-4.64E-10	-2.79E-11	2.99E-10
URI (ΔCDF)	-2.29E-08	-2.24E-08	-2.20E-08	-1.40E-08	-1.34E-08	-1.32E-08	-1.29E-08	-1.26E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-1.80E-08**	**-1.90E-08**	**-1.80E-08**	**-1.40E-08**	**-1.30E-08**	**-1.40E-08**	**-1.30E-08**	**-1.20E-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/09**	**3Q/09**	**4Q/09**	**1Q/10**	**2Q/10**	**3Q/10**	**4Q/10**	**1Q/11**
UAI (ΔCDF)	-1.40E-08	-1.40E-08	-1.71E-08	-2.45E-08	4.18E-08	1.65E-08	-4.89E-08	-4.89E-08
URI (ΔCDF)	-9.80E-08	-9.80E-08	-9.96E-08	-1.42E-07	-5.81E-08	-5.98E-08	-6.15E-08	-6.35E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-1.12E-07**	**-1.12E-07**	**-1.20E-07**	**-1.70E-07**	**-1.60E-08**	**-4.30E-08**	**-1.10E-07**	**-1.10E-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/09	3Q/09	4Q/09	1Q/10	2Q/10	3Q/10	4Q/10	1Q/11
UAI (ΔCDF)	1.01E-08	1.03E-08	9.83E-09	-5.24E-10	-4.94E-10	-1.04E-09	-1.45E-09	-1.45E-09
URI (ΔCDF)	-2.28E-08	-2.25E-08	-2.23E-08	-7.14E-09	-6.90E-09	-6.78E-09	-6.67E-09	-6.55E-09
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-1.30E-08**	**-1.20E-08**	**-1.30E-08**	**-7.70E-09**	**-7.40E-09**	**-7.80E-09**	**-8.10E-09**	**-8.00E-09**

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/09**	**3Q/09**	**4Q/09**	**1Q/10**	**2Q/10**	**3Q/10**	**4Q/10**	**1Q/11**
UAI (ΔCDF)	-1.50E-11	-1.50E-11	-1.47E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.66E-12
URI (ΔCDF)	-1.90E-07	-1.90E-07	-1.94E-07	-4.99E-08	-4.06E-08	-4.09E-08	-4.13E-08	-4.17E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-1.90E-07**	**-1.90E-07**	**-1.90E-07**	**-5.00E-08**	**-4.10E-08**	**-4.10E-08**	**-4.10E-08**	**-4.20E-08**

Licensee Comments: none

Reactor Coolant System Activity

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Activity	**4/09**	**5/09**	**6/09**	**7/09**	**8/09**	**9/09**	**10/09**	**11/09**	**12/09**	**1/10**	**2/10**	**3/10**
Maximum activity	0.000289	0.000298	0.000307	0.000399	0.000313	0.000332	0.000340	0.000339	0.000344	0.000349	0.000370	0.000363
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**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Reactor Coolant System Activity	**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	0.000332	N/A	0.000257	0.000294	0.000281	0.000267	0.000282	0.000289	0.000589	0.000300	0.000305	0.000318
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**	**N/A**	**0**	**0**	**0**	**0**	**0**	**0**	**0.1**	**0**	**0**	**0**

Licensee Comments: none

Reactor Coolant System Leakage

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Leakage	4/09	5/09	6/09	7/09	8/09	9/09	10/09	11/09	12/09	1/10	2/10	3/10
Maximum leakage	0.038	0.047	0.060	0.045	0.054	0.055	0.056	0.043	0.049	0.071	0.076	0.079
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	**0.4**	**0.5**	**0.6**	**0.5**	**0.5**	**0.6**	**0.6**	**0.4**	**0.5**	**0.7**	**0.8**	**0.8**
Reactor Coolant System Leakage	**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 leakage	N/A	0.046	0.021	0.027	0.036	0.019	0.035	0.018	0.041	0.017	0.035	0.037
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**	**0.5**	**0.2**	**0.3**	**0.4**	**0.2**	**0.4**	**0.2**	**0.4**	**0.2**	**0.4**	**0.4**

Licensee Comments: none

Drill/Exercise Performance

Thresholds: White < 90.0% Yellow < 70.0%

Notes

Drill/Exercise Performance	2Q/09	3Q/09	4Q/09	1Q/10	2Q/10	3Q/10	4Q/10	1Q/11
Successful opportunities	109.0	49.0	13.0	86.0	81.0	126.0	20.0	91.0
Total opportunities	112.0	50.0	14.0	90.0	84.0	127.0	20.0	93.0
Indicator value	**95.4%**	**96.2%**	**96.1%**	**95.5%**	**96.1%**	**96.5%**	**97.0%**	**97.5%**

Licensee Comments: none

ERO Drill Participation

Thresholds: White < 80.0% Yellow < 60.0%

Notes

ERO Drill Participation	2Q/09	3Q/09	4Q/09	1Q/10	2Q/10	3Q/10	4Q/10	1Q/11
Participating Key personnel	87.0	95.0	92.0	97.0	102.0	97.0	101.0	92.0
Total Key personnel	87.0	95.0	92.0	97.0	102.0	97.0	101.0	92.0
Indicator value	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Licensee Comments: none

Alert & Notification System

Thresholds: White < 94.0% Yellow < 90.0%

Notes

Alert & Notification System	2Q/09	3Q/09	4Q/09	1Q/10	2Q/10	3Q/10	4Q/10	1Q/11
Successful siren-tests	296	296	333	911	909	864	1000	912
Total sirens-tests	296	296	333	912	912	912	1008	912
Indicator value	**99.8%**	**99.8%**	**100.0%**	**99.9%**	**99.8%**	**98.3%**	**98.4%**	**98.4%**

Licensee Comments: none

Occupational Exposure Control Effectiveness

Thresholds: White > 2.0 Yellow > 5.0

Notes

Occupational Exposure Control Effectiveness	2Q/09	3Q/09	4Q/09	1Q/10	2Q/10	3Q/10	4Q/10	1Q/11
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**	**0**	**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/09	3Q/09	4Q/09	1Q/10	2Q/10	3Q/10	4Q/10	1Q/11
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.

Last Modified: May 4, 2011

Palo Verde 1

2Q/2011 Performance Indicators

Licensee's General Comments: none

Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

Notes

Unplanned Scrams per 7000 Critical Hrs	3Q/09	4Q/09	1Q/10	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11
Unplanned scrams	0	0	1.0	0	0	0	0	0
Critical hours	2208.0	2208.0	1880.6	1006.6	2208.0	2208.0	2160.0	2184.0
Indicator value	**0**	**0**	**0.8**	**1.0**	**1.0**	**1.0**	**0**	**0**

Licensee Comments: none

Unplanned Power Changes per 7000 Critical Hrs

Thresholds: White > 6.0

Notes

Unplanned Power Changes per 7000 Critical Hrs	3Q/09	4Q/09	1Q/10	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11
Unplanned power changes	0	0	1.0	1.0	0	0	1.0	0
Critical hours	2208.0	2208.0	1880.6	1006.6	2208.0	2208.0	2160.0	2184.0
Indicator value	**0.9**	**0.8**	**0.8**	**1.9**	**1.9**	**1.9**	**1.8**	**0.8**

Licensee Comments: none

Unplanned Scrams with Complications

Thresholds: White > 1.0

Notes

Unplanned Scrams with Complications	3Q/09	4Q/09	1Q/10	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11
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 (PWR)

Thresholds: White > 5.0

Notes

Safety System Functional Failures (PWR)	3Q/09	4Q/09	1Q/10	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11
Safety System Functional Failures	0	0	0	0	0	0	0	0
Indicator value	**1**	**1**	**1**	**0**	**0**	**0**	**0**	**0**

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	**3Q/09**	**4Q/09**	**1Q/10**	**2Q/10**	**3Q/10**	**4Q/10**	**1Q/11**	**2Q/11**
UAI (ΔCDF)	5.60E-08	4.13E-08	2.92E-09	2.37E-09	5.24E-10	-2.07E-09	-3.28E-09	-4.11E-09
URI (ΔCDF)	-1.70E-07	-1.67E-07	-8.32E-08	-5.88E-08	-5.96E-08	-6.02E-08	-6.11E-08	-6.56E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-1.14E-07**	**-1.30E-07**	**-8.00E-08**	**-5.60E-08**	**-5.90E-08**	**-6.20E-08**	**-6.40E-08**	**-7.00E-08**

Licensee Comments:

2Q/11: Changed PRA Parameter(s). A PVNGS PRA Model was completed in January 2011 with a corresponding MSPI Basis Document revision in March 2011. The PRA model revision was a periodic update to the model. As a result of the PRA model change, the Core Damage Frequency and Fussel-Vesely for all monitored trains and components were revised in CDE.

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	**3Q/09**	**4Q/09**	**1Q/10**	**2Q/10**	**3Q/10**	**4Q/10**	**1Q/11**	**2Q/11**
UAI (ΔCDF)	3.82E-09	3.59E-09	-3.98E-10	6.78E-10	-4.64E-10	-2.79E-11	2.99E-10	-1.96E-10
URI (ΔCDF)	-2.24E-08	-2.20E-08	-1.40E-08	-1.34E-08	-1.32E-08	-1.29E-08	-1.26E-08	-1.17E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-1.90E-08**	**-1.80E-08**	**-1.40E-08**	**-1.30E-08**	**-1.40E-08**	**-1.30E-08**	**-1.20E-08**	**-1.20E-08**

Licensee Comments:

2Q/11: Changed PRA Parameter(s). A PVNGS PRA Model was completed in January 2011 with a corresponding MSPI Basis Document revision in March 2011. The PRA model revision was a periodic update to the model. As a result of the PRA model change, the Core Damage Frequency and Fussel-Vesely for all monitored trains and components were revised in CDE.

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	3Q/09	4Q/09	1Q/10	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11
UAI (ΔCDF)	-1.40E-08	-1.71E-08	-2.45E-08	4.18E-08	1.65E-08	-4.89E-08	-4.89E-08	-4.84E-08
URI (ΔCDF)	-9.80E-08	-9.96E-08	-1.42E-07	-5.81E-08	-5.98E-08	-6.15E-08	-6.35E-08	-6.29E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-1.12E-07**	**-1.20E-07**	**-1.70E-07**	**-1.60E-08**	**-4.30E-08**	**-1.10E-07**	**-1.10E-07**	**-1.10E-07**

Licensee Comments:

2Q/11: Changed PRA Parameter(s). A PVNGS PRA Model was completed in January 2011 with a corresponding MSPI Basis Document revision in March 2011. The PRA model revision was a periodic update to the model. As a result of the PRA model change, the Core Damage Frequency and Fussel-Vesely for all monitored trains and components were revised in CDE.

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	**3Q/09**	**4Q/09**	**1Q/10**	**2Q/10**	**3Q/10**	**4Q/10**	**1Q/11**	**2Q/11**
UAI (ΔCDF)	1.03E-08	9.83E-09	-5.24E-10	-4.94E-10	-1.04E-09	-1.45E-09	-1.45E-09	-1.46E-09
URI (ΔCDF)	-2.25E-08	-2.23E-08	-7.14E-09	-6.90E-09	-6.78E-09	-6.67E-09	-6.55E-09	-6.41E-09
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-1.20E-08**	**-1.30E-08**	**-7.70E-09**	**-7.40E-09**	**-7.80E-09**	**-8.10E-09**	**-8.00E-09**	**-7.90E-09**

Licensee Comments:

2Q/11: Changed PRA Parameter(s). A PVNGS PRA Model was completed in January 2011 with a corresponding MSPI Basis Document revision in March 2011. The PRA model revision was a periodic update to the model. As a result of the PRA model change, the Core Damage Frequency and Fussel-Vesely for all monitored trains and components were revised in CDE.

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	**3Q/09**	**4Q/09**	**1Q/10**	**2Q/10**	**3Q/10**	**4Q/10**	**1Q/11**	**2Q/11**
UAI (ΔCDF)	-1.50E-11	-1.47E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.66E-12	3.30E-11
URI (ΔCDF)	-1.90E-07	-1.94E-07	-4.99E-08	-4.06E-08	-4.09E-08	-4.13E-08	-4.17E-08	-4.40E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-1.90E-07**	**-1.90E-07**	**-5.00E-08**	**-4.10E-08**	**-4.10E-08**	**-4.10E-08**	**-4.20E-08**	**-4.40E-08**

Licensee Comments:

2Q/11: Changed PRA Parameter(s). A PVNGS PRA Model was completed in January 2011 with a corresponding MSPI Basis Document revision in March 2011. The PRA model revision was a periodic update to the model. As a result of the PRA model change, the Core Damage Frequency and Fussel-Vesely for all monitored trains and components were revised in CDE.

Reactor Coolant System Activity

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Activity	**7/09**	**8/09**	**9/09**	**10/09**	**11/09**	**12/09**	**1/10**	**2/10**	**3/10**	**4/10**	**5/10**	**6/10**
Maximum activity	0.000399	0.000313	0.000332	0.000340	0.000339	0.000344	0.000349	0.000370	0.000363	0.000332	N/A	0.000257
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**	**0**	**0**	**0**	**0**	**0**	**N/A**	**0**

Reactor Coolant System Activity	**7/10**	**8/10**	**9/10**	**10/10**	**11/10**	**12/10**	**1/11**	**2/11**	**3/11**	**4/11**	**5/11**	**6/11**
Maximum activity	0.000294	0.000281	0.000267	0.000282	0.000289	0.000589	0.000300	0.000305	0.000318	0.000327	0.000452	0.000340
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**	**0.1**	**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	**7/09**	**8/09**	**9/09**	**10/09**	**11/09**	**12/09**	**1/10**	**2/10**	**3/10**	**4/10**	**5/10**	**6/10**
Maximum leakage	0.045	0.054	0.055	0.056	0.043	0.049	0.071	0.076	0.079	N/A	0.046	0.021
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	**0.5**	**0.5**	**0.6**	**0.6**	**0.4**	**0.5**	**0.7**	**0.8**	**0.8**	**N/A**	**0.5**	**0.2**
Reactor Coolant System Leakage	**7/10**	**8/10**	**9/10**	**10/10**	**11/10**	**12/10**	**1/11**	**2/11**	**3/11**	**4/11**	**5/11**	**6/11**
Maximum leakage	0.027	0.036	0.019	0.035	0.018	0.041	0.017	0.035	0.037	0.054	0.038	0.033
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**	**0.4**	**0.2**	**0.4**	**0.2**	**0.4**	**0.2**	**0.4**	**0.4**	**0.5**	**0.4**	**0.3**

Licensee Comments: none

Drill/Exercise Performance

Thresholds: White < 90.0% Yellow < 70.0%

Notes

Drill/Exercise Performance	3Q/09	4Q/09	1Q/10	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11
Successful opportunities	49.0	13.0	86.0	81.0	126.0	20.0	91.0	10.0
Total opportunities	50.0	14.0	90.0	84.0	127.0	20.0	93.0	10.0
Indicator value	**96.2%**	**96.1%**	**95.5%**	**96.1%**	**96.5%**	**97.0%**	**97.5%**	**97.5%**

Licensee Comments: none

Thresholds: White < 80.0% Yellow < 60.0%

Notes

ERO Drill Participation	3Q/09	4Q/09	1Q/10	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11
Participating Key personnel	95.0	92.0	97.0	102.0	97.0	101.0	92.0	95.0
Total Key personnel	95.0	92.0	97.0	102.0	97.0	101.0	92.0	96.0
Indicator value	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**99.0%**

Licensee Comments: none

Alert & Notification System

Thresholds: White < 94.0% Yellow < 90.0%

Notes

Alert & Notification System	3Q/09	4Q/09	1Q/10	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11
Successful siren-tests	296	333	911	909	864	1000	912	912
Total sirens-tests	296	333	912	912	912	1008	912	912
Indicator value	**99.8%**	**100.0%**	**99.9%**	**99.8%**	**98.3%**	**98.4%**	**98.4%**	**98.5%**

Licensee Comments: none

Occupational Exposure Control Effectiveness

Thresholds: White > 2.0 Yellow > 5.0

Notes

Occupational Exposure Control Effectiveness	3Q/09	4Q/09	1Q/10	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11
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**	**0**	**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	3Q/09	4Q/09	1Q/10	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11
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.

Last Modified: July 22, 2011

Palo Verde 1

3Q/2011 Performance Indicators

Licensee's General Comments: none

Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

Notes

Unplanned Scrams per 7000 Critical Hrs	4Q/09	1Q/10	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11
Unplanned scrams	0	1.0	0	0	0	0	0	1.0
Critical hours	2208.0	1880.6	1006.6	2208.0	2208.0	2160.0	2184.0	2108.3
Indicator value	**0**	**0.8**	**1.0**	**1.0**	**1.0**	**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	4Q/09	1Q/10	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11
Unplanned power changes	0	1.0	1.0	0	0	1.0	0	1.0
Critical hours	2208.0	1880.6	1006.6	2208.0	2208.0	2160.0	2184.0	2108.3
Indicator value	**0.8**	**0.8**	**1.9**	**1.9**	**1.9**	**1.8**	**0.8**	**1.6**

Licensee Comments: none

Unplanned Scrams with Complications

Thresholds: White > 1.0

Notes

Unplanned Scrams with Complications	4Q/09	1Q/10	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11
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 (PWR)

Thresholds: White > 5.0

Notes

Safety System Functional Failures (PWR)	4Q/09	1Q/10	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11
Safety System Functional Failures	0	0	0	0	0	0	0	0
Indicator value	**1**	**1**	**0**	**0**	**0**	**0**	**0**	**0**

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	**4Q/09**	**1Q/10**	**2Q/10**	**3Q/10**	**4Q/10**	**1Q/11**	**2Q/11**	**3Q/11**
UAI (ΔCDF)	4.13E-08	2.92E-09	2.37E-09	5.24E-10	-2.07E-09	-3.28E-09	-4.11E-09	-4.11E-09
URI (ΔCDF)	-1.67E-07	-8.32E-08	-5.88E-08	-5.96E-08	-6.02E-08	-6.11E-08	-6.56E-08	-6.63E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-1.30E-07**	**-8.00E-08**	**-5.60E-08**	**-5.90E-08**	**-6.20E-08**	**-6.40E-08**	**-7.00E-08**	**-7.00E-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	**4Q/09**	**1Q/10**	**2Q/10**	**3Q/10**	**4Q/10**	**1Q/11**	**2Q/11**	**3Q/11**
UAI (ΔCDF)	3.59E-09	-3.98E-10	6.78E-10	-4.64E-10	-2.79E-11	2.99E-10	-1.96E-10	2.68E-09
URI (ΔCDF)	-2.20E-08	-1.40E-08	-1.34E-08	-1.32E-08	-1.29E-08	-1.26E-08	-1.17E-08	-1.14E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-1.80E-08**	**-1.40E-08**	**-1.30E-08**	**-1.40E-08**	**-1.30E-08**	**-1.20E-08**	**-1.20E-08**	**-8.80E-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	4Q/09	1Q/10	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11
UAI (ΔCDF)	-1.71E-08	-2.45E-08	4.18E-08	1.65E-08	-4.89E-08	-4.89E-08	-4.84E-08	-4.84E-08
URI (ΔCDF)	-9.96E-08	-1.42E-07	-5.81E-08	-5.98E-08	-6.15E-08	-6.35E-08	-6.29E-08	-6.44E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-1.20E-07**	**-1.70E-07**	**-1.60E-08**	**-4.30E-08**	**-1.10E-07**	**-1.10E-07**	**-1.10E-07**	**-1.10E-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	**4Q/09**	**1Q/10**	**2Q/10**	**3Q/10**	**4Q/10**	**1Q/11**	**2Q/11**	**3Q/11**
UAI (ΔCDF)	9.83E-09	-5.24E-10	-4.94E-10	-1.04E-09	-1.45E-09	-1.45E-09	-1.46E-09	-1.46E-09
URI (ΔCDF)	-2.23E-08	-7.14E-09	-6.90E-09	-6.78E-09	-6.67E-09	-6.55E-09	-6.41E-09	-6.29E-09
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-1.30E-08**	**-7.70E-09**	**-7.40E-09**	**-7.80E-09**	**-8.10E-09**	**-8.00E-09**	**-7.90E-09**	**-7.70E-09**

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	4Q/09	1Q/10	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11
UAI (ΔCDF)	-1.47E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.66E-12	3.30E-11	7.14E-11
URI (ΔCDF)	-1.94E-07	-4.99E-08	-4.06E-08	-4.09E-08	-4.13E-08	-4.17E-08	-4.40E-08	-4.44E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-1.90E-07**	**-5.00E-08**	**-4.10E-08**	**-4.10E-08**	**-4.10E-08**	**-4.20E-08**	**-4.40E-08**	**-4.40E-08**

Licensee Comments: none

Reactor Coolant System Activity

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Activity	**10/09**	**11/09**	**12/09**	**1/10**	**2/10**	**3/10**	**4/10**	**5/10**	**6/10**	**7/10**	**8/10**	**9/10**
Maximum activity	0.000340	0.000339	0.000344	0.000349	0.000370	0.000363	0.000332	N/A	0.000257	0.000294	0.000281	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	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**N/A**	**0**	**0**	**0**	**0**

Reactor Coolant System Activity	**10/10**	**11/10**	**12/10**	**1/11**	**2/11**	**3/11**	**4/11**	**5/11**	**6/11**	**7/11**	**8/11**	**9/11**
Maximum activity	0.000282	0.000289	0.000589	0.000300	0.000305	0.000318	0.000327	0.000452	0.000340	0.000364	0.000349	0.000389
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**	**0.1**	**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	**10/09**	**11/09**	**12/09**	**1/10**	**2/10**	**3/10**	**4/10**	**5/10**	**6/10**	**7/10**	**8/10**	**9/10**
Maximum leakage	0.056	0.043	0.049	0.071	0.076	0.079	N/A	0.046	0.021	0.027	0.036	0.019
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	**0.6**	**0.4**	**0.5**	**0.7**	**0.8**	**0.8**	**N/A**	**0.5**	**0.2**	**0.3**	**0.4**	**0.2**
Reactor Coolant System Leakage	**10/10**	**11/10**	**12/10**	**1/11**	**2/11**	**3/11**	**4/11**	**5/11**	**6/11**	**7/11**	**8/11**	**9/11**
Maximum leakage	0.035	0.018	0.041	0.017	0.035	0.037	0.054	0.038	0.033	0.038	0.055	0.048
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	**0.4**	**0.2**	**0.4**	**0.2**	**0.4**	**0.4**	**0.5**	**0.4**	**0.3**	**0.4**	**0.6**	**0.5**

Licensee Comments: none

Drill/Exercise Performance

Thresholds: White < 90.0% Yellow < 70.0%

Notes

Drill/Exercise Performance	4Q/09	1Q/10	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11
Successful opportunities	13.0	86.0	81.0	126.0	20.0	91.0	10.0	184.0
Total opportunities	14.0	90.0	84.0	127.0	20.0	93.0	10.0	187.0
Indicator value	**96.1%**	**95.5%**	**96.1%**	**96.5%**	**97.0%**	**97.5%**	**97.5%**	**97.8%**

Licensee Comments: none

Notes

ERO Drill Participation	4Q/09	1Q/10	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11
Participating Key personnel	92.0	97.0	102.0	97.0	101.0	92.0	90.0	88.0
Total Key personnel	92.0	97.0	102.0	97.0	101.0	92.0	91.0	88.0
Indicator value	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**98.9%**	**100.0%**

Licensee Comments:

3Q/11: Routine review of prior data submissions identifed errors in May and June 2011 inputs. No color change occurred as a result of the corrections.

Alert & Notification System

Thresholds: White < 94.0% Yellow < 90.0%

Notes

Alert & Notification System	4Q/09	1Q/10	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11
Successful siren-tests	333	911	909	864	1000	912	912	910
Total sirens-tests	333	912	912	912	1008	912	912	912
Indicator value	**100.0%**	**99.9%**	**99.8%**	**98.3%**	**98.4%**	**98.4%**	**98.5%**	**99.7%**

Licensee Comments: none

Occupational Exposure Control Effectiveness

Thresholds: White > 2.0 Yellow > 5.0

Notes

Occupational Exposure Control Effectiveness	4Q/09	1Q/10	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11
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**	**0**	**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	4Q/09	1Q/10	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11
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.

Last Modified: November 29, 2011

Palo Verde 1

4Q/2011 Performance Indicators

Licensee's General Comments: none

Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

Notes

Unplanned Scrams per 7000 Critical Hrs	1Q/10	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11
Unplanned scrams	1.0	0	0	0	0	0	1.0	1.0
Critical hours	1880.6	1006.6	2208.0	2208.0	2160.0	2184.0	2108.3	1013.2
Indicator value	**0.8**	**1.0**	**1.0**	**1.0**	**0**	**0**	**0.8**	**1.9**

Licensee Comments: none

Unplanned Power Changes per 7000 Critical Hrs

Thresholds: White > 6.0

Notes

Unplanned Power Changes per 7000 Critical Hrs	1Q/10	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11
Unplanned power changes	1.0	1.0	0	0	1.0	0	1.0	0
Critical hours	1880.6	1006.6	2208.0	2208.0	2160.0	2184.0	2108.3	1013.2
Indicator value	**0.8**	**1.9**	**1.9**	**1.9**	**1.8**	**0.8**	**1.6**	**1.9**

Licensee Comments: none

Unplanned Scrams with Complications

Thresholds: White > 1.0

Notes

Unplanned Scrams with Complications	1Q/10	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11
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 (PWR)

Thresholds: White > 5.0

Notes

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

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	**1Q/10**	**2Q/10**	**3Q/10**	**4Q/10**	**1Q/11**	**2Q/11**	**3Q/11**	**4Q/11**
UAI (ΔCDF)	2.92E-09	2.37E-09	5.24E-10	-2.07E-09	-3.28E-09	-4.11E-09	-4.11E-09	-4.10E-09
URI (ΔCDF)	-8.32E-08	-5.88E-08	-5.96E-08	-6.02E-08	-6.11E-08	-6.56E-08	-6.63E-08	-6.69E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-8.00E-08**	**-5.60E-08**	**-5.90E-08**	**-6.20E-08**	**-6.40E-08**	**-7.00E-08**	**-7.00E-08**	**-7.10E-08**

Licensee Comments:

4Q/11: Revised MSPI Bases Document (Rev 9) in 12/2011 for emergency AC power system. Per FAQ 468, returned all Planned Unavailability Baselines to 2002 ??? 2004, 36 month historical plant data. Revised emergency AC diesel generator demands/runtimes per FAQ 480. No MSPI PRA coefficients were changed.

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/10**	**2Q/10**	**3Q/10**	**4Q/10**	**1Q/11**	**2Q/11**	**3Q/11**	**4Q/11**
UAI (ΔCDF)	-3.98E-10	6.78E-10	-4.64E-10	-2.79E-11	2.99E-10	-1.96E-10	2.68E-09	2.26E-09
URI (ΔCDF)	-1.40E-08	-1.34E-08	-1.32E-08	-1.29E-08	-1.26E-08	-1.17E-08	-1.14E-08	-1.12E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-1.40E-08**	**-1.30E-08**	**-1.40E-08**	**-1.30E-08**	**-1.20E-08**	**-1.20E-08**	**-8.80E-09**	**-8.90E-09**

Licensee Comments:

4Q/11: Revised MSPI Bases Document (Rev 9) in 12/2011 for high pressure safety injection system. Per FAQ 468, returned all Planned Unavailability Baselines to 2002 ??? 2004, 36 month historical plant data. The change also reflected a change in maintenance philosophy. Revised HPSI demands/runtimes to address greater than 25% deviation. No MSPI PRA coefficients were changed.

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/10	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11
UAI (ΔCDF)	-2.45E-08	4.18E-08	1.65E-08	-4.89E-08	-4.89E-08	-4.84E-08	-4.84E-08	-4.84E-08
URI (ΔCDF)	-1.42E-07	-5.81E-08	-5.98E-08	-6.15E-08	-6.35E-08	-6.29E-08	-6.44E-08	-6.58E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-1.70E-07**	**-1.60E-08**	**-4.30E-08**	**-1.10E-07**	**-1.10E-07**	**-1.10E-07**	**-1.10E-07**	**-1.10E-07**

Licensee Comments:

4Q/11: Revised MSPI Bases Document (Rev 9) in 12/2011 for heat removal system. Per FAQ 468, returned all Planned Unavailability Baselines to 2002 ??? 2004, 36 month historical plant data. Revised heat removal system demands/runtimes to address greater than 25% deviation. No MSPI PRA coefficients were changed.

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/10**	**2Q/10**	**3Q/10**	**4Q/10**	**1Q/11**	**2Q/11**	**3Q/11**	**4Q/11**
UAI (ΔCDF)	-5.24E-10	-4.94E-10	-1.04E-09	-1.45E-09	-1.45E-09	-1.46E-09	-1.46E-09	-1.46E-09
URI (ΔCDF)	-7.14E-09	-6.90E-09	-6.78E-09	-6.67E-09	-6.55E-09	-6.41E-09	-6.29E-09	-6.16E-09
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-7.70E-09**	**-7.40E-09**	**-7.80E-09**	**-8.10E-09**	**-8.00E-09**	**-7.90E-09**	**-7.70E-09**	**-7.60E-09**

Licensee Comments:

4Q/11: Revised MSPI Bases Document (Rev 9) in 12/2011 for residual heat removal system. Per FAQ 468, returned all Planned Unavailability Baselines to 2002 ??? 2004, 36 month historical plant data. The change also reflected a change in maintenance philosophy. No MSPI PRA coefficients were changed.

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/10	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11
UAI (ΔCDF)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.66E-12	3.30E-11	7.14E-11	0.00E+00
URI (ΔCDF)	-4.99E-08	-4.06E-08	-4.09E-08	-4.13E-08	-4.17E-08	-4.40E-08	-4.44E-08	-4.47E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-5.00E-08**	**-4.10E-08**	**-4.10E-08**	**-4.10E-08**	**-4.20E-08**	**-4.40E-08**	**-4.40E-08**	**-4.50E-08**

Licensee Comments:

4Q/11: Revised MSPI Bases Document (Rev 9) in 12/2011 for cooling water systems. Per FAQ 468, returned all Planned Unavailability Baselines to 2002 â€" 2004, 36 month historical plant data.

Reactor Coolant System Activity

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Activity	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	10/10	11/10	12/10
Maximum activity	0.000349	0.000370	0.000363	0.000332	N/A	0.000257	0.000294	0.000281	0.000267	0.000282	0.000289	0.000589
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**	**N/A**	**0**	**0**	**0**	**0**	**0**	**0**	**0.1**

Reactor Coolant System Activity	1/11	2/11	3/11	4/11	5/11	6/11	7/11	8/11	9/11	10/11	11/11	12/11
Maximum activity	0.000300	0.000305	0.000318	0.000327	0.000452	0.000340	0.000364	0.000349	0.000389	0.000303	N/A	0.000226
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**	**0**	**0**	**0**	**0**	**0**	**N/A**	**0**

Licensee Comments: none

Reactor Coolant System Leakage

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Leakage	**1/10**	**2/10**	**3/10**	**4/10**	**5/10**	**6/10**	**7/10**	**8/10**	**9/10**	**10/10**	**11/10**	**12/10**
Maximum leakage	0.071	0.076	0.079	N/A	0.046	0.021	0.027	0.036	0.019	0.035	0.018	0.041
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	**0.7**	**0.8**	**0.8**	**N/A**	**0.5**	**0.2**	**0.3**	**0.4**	**0.2**	**0.4**	**0.2**	**0.4**
Reactor Coolant System Leakage	**1/11**	**2/11**	**3/11**	**4/11**	**5/11**	**6/11**	**7/11**	**8/11**	**9/11**	**10/11**	**11/11**	**12/11**
Maximum leakage	0.017	0.035	0.037	0.054	0.038	0.033	0.038	0.055	0.048	0.034	0.039	0.023
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**	**0.4**	**0.4**	**0.5**	**0.4**	**0.3**	**0.4**	**0.6**	**0.5**	**0.3**	**0.4**	**0.2**

Licensee Comments: none

Drill/Exercise Performance

Thresholds: White < 90.0% Yellow < 70.0%

Notes

Drill/Exercise Performance	1Q/10	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11
Successful opportunities	86.0	81.0	126.0	20.0	91.0	10.0	184.0	33.0
Total opportunities	90.0	84.0	127.0	20.0	93.0	10.0	187.0	34.0
Indicator value	**95.5%**	**96.1%**	**96.5%**	**97.0%**	**97.5%**	**97.5%**	**97.8%**	**97.8%**

Licensee Comments: none

Notes

ERO Drill Participation	1Q/10	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11
Participating Key personnel	97.0	102.0	97.0	101.0	90.0	90.0	88.0	85.0
Total Key personnel	97.0	102.0	97.0	101.0	90.0	91.0	88.0	86.0
Indicator value	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**98.9%**	**100.0%**	**98.8%**

Licensee Comments:

4Q/11: January and March 2011 participation results were revised based on a self-assessment review. This does not affect current quarter results and no-color change resulted.

Alert & Notification System

Thresholds: White < 94.0% Yellow < 90.0%

Notes

Alert & Notification System	1Q/10	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11
Successful siren-tests	911	909	864	1000	912	912	910	1008
Total sirens-tests	912	912	912	1008	912	912	912	1008
Indicator value	**99.9%**	**99.8%**	**98.3%**	**98.4%**	**98.4%**	**98.5%**	**99.7%**	**99.9%**

Licensee Comments: none

Occupational Exposure Control Effectiveness

Thresholds: White > 2.0 Yellow > 5.0

Notes

Occupational Exposure Control Effectiveness	1Q/10	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11
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**	**0**	**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	1Q/10	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11
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.

Last Modified: February 2, 2012

Palo Verde 1

1Q/2012 Performance Indicators

Licensee's General Comments: none

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	0	0	0	0	0	1.0	1.0	0
Critical hours	1006.6	2208.0	2208.0	2160.0	2184.0	2108.3	1013.2	2184.0
Indicator value	**1.0**	**1.0**	**1.0**	**0**	**0**	**0.8**	**1.9**	**1.9**

Licensee Comments: none

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	1.0	0	0	1.0	0	1.0	0	0
Critical hours	1006.6	2208.0	2208.0	2160.0	2184.0	2108.3	1013.2	2184.0
Indicator value	**1.9**	**1.9**	**1.9**	**1.8**	**0.8**	**1.6**	**1.9**	**0.9**

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 (PWR)

Thresholds: White > 5.0

Notes

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

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/10	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11	1Q/12
UAI (ΔCDF)	2.37E-09	5.24E-10	-2.07E-09	-3.28E-09	-4.11E-09	-4.11E-09	-4.10E-09	1.42E-08
URI (ΔCDF)	-5.88E-08	-5.96E-08	-6.02E-08	-6.11E-08	-6.56E-08	-6.63E-08	-6.69E-08	-6.64E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-5.60E-08**	**-5.90E-08**	**-6.20E-08**	**-6.40E-08**	**-7.00E-08**	**-7.00E-08**	**-7.10E-08**	**-5.20E-08**

Licensee Comments:

4Q/11: Revised MSPI Bases Document (Rev 9) in 12/2011 for emergency AC power system. Per FAQ 468, returned all Planned Unavailability Baselines to 2002 ??? 2004, 36 month historical plant data. Revised emergency AC diesel generator demands/runtimes per FAQ 480. No MSPI PRA coefficients were changed.

2Q/11: Changed PRA Parameter(s). A PVNGS PRA Model was completed in January 2011 with a corresponding MSPI Basis Document revision in March 2011. The PRA model revision was a periodic update to the model. As a result of the PRA model change, the Core Damage Frequency and Fussel-Vesely for all monitored trains and components were revised in CDE.

2Q/10: PRA model was revised March 25, 2010 with corresponding MSPI Model revision. This resulted in revision to plant base CDF values and corresponding Fussel-Vessely, Unavailability, and Unreliability values for monitored systems.

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 (ΔCDF)	6.78E-10	-4.64E-10	-2.79E-11	2.99E-10	-1.96E-10	2.68E-09	2.26E-09	9.42E-10
URI (ΔCDF)	-1.34E-08	-1.32E-08	-1.29E-08	-1.26E-08	-1.17E-08	-1.14E-08	-1.12E-08	-1.11E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-1.30E-08**	**-1.40E-08**	**-1.30E-08**	**-1.20E-08**	**-1.20E-08**	**-8.80E-09**	**-8.90E-09**	**-1.00E-08**

Licensee Comments:

4Q/11: Revised MSPI Bases Document (Rev 9) in 12/2011 for high pressure safety injection system. Per FAQ 468, returned all Planned Unavailability Baselines to 2002 ??? 2004, 36 month historical plant data. The change also reflected a change in maintenance philosophy. Revised HPSI demands/runtimes to address greater than 25% deviation. No MSPI PRA coefficients were changed.

2Q/11: Changed PRA Parameter(s). A PVNGS PRA Model was completed in January 2011 with a corresponding MSPI Basis Document revision in March 2011. The PRA model revision was a periodic update to the model. As a result of the PRA model change, the Core Damage Frequency and Fussel-Vesely for all monitored trains and components were revised in CDE.

2Q/10: PRA model was revised March 25, 2010 with corresponding MSPI Model revision. This resulted in revision to plant base CDF values and corresponding Fussel-Vessely, Unavailability, and Unreliability values for monitored systems.

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 (ΔCDF)	4.18E-08	1.65E-08	-4.89E-08	-4.89E-08	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08
URI (ΔCDF)	-5.81E-08	-5.98E-08	-6.15E-08	-6.35E-08	-6.29E-08	-6.44E-08	-6.58E-08	-6.57E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-1.60E-08**	**-4.30E-08**	**-1.10E-07**	**-1.10E-07**	**-1.10E-07**	**-1.10E-07**	**-1.10E-07**	**-1.10E-07**

Licensee Comments:

4Q/11: Revised MSPI Bases Document (Rev 9) in 12/2011 for heat removal system. Per FAQ 468, returned all Planned Unavailability Baselines to 2002 ??? 2004, 36 month historical plant data. Revised heat removal system demands/runtimes to address greater than 25% deviation. No MSPI PRA coefficients were changed.

2Q/11: Changed PRA Parameter(s). A PVNGS PRA Model was completed in January 2011 with a corresponding MSPI Basis Document revision in March 2011. The PRA model revision was a periodic update to the model. As a result of the PRA model change, the Core Damage Frequency and Fussel-Vesely for all monitored trains and components were revised in CDE.

2Q/10: PRA model was revised March 25, 2010 with corresponding MSPI Model revision. This resulted in revision to plant base CDF values and corresponding Fussel-Vessely, Unavailability, and Unreliability values for monitored systems.

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 (ΔCDF)	-4.94E-10	-1.04E-09	-1.45E-09	-1.45E-09	-1.46E-09	-1.46E-09	-1.46E-09	8.16E-10
URI (ΔCDF)	-6.90E-09	-6.78E-09	-6.67E-09	-6.55E-09	-6.41E-09	-6.29E-09	-6.16E-09	-6.23E-09
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-7.40E-09**	**-7.80E-09**	**-8.10E-09**	**-8.00E-09**	**-7.90E-09**	**-7.70E-09**	**-7.60E-09**	**-5.40E-09**

Licensee Comments:

4Q/11: Revised MSPI Bases Document (Rev 9) in 12/2011 for residual heat removal system. Per FAQ 468, returned all Planned Unavailability Baselines to 2002 ??? 2004, 36 month historical plant data. The change also reflected a change in maintenance philosophy. No MSPI PRA coefficients were changed.

2Q/11: Changed PRA Parameter(s). A PVNGS PRA Model was completed in January 2011 with a corresponding MSPI Basis Document revision in March 2011. The PRA model revision was a periodic update to the model. As a result of the PRA model change, the Core Damage Frequency and Fussel-Vesely for all monitored trains and components were revised in CDE.

2Q/10: PRA model was revised March 25, 2010 with corresponding MSPI Model revision. This resulted in revision to plant base CDF values and corresponding Fussel-Vessely, Unavailability, and Unreliability values for monitored systems.

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)	0.00E+00	0.00E+00	0.00E+00	9.66E-12	3.30E-11	7.14E-11	0.00E+00	1.38E-08
URI (ΔCDF)	-4.06E-08	-4.09E-08	-4.13E-08	-4.17E-08	-4.40E-08	-4.44E-08	-4.47E-08	-4.51E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-4.10E-08**	**-4.10E-08**	**-4.10E-08**	**-4.20E-08**	**-4.40E-08**	**-4.40E-08**	**-4.50E-08**	**-3.10E-08**

Licensee Comments:

4Q/11: Revised MSPI Bases Document (Rev 9) in 12/2011 for cooling water systems. Per FAQ 468, returned all Planned Unavailability Baselines to 2002 â€" 2004, 36 month historical plant data.

2Q/11: Changed PRA Parameter(s). A PVNGS PRA Model was completed in January 2011 with a corresponding MSPI Basis Document revision in March 2011. The PRA model revision was a periodic update to the model. As a result of the PRA model change, the Core Damage Frequency and Fussel-Vesely for all monitored trains and components were revised in CDE.

2Q/10: PRA model was revised March 25, 2010 with corresponding MSPI Model revision. This resulted in revision to plant base CDF values and corresponding Fussel-Vessely, Unavailability, and Unreliability values for monitored systems.

Reactor Coolant System Activity

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Activity	**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	0.000332	N/A	0.000257	0.000294	0.000281	0.000267	0.000282	0.000289	0.000589	0.000300	0.000305	0.000318
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**	**N/A**	**0**	**0**	**0**	**0**	**0**	**0**	**0.1**	**0**	**0**	**0**

Reactor Coolant System Activity	**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	0.000327	0.000452	0.000340	0.000364	0.000349	0.000389	0.000303	N/A	0.000226	0.000370	0.000223	0.000217
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**	**0**	**0**	**N/A**	**0**	**0**	**0**	**0**

Licensee Comments:

6/10: Unit 1 Maximum I-131 activity was not obtained in May 2010 because of the refueling outage.

Reactor Coolant System Leakage

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Leakage	**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 leakage	N/A	0.046	0.021	0.027	0.036	0.019	0.035	0.018	0.041	0.017	0.035	0.037
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**	**0.5**	**0.2**	**0.3**	**0.4**	**0.2**	**0.4**	**0.2**	**0.4**	**0.2**	**0.4**	**0.4**
Reactor Coolant System Leakage	**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 leakage	0.054	0.038	0.033	0.038	0.055	0.048	0.034	0.039	0.023	0.034	0.026	0.070
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	**0.5**	**0.4**	**0.3**	**0.4**	**0.6**	**0.5**	**0.3**	**0.4**	**0.2**	**0.3**	**0.3**	**0.7**

Licensee Comments:

6/10: Unit 1 RCS leak rate was not obtained in April 2010 because of the refueling outage.

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	81.0	126.0	20.0	91.0	10.0	184.0	33.0	73.0
Total opportunities	84.0	127.0	20.0	93.0	10.0	187.0	34.0	73.0
Indicator value	**96.1%**	**96.5%**	**97.0%**	**97.5%**	**97.5%**	**97.8%**	**97.8%**	**98.4%**

Licensee Comments: none

Notes

ERO Drill Participation	2Q/10	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11	1Q/12
Participating Key personnel	102.0	97.0	101.0	90.0	90.0	88.0	85.0	99.0
Total Key personnel	102.0	97.0	101.0	90.0	91.0	88.0	86.0	99.0
Indicator value	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**98.9%**	**100.0%**	**98.8%**	**100.0%**

Licensee Comments:

4Q/11: January and March 2011 participation results were revised based on a self-assessment review. This does not affect current quarter results and no-color change resulted.

3Q/11: Routine review of prior data submissions identifed errors in May and June 2011 inputs. No color change occurred as a result of the corrections.

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	909	864	1000	912	912	910	1008	910
Total sirens-tests	912	912	1008	912	912	912	1008	912
Indicator value	**99.8%**	**98.3%**	**98.4%**	**98.4%**	**98.5%**	**99.7%**	**99.9%**	**99.9%**

Licensee Comments:

3Q/10: The regularly scheduled test of the sirens for September 9, 2010, from the Arizona Department of Public Safety was not conducted.

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
Indicator value	**0**	**0**	**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/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.

Last Modified: April 24, 2012

Palo Verde 1

2Q/2012 Performance Indicators

Licensee's General Comments: none

Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

Notes

Unplanned Scrams per 7000 Critical Hrs	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11	1Q/12	2Q/12
Unplanned scrams	0	0	0	0	1.0	1.0	0	0
Critical hours	2208.0	2208.0	2160.0	2184.0	2108.3	1013.2	2184.0	2184.0
Indicator value	**1.0**	**1.0**	**0**	**0**	**0.8**	**1.9**	**1.9**	**1.9**

Licensee Comments: none

Unplanned Power Changes per 7000 Critical Hrs

Thresholds: White > 6.0

Notes

Unplanned Power Changes per 7000 Critical Hrs	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11	1Q/12	2Q/12
Unplanned power changes	0	0	1.0	0	1.0	0	0	0
Critical hours	2208.0	2208.0	2160.0	2184.0	2108.3	1013.2	2184.0	2184.0
Indicator value	**1.9**	**1.9**	**1.8**	**0.8**	**1.6**	**1.9**	**0.9**	**0.9**

Licensee Comments: none

Unplanned Scrams with Complications

Thresholds: White > 1.0

Notes

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

Thresholds: White > 5.0

Notes

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

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	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11	1Q/12	2Q/12
UAI (ΔCDF)	5.24E-10	-2.07E-09	-3.28E-09	-4.11E-09	-4.11E-09	-4.10E-09	1.42E-08	7.42E-09
URI (ΔCDF)	-5.96E-08	-6.02E-08	-6.11E-08	-6.56E-08	-6.63E-08	-6.69E-08	-6.64E-08	-6.59E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-5.90E-08**	**-6.20E-08**	**-6.40E-08**	**-7.00E-08**	**-7.00E-08**	**-7.10E-08**	**-5.20E-08**	**-5.80E-08**

Licensee Comments:

4Q/11: Revised MSPI Bases Document (Rev 9) in 12/2011 for emergency AC power system. Per FAQ 468, returned all Planned Unavailability Baselines to 2002 ??? 2004, 36 month historical plant data. Revised emergency AC diesel generator demands/runtimes per FAQ 480. No MSPI PRA coefficients were changed.

2Q/11: Changed PRA Parameter(s). A PVNGS PRA Model was completed in January 2011 with a corresponding MSPI Basis Document revision in March 2011. The PRA model revision was a periodic update to the model. As a result of the PRA model change, the Core Damage Frequency and Fussel-Vesely for all monitored trains and components were revised in CDE.

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	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11	1Q/12	2Q/12
UAI (ΔCDF)	-4.64E-10	-2.79E-11	2.99E-10	-1.96E-10	2.68E-09	2.26E-09	9.42E-10	9.45E-10
URI (ΔCDF)	-1.32E-08	-1.29E-08	-1.26E-08	-1.17E-08	-1.14E-08	-1.12E-08	-1.11E-08	-1.11E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-1.40E-08**	**-1.30E-08**	**-1.20E-08**	**-1.20E-08**	**-8.80E-09**	**-8.90E-09**	**-1.00E-08**	**-1.00E-08**

Licensee Comments:

4Q/11: Revised MSPI Bases Document (Rev 9) in 12/2011 for high pressure safety injection system. Per FAQ 468, returned all Planned Unavailability Baselines to 2002 ??? 2004, 36 month historical plant data. The change also reflected a change in maintenance philosophy. Revised HPSI demands/runtimes to address greater than 25% deviation. No MSPI PRA coefficients were changed.

2Q/11: Changed PRA Parameter(s). A PVNGS PRA Model was completed in January 2011 with a corresponding MSPI Basis Document revision in March 2011. The PRA model revision was a periodic update to the model. As a result of the PRA model change, the Core Damage Frequency and Fussel-Vesely for all monitored trains and components were revised in CDE.

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	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11	1Q/12	2Q/12
UAI (ΔCDF)	1.65E-08	-4.89E-08	-4.89E-08	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08
URI (ΔCDF)	-5.98E-08	-6.15E-08	-6.35E-08	-6.29E-08	-6.44E-08	-6.58E-08	-6.57E-08	-6.56E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-4.30E-08**	**-1.10E-07**	**-1.10E-07**	**-1.10E-07**	**-1.10E-07**	**-1.10E-07**	**-1.10E-07**	**-1.10E-07**

Licensee Comments:

4Q/11: Revised MSPI Bases Document (Rev 9) in 12/2011 for heat removal system. Per FAQ 468, returned all Planned Unavailability Baselines to 2002 ??? 2004, 36 month historical plant data. Revised heat removal system demands/runtimes to address greater than 25% deviation. No MSPI PRA coefficients were changed.

2Q/11: Changed PRA Parameter(s). A PVNGS PRA Model was completed in January 2011 with a corresponding MSPI Basis Document revision in March 2011. The PRA model revision was a periodic update to the model. As a result of the PRA model change, the Core Damage Frequency and Fussel-Vesely for all monitored trains and components were revised in CDE.

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	**3Q/10**	**4Q/10**	**1Q/11**	**2Q/11**	**3Q/11**	**4Q/11**	**1Q/12**	**2Q/12**
UAI (ΔCDF)	-1.04E-09	-1.45E-09	-1.45E-09	-1.46E-09	-1.46E-09	-1.46E-09	8.16E-10	9.04E-10
URI (ΔCDF)	-6.78E-09	-6.67E-09	-6.55E-09	-6.41E-09	-6.29E-09	-6.16E-09	-6.23E-09	-6.30E-09
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-7.80E-09**	**-8.10E-09**	**-8.00E-09**	**-7.90E-09**	**-7.70E-09**	**-7.60E-09**	**-5.40E-09**	**-5.40E-09**

Licensee Comments:

4Q/11: Revised MSPI Bases Document (Rev 9) in 12/2011 for residual heat removal system. Per FAQ 468, returned all Planned Unavailability Baselines to 2002 ??? 2004, 36 month historical plant data. The change also reflected a change in maintenance philosophy. No MSPI PRA coefficients were changed.

2Q/11: Changed PRA Parameter(s). A PVNGS PRA Model was completed in January 2011 with a corresponding MSPI Basis Document revision in March 2011. The PRA model revision was a periodic update to the model. As a result of the PRA model change, the Core Damage Frequency and Fussel-Vesely for all monitored trains and components were revised in CDE.

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	**3Q/10**	**4Q/10**	**1Q/11**	**2Q/11**	**3Q/11**	**4Q/11**	**1Q/12**	**2Q/12**
UAI (ΔCDF)	0.00E+00	0.00E+00	9.66E-12	3.30E-11	7.14E-11	0.00E+00	1.38E-08	1.40E-08
URI (ΔCDF)	-4.09E-08	-4.13E-08	-4.17E-08	-4.40E-08	-4.44E-08	-4.47E-08	-4.51E-08	-4.54E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-4.10E-08**	**-4.10E-08**	**-4.20E-08**	**-4.40E-08**	**-4.40E-08**	**-4.50E-08**	**-3.10E-08**	**-3.10E-08**

Licensee Comments:

4Q/11: Revised MSPI Bases Document (Rev 9) in 12/2011 for cooling water systems. Per FAQ 468, returned all Planned Unavailability Baselines to 2002 â€" 2004, 36 month historical plant data.

2Q/11: Changed PRA Parameter(s). A PVNGS PRA Model was completed in January 2011 with a corresponding MSPI Basis Document revision in March 2011. The PRA model revision was a periodic update to the model. As a result of the PRA model change, the Core Damage Frequency and Fussel-Vesely for all monitored trains and components were revised in CDE.

Reactor Coolant System Activity

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Activity	7/10	8/10	9/10	10/10	11/10	12/10	1/11	2/11	3/11	4/11	5/11	6/11
Maximum activity	0.000294	0.000281	0.000267	0.000282	0.000289	0.000589	0.000300	0.000305	0.000318	0.000327	0.000452	0.000340
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**	**0.1**	**0**	**0**	**0**	**0**	**0**	**0**

Reactor Coolant System Activity	7/11	8/11	9/11	10/11	11/11	12/11	1/12	2/12	3/12	4/12	5/12	6/12
Maximum activity	0.000364	0.000349	0.000389	0.000303	N/A	0.000226	0.000370	0.000223	0.000217	0.000228	0.000246	0.000254
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**	**N/A**	**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	**7/10**	**8/10**	**9/10**	**10/10**	**11/10**	**12/10**	**1/11**	**2/11**	**3/11**	**4/11**	**5/11**	**6/11**
Maximum leakage	0.027	0.036	0.019	0.035	0.018	0.041	0.017	0.035	0.037	0.054	0.038	0.033
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**	**0.4**	**0.2**	**0.4**	**0.2**	**0.4**	**0.2**	**0.4**	**0.4**	**0.5**	**0.4**	**0.3**
Reactor Coolant System Leakage	**7/11**	**8/11**	**9/11**	**10/11**	**11/11**	**12/11**	**1/12**	**2/12**	**3/12**	**4/12**	**5/12**	**6/12**
Maximum leakage	0.038	0.055	0.048	0.034	0.039	0.023	0.034	0.026	0.070	0.032	0.074	0.049
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	**0.4**	**0.6**	**0.5**	**0.3**	**0.4**	**0.2**	**0.3**	**0.3**	**0.7**	**0.3**	**0.7**	**0.5**

Licensee Comments: none

Drill/Exercise Performance

Thresholds: White < 90.0% Yellow < 70.0%

Notes

Drill/Exercise Performance	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11	1Q/12	2Q/12
Successful opportunities	126.0	20.0	91.0	10.0	184.0	33.0	73.0	15.0
Total opportunities	127.0	20.0	93.0	10.0	187.0	34.0	73.0	15.0
Indicator value	**96.5%**	**97.0%**	**97.5%**	**97.5%**	**97.8%**	**97.8%**	**98.4%**	**98.7%**

Licensee Comments: none

Thresholds: White < 80.0% Yellow < 60.0%

Notes

ERO Drill Participation	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11	1Q/12	2Q/12
Participating Key personnel	97.0	101.0	90.0	90.0	88.0	85.0	99.0	95.0
Total Key personnel	97.0	101.0	90.0	91.0	88.0	86.0	99.0	95.0
Indicator value	**100.0%**	**100.0%**	**100.0%**	**98.9%**	**100.0%**	**98.8%**	**100.0%**	**100.0%**

Licensee Comments:

4Q/11: January and March 2011 participation results were revised based on a self-assessment review. This does not affect current quarter results and no-color change resulted.

3Q/11: Routine review of prior data submissions identifed errors in May and June 2011 inputs. No color change occurred as a result of the corrections.

Thresholds: White < 94.0% Yellow < 90.0%

Notes

Alert & Notification System	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11	1Q/12	2Q/12
Successful siren-tests	864	1000	912	912	910	1008	910	912
Total sirens-tests	912	1008	912	912	912	1008	912	912
Indicator value	**98.3%**	**98.4%**	**98.4%**	**98.5%**	**99.7%**	**99.9%**	**99.9%**	**99.9%**

Licensee Comments:

3Q/10: The regularly scheduled test of the sirens for September 9, 2010, from the Arizona Department of Public Safety was not conducted.

Occupational Exposure Control Effectiveness

Thresholds: White > 2.0 Yellow > 5.0

Notes

Occupational Exposure Control Effectiveness	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11	1Q/12	2Q/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
Indicator value	**0**	**0**	**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	3Q/10	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11	1Q/12	2Q/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

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.

Palo Verde 1

3Q/2012 Performance Indicators

Licensee's General Comments: none

Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

Notes

Unplanned Scrams per 7000 Critical Hrs	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11	1Q/12	2Q/12	3Q/12
Unplanned scrams	0	0	0	1.0	1.0	0	0	0
Critical hours	2208.0	2160.0	2184.0	2108.3	1013.2	2184.0	2184.0	2208.0
Indicator value	**1.0**	**0**	**0**	**0.8**	**1.9**	**1.9**	**1.9**	**0.9**

Licensee Comments: none

Thresholds: White > 6.0

Notes

Unplanned Power Changes per 7000 Critical Hrs	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11	1Q/12	2Q/12	3Q/12
Unplanned power changes	0	1.0	0	1.0	0	0	0	0
Critical hours	2208.0	2160.0	2184.0	2108.3	1013.2	2184.0	2184.0	2208.0
Indicator value	**1.9**	**1.8**	**0.8**	**1.6**	**1.9**	**0.9**	**0.9**	**0**

Licensee Comments: none

Thresholds: White > 1.0

Notes

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

Thresholds: White > 5.0

Notes

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

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	**4Q/10**	**1Q/11**	**2Q/11**	**3Q/11**	**4Q/11**	**1Q/12**	**2Q/12**	**3Q/12**
UAI (ΔCDF)	-2.07E-09	-3.28E-09	-4.11E-09	-4.11E-09	-4.10E-09	1.42E-08	7.42E-09	5.13E-09
URI (ΔCDF)	-6.02E-08	-6.11E-08	-6.56E-08	-6.63E-08	-6.69E-08	-6.64E-08	-6.59E-08	-6.54E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-6.20E-08**	**-6.40E-08**	**-7.00E-08**	**-7.00E-08**	**-7.10E-08**	**-5.20E-08**	**-5.80E-08**	**-6.00E-08**

Licensee Comments:

4Q/11: Revised MSPI Bases Document (Rev 9) in 12/2011 for emergency AC power system. Per FAQ 468, returned all Planned Unavailability Baselines to 2002 ??? 2004, 36 month historical plant data. Revised emergency AC diesel generator demands/runtimes per FAQ 480. No MSPI PRA coefficients were changed.

2Q/11: Changed PRA Parameter(s). A PVNGS PRA Model was completed in January 2011 with a corresponding MSPI Basis Document revision in March 2011. The PRA model revision was a periodic update to the model. As a result of the PRA model change, the Core Damage Frequency and Fussel-Vesely for all monitored trains and components were revised in CDE.

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	**4Q/10**	**1Q/11**	**2Q/11**	**3Q/11**	**4Q/11**	**1Q/12**	**2Q/12**	**3Q/12**
UAI (ΔCDF)	-2.79E-11	2.99E-10	-1.96E-10	2.68E-09	2.26E-09	9.42E-10	9.45E-10	9.93E-10
URI (ΔCDF)	-1.29E-08	-1.26E-08	-1.17E-08	-1.14E-08	-1.12E-08	-1.11E-08	-1.11E-08	-1.10E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-1.30E-08**	**-1.20E-08**	**-1.20E-08**	**-8.80E-09**	**-8.90E-09**	**-1.00E-08**	**-1.00E-08**	**-1.00E-08**

Licensee Comments:

4Q/11: Revised MSPI Bases Document (Rev 9) in 12/2011 for high pressure safety injection system. Per FAQ 468, returned all Planned Unavailability Baselines to 2002 ??? 2004, 36 month historical plant data. The change also reflected a change in maintenance philosophy. Revised HPSI demands/runtimes to address greater than 25% deviation. No MSPI PRA coefficients were changed.

2Q/11: Changed PRA Parameter(s). A PVNGS PRA Model was completed in January 2011 with a corresponding MSPI Basis Document revision in March 2011. The PRA model revision was a periodic update to the model. As a result of the PRA model change, the Core Damage Frequency and Fussel-Vesely for all monitored trains and components were revised in CDE.

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	**4Q/10**	**1Q/11**	**2Q/11**	**3Q/11**	**4Q/11**	**1Q/12**	**2Q/12**	**3Q/12**
UAI (ΔCDF)	-4.89E-08	-4.89E-08	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08
URI (ΔCDF)	-6.15E-08	-6.35E-08	-6.29E-08	-6.44E-08	-6.58E-08	-6.57E-08	-6.56E-08	-6.56E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-1.10E-07**	**-1.10E-07**	**-1.10E-07**	**-1.10E-07**	**-1.10E-07**	**-1.10E-07**	**-1.10E-07**	**-1.10E-07**

Licensee Comments:

4Q/11: Revised MSPI Bases Document (Rev 9) in 12/2011 for heat removal system. Per FAQ 468, returned all Planned Unavailability Baselines to 2002 ??? 2004, 36 month historical plant data. Revised heat removal system demands/runtimes to address greater than 25% deviation. No MSPI PRA coefficients were changed.

2Q/11: Changed PRA Parameter(s). A PVNGS PRA Model was completed in January 2011 with a corresponding MSPI Basis Document revision in March 2011. The PRA model revision was a periodic update to the model. As a result of the PRA model change, the Core Damage Frequency and Fussel-Vesely for all monitored trains and components were revised in CDE.

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	**4Q/10**	**1Q/11**	**2Q/11**	**3Q/11**	**4Q/11**	**1Q/12**	**2Q/12**	**3Q/12**
UAI (ΔCDF)	-1.45E-09	-1.45E-09	-1.46E-09	-1.46E-09	-1.46E-09	8.16E-10	9.04E-10	-8.38E-11
URI (ΔCDF)	-6.67E-09	-6.55E-09	-6.41E-09	-6.29E-09	-6.16E-09	-6.23E-09	-6.30E-09	-6.37E-09
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-8.10E-09**	**-8.00E-09**	**-7.90E-09**	**-7.70E-09**	**-7.60E-09**	**-5.40E-09**	**-5.40E-09**	**-6.50E-09**

Licensee Comments:

4Q/11: Revised MSPI Bases Document (Rev 9) in 12/2011 for residual heat removal system. Per FAQ 468, returned all Planned Unavailability Baselines to 2002 ??? 2004, 36 month historical plant data. The change also reflected a change in maintenance philosophy. No MSPI PRA coefficients were changed.

2Q/11: Changed PRA Parameter(s). A PVNGS PRA Model was completed in January 2011 with a corresponding MSPI Basis Document revision in March 2011. The PRA model revision was a periodic update to the model. As a result of the PRA model change, the Core Damage Frequency and Fussel-Vesely for all monitored trains and components were revised in CDE.

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	**4Q/10**	**1Q/11**	**2Q/11**	**3Q/11**	**4Q/11**	**1Q/12**	**2Q/12**	**3Q/12**
UAI (ΔCDF)	0.00E+00	9.66E-12	3.30E-11	7.14E-11	0.00E+00	1.38E-08	1.40E-08	1.42E-08
URI (ΔCDF)	-4.13E-08	-4.17E-08	-4.40E-08	-4.44E-08	-4.47E-08	-4.51E-08	-4.54E-08	-4.57E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-4.10E-08**	**-4.20E-08**	**-4.40E-08**	**-4.40E-08**	**-4.50E-08**	**-3.10E-08**	**-3.10E-08**	**-3.20E-08**

Licensee Comments:

4Q/11: Revised MSPI Bases Document (Rev 9) in 12/2011 for cooling water systems. Per FAQ 468, returned all Planned Unavailability Baselines to 2002 â€" 2004, 36 month historical plant data.

2Q/11: Changed PRA Parameter(s). A PVNGS PRA Model was completed in January 2011 with a corresponding MSPI Basis Document revision in March 2011. The PRA model revision was a periodic update to the model. As a result of the PRA model change, the Core Damage Frequency and Fussel-Vesely for all monitored trains and components were revised in CDE.

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Activity	**10/10**	**11/10**	**12/10**	**1/11**	**2/11**	**3/11**	**4/11**	**5/11**	**6/11**	**7/11**	**8/11**	**9/11**
Maximum activity	0.000282	0.000289	0.000589	0.000300	0.000305	0.000318	0.000327	0.000452	0.000340	0.000364	0.000349	0.000389
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**	**0.1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Reactor Coolant System Activity	**10/11**	**11/11**	**12/11**	**1/12**	**2/12**	**3/12**	**4/12**	**5/12**	**6/12**	**7/12**	**8/12**	**9/12**
Maximum activity	0.000303	N/A	0.000226	0.000370	0.000223	0.000217	0.000228	0.000246	0.000254	0.000270	0.000257	0.000272
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**	**N/A**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Leakage	10/10	11/10	12/10	1/11	2/11	3/11	4/11	5/11	6/11	7/11	8/11	9/11
Maximum leakage	0.035	0.018	0.041	0.017	0.035	0.037	0.054	0.038	0.033	0.038	0.055	0.048
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	**0.4**	**0.2**	**0.4**	**0.2**	**0.4**	**0.4**	**0.5**	**0.4**	**0.3**	**0.4**	**0.6**	**0.5**
Reactor Coolant System Leakage	**10/11**	**11/11**	**12/11**	**1/12**	**2/12**	**3/12**	**4/12**	**5/12**	**6/12**	**7/12**	**8/12**	**9/12**
Maximum leakage	0.034	0.039	0.023	0.034	0.026	0.070	0.032	0.074	0.049	0.049	0.050	0.057
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**	**0.4**	**0.2**	**0.3**	**0.3**	**0.7**	**0.3**	**0.7**	**0.5**	**0.5**	**0.5**	**0.6**

Licensee Comments: none

Thresholds: White < 90.0% Yellow < 70.0%

Notes

Drill/Exercise Performance	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11	1Q/12	2Q/12	3Q/12
Successful opportunities	20.0	91.0	10.0	184.0	33.0	73.0	15.0	181.0
Total opportunities	20.0	93.0	10.0	187.0	34.0	73.0	15.0	186.0
Indicator value	**97.0%**	**97.5%**	**97.5%**	**97.8%**	**97.8%**	**98.4%**	**98.7%**	**98.2%**

Licensee Comments: none

Thresholds: White < 80.0% Yellow < 60.0%

Notes

ERO Drill Participation	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11	1Q/12	2Q/12	3Q/12
Participating Key personnel	101.0	90.0	90.0	88.0	85.0	99.0	95.0	95.0
Total Key personnel	101.0	90.0	91.0	88.0	86.0	99.0	95.0	95.0
Indicator value	**100.0%**	**100.0%**	**98.9%**	**100.0%**	**98.8%**	**100.0%**	**100.0%**	**100.0%**

Licensee Comments:

4Q/11: January and March 2011 participation results were revised based on a self-assessment review. This does not affect current quarter results and no-color change resulted.

3Q/11: Routine review of prior data submissions identifed errors in May and June 2011 inputs. No color change occurred as a result of the corrections.

Thresholds: White < 94.0% Yellow < 90.0%

Notes

Alert & Notification System	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11	1Q/12	2Q/12	3Q/12
Successful siren-tests	1000	912	912	910	1008	910	912	911
Total sirens-tests	1008	912	912	912	1008	912	912	912
Indicator value	**98.4%**	**98.4%**	**98.5%**	**99.7%**	**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	4Q/10	1Q/11	2Q/11	3Q/11	4Q/11	1Q/12	2Q/12	3Q/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
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Thresholds: White > 1.0 Yellow > 3.0

Notes

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

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: October 24, 2012

Palo Verde 1

4Q/2012 Performance Indicators

Licensee's General Comments: none

Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

Notes

Unplanned Scrams per 7000 Critical Hrs	1Q/11	2Q/11	3Q/11	4Q/11	1Q/12	2Q/12	3Q/12	4Q/12
Unplanned scrams	0	0	1.0	1.0	0	0	0	0
Critical hours	2160.0	2184.0	2108.3	1013.2	2184.0	2184.0	2208.0	2208.0
Indicator value	**0**	**0**	**0.8**	**1.9**	**1.9**	**1.9**	**0.9**	**0**

Licensee Comments: none

Thresholds: White > 6.0

Notes

Unplanned Power Changes per 7000 Critical Hrs	1Q/11	2Q/11	3Q/11	4Q/11	1Q/12	2Q/12	3Q/12	4Q/12
Unplanned power changes	1.0	0	1.0	0	0	0	0	0
Critical hours	2160.0	2184.0	2108.3	1013.2	2184.0	2184.0	2208.0	2208.0
Indicator value	**1.8**	**0.8**	**1.6**	**1.9**	**0.9**	**0.9**	**0**	**0**

Licensee Comments: none

Unplanned Scrams with Complications

Thresholds: White > 1.0

Notes

Unplanned Scrams with Complications	1Q/11	2Q/11	3Q/11	4Q/11	1Q/12	2Q/12	3Q/12	4Q/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 (PWR)

Thresholds: White > 5.0

Notes

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

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	**1Q/11**	**2Q/11**	**3Q/11**	**4Q/11**	**1Q/12**	**2Q/12**	**3Q/12**	**4Q/12**
UAI (ΔCDF)	-3.28E-09	-4.11E-09	-4.11E-09	-4.10E-09	1.42E-08	7.42E-09	5.13E-09	1.52E-09
URI (ΔCDF)	-6.11E-08	-6.56E-08	-6.63E-08	-6.69E-08	-6.64E-08	-6.59E-08	-6.54E-08	-6.41E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-6.40E-08**	**-7.00E-08**	**-7.00E-08**	**-7.10E-08**	**-5.20E-08**	**-5.80E-08**	**-6.00E-08**	**-6.30E-08**

Licensee Comments:

4Q/11: Revised MSPI Bases Document (Rev 9) in 12/2011 for emergency AC power system. Per FAQ 468, returned all Planned Unavailability Baselines to 2002 ??? 2004, 36 month historical plant data. Revised emergency AC diesel generator demands/runtimes per FAQ 480. No MSPI PRA coefficients were changed.

2Q/11: Changed PRA Parameter(s). A PVNGS PRA Model was completed in January 2011 with a corresponding MSPI Basis Document revision in March 2011. The PRA model revision was a periodic update to the model. As a result of the PRA model change, the Core Damage Frequency and Fussel-Vesely for all monitored trains and components were revised in CDE.

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/11**	**2Q/11**	**3Q/11**	**4Q/11**	**1Q/12**	**2Q/12**	**3Q/12**	**4Q/12**
UAI (ΔCDF)	2.99E-10	-1.96E-10	2.68E-09	2.26E-09	9.42E-10	9.45E-10	9.93E-10	2.06E-09
URI (ΔCDF)	-1.26E-08	-1.17E-08	-1.14E-08	-1.12E-08	-1.11E-08	-1.11E-08	-1.10E-08	-1.10E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-1.20E-08**	**-1.20E-08**	**-8.80E-09**	**-8.90E-09**	**-1.00E-08**	**-1.00E-08**	**-1.00E-08**	**-8.90E-09**

Licensee Comments:

4Q/11: Revised MSPI Bases Document (Rev 9) in 12/2011 for high pressure safety injection system. Per FAQ 468, returned all Planned Unavailability Baselines to 2002 ??? 2004, 36 month historical plant data. The change also reflected a change in maintenance philosophy. Revised HPSI demands/runtimes to address greater than 25% deviation. No MSPI PRA coefficients were changed.

2Q/11: Changed PRA Parameter(s). A PVNGS PRA Model was completed in January 2011 with a corresponding MSPI Basis Document revision in March 2011. The PRA model revision was a periodic update to the model. As a result of the PRA model change, the Core Damage Frequency and Fussel-Vesely for all monitored trains and components were revised in CDE.

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/11	2Q/11	3Q/11	4Q/11	1Q/12	2Q/12	3Q/12	4Q/12
UAI (ΔCDF)	-4.89E-08	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08
URI (ΔCDF)	-6.35E-08	-6.29E-08	-6.44E-08	-6.58E-08	-6.57E-08	-6.56E-08	-6.56E-08	-6.41E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-1.10E-07**	**-1.10E-07**	**-1.10E-07**	**-1.10E-07**	**-1.10E-07**	**-1.10E-07**	**-1.10E-07**	**-1.10E-07**

Licensee Comments:

4Q/11: Revised MSPI Bases Document (Rev 9) in 12/2011 for heat removal system. Per FAQ 468, returned all Planned Unavailability Baselines to 2002 ??? 2004, 36 month historical plant data. Revised heat removal system demands/runtimes to address greater than 25% deviation. No MSPI PRA coefficients were changed.

2Q/11: Changed PRA Parameter(s). A PVNGS PRA Model was completed in January 2011 with a corresponding MSPI Basis Document revision in March 2011. The PRA model revision was a periodic update to the model. As a result of the PRA model change, the Core Damage Frequency and Fussel-Vesely for all monitored trains and components were revised in CDE.

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/11**	**2Q/11**	**3Q/11**	**4Q/11**	**1Q/12**	**2Q/12**	**3Q/12**	**4Q/12**
UAI (ΔCDF)	-1.45E-09	-1.46E-09	-1.46E-09	-1.46E-09	8.16E-10	9.04E-10	-8.38E-11	-5.42E-10
URI (ΔCDF)	-6.55E-09	-6.41E-09	-6.29E-09	-6.16E-09	-6.23E-09	-6.30E-09	-6.37E-09	-6.37E-09
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-8.00E-09**	**-7.90E-09**	**-7.70E-09**	**-7.60E-09**	**-5.40E-09**	**-5.40E-09**	**-6.50E-09**	**-6.90E-09**

Licensee Comments:

4Q/11: Revised MSPI Bases Document (Rev 9) in 12/2011 for residual heat removal system. Per FAQ 468, returned all Planned Unavailability Baselines to 2002 ??? 2004, 36 month historical plant data. The change also reflected a change in maintenance philosophy. No MSPI PRA coefficients were changed.

2Q/11: Changed PRA Parameter(s). A PVNGS PRA Model was completed in January 2011 with a corresponding MSPI Basis Document revision in March 2011. The PRA model revision was a periodic update to the model. As a result of the PRA model change, the Core Damage Frequency and Fussel-Vesely for all monitored trains and components were revised in CDE.

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/11**	**2Q/11**	**3Q/11**	**4Q/11**	**1Q/12**	**2Q/12**	**3Q/12**	**4Q/12**
UAI (ΔCDF)	9.66E-12	3.30E-11	7.14E-11	0.00E+00	1.38E-08	1.40E-08	1.42E-08	1.09E-08
URI (ΔCDF)	-4.17E-08	-4.40E-08	-4.44E-08	-4.47E-08	-4.51E-08	-4.54E-08	-4.57E-08	-4.57E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-4.20E-08**	**-4.40E-08**	**-4.40E-08**	**-4.50E-08**	**-3.10E-08**	**-3.10E-08**	**-3.20E-08**	**-3.50E-08**

Licensee Comments:

4Q/11: Revised MSPI Bases Document (Rev 9) in 12/2011 for cooling water systems. Per FAQ 468, returned all Planned Unavailability Baselines to 2002 â€" 2004, 36 month historical plant data.

2Q/11: Changed PRA Parameter(s). A PVNGS PRA Model was completed in January 2011 with a corresponding MSPI Basis Document revision in March 2011. The PRA model revision was a periodic update to the model. As a result of the PRA model change, the Core Damage Frequency and Fussel-Vesely for all monitored trains and components were revised in CDE.

Reactor Coolant System Activity

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Activity	**1/11**	**2/11**	**3/11**	**4/11**	**5/11**	**6/11**	**7/11**	**8/11**	**9/11**	**10/11**	**11/11**	**12/11**
Maximum activity	0.000300	0.000305	0.000318	0.000327	0.000452	0.000340	0.000364	0.000349	0.000389	0.000303	N/A	0.000226
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**	**0**	**0**	**0**	**0**	**0**	**N/A**	**0**

Reactor Coolant System Activity	**1/12**	**2/12**	**3/12**	**4/12**	**5/12**	**6/12**	**7/12**	**8/12**	**9/12**	**10/12**	**11/12**	**12/12**
Maximum activity	0.000370	0.000223	0.000217	0.000228	0.000246	0.000254	0.000270	0.000257	0.000272	0.000289	0.000287	0.000291
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**	**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	**1/11**	**2/11**	**3/11**	**4/11**	**5/11**	**6/11**	**7/11**	**8/11**	**9/11**	**10/11**	**11/11**	**12/11**
Maximum leakage	0.017	0.035	0.037	0.054	0.038	0.033	0.038	0.055	0.048	0.034	0.039	0.023
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**	**0.4**	**0.4**	**0.5**	**0.4**	**0.3**	**0.4**	**0.6**	**0.5**	**0.3**	**0.4**	**0.2**
Reactor Coolant System Leakage	**1/12**	**2/12**	**3/12**	**4/12**	**5/12**	**6/12**	**7/12**	**8/12**	**9/12**	**10/12**	**11/12**	**12/12**
Maximum leakage	0.034	0.026	0.070	0.032	0.074	0.049	0.049	0.050	0.057	0.046	0.049	0.040
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**	**0.3**	**0.7**	**0.3**	**0.7**	**0.5**	**0.5**	**0.5**	**0.6**	**0.5**	**0.5**	**0.4**

Licensee Comments: none

Thresholds: White < 90.0% Yellow < 70.0%

Notes

Drill/Exercise Performance	1Q/11	2Q/11	3Q/11	4Q/11	1Q/12	2Q/12	3Q/12	4Q/12
Successful opportunities	91.0	10.0	184.0	33.0	73.0	15.0	181.0	2.0
Total opportunities	93.0	10.0	187.0	34.0	73.0	15.0	186.0	2.0
Indicator value	**97.5%**	**97.5%**	**97.8%**	**97.8%**	**98.4%**	**98.7%**	**98.2%**	**98.2%**

Licensee Comments: none

Thresholds: White < 80.0% Yellow < 60.0%

Notes

ERO Drill Participation	1Q/11	2Q/11	3Q/11	4Q/11	1Q/12	2Q/12	3Q/12	4Q/12
Participating Key personnel	90.0	90.0	88.0	85.0	99.0	95.0	95.0	90.0
Total Key personnel	90.0	91.0	88.0	86.0	99.0	95.0	95.0	90.0
Indicator value	**100.0%**	**98.9%**	**100.0%**	**98.8%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Licensee Comments:

4Q/11: January and March 2011 participation results were revised based on a self-assessment review. This does not affect current quarter results and no-color change resulted.

3Q/11: Routine review of prior data submissions identifed errors in May and June 2011 inputs. No color change occurred as a result of the corrections.

Thresholds: White < 94.0% Yellow < 90.0%

Notes

Alert & Notification System	1Q/11	2Q/11	3Q/11	4Q/11	1Q/12	2Q/12	3Q/12	4Q/12
Successful siren-tests	912	912	910	1008	910	912	911	1007
Total sirens-tests	912	912	912	1008	912	912	912	1008
Indicator value	**98.4%**	**98.5%**	**99.7%**	**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	1Q/11	2Q/11	3Q/11	4Q/11	1Q/12	2Q/12	3Q/12	4Q/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
Indicator value	**0**	**0**	**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	1Q/11	2Q/11	3Q/11	4Q/11	1Q/12	2Q/12	3Q/12	4Q/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

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.

Palo Verde 1

1Q/2013 Performance Indicators

Licensee's General Comments: none

Notes

Unplanned Scrams per 7000 Critical Hrs	2Q/11	3Q/11	4Q/11	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13
Unplanned scrams	0	1.0	1.0	0	0	0	0	0
Critical hours	2184.0	2108.3	1013.2	2184.0	2184.0	2208.0	2208.0	2112.0
Indicator value	**0**	**0.8**	**1.9**	**1.9**	**1.9**	**0.9**	**0**	**0**

Licensee Comments: none

Thresholds: White > 6.0

Notes

Unplanned Power Changes per 7000 Critical Hrs	2Q/11	3Q/11	4Q/11	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13
Unplanned power changes	0	1.0	0	0	0	0	0	0
Critical hours	2184.0	2108.3	1013.2	2184.0	2184.0	2208.0	2208.0	2112.0
Indicator value	**0.8**	**1.6**	**1.9**	**0.9**	**0.9**	**0**	**0**	**0**

Licensee Comments: none

Unplanned Scrams with Complications

Thresholds: White > 1.0

Notes

Unplanned Scrams with Complications	2Q/11	3Q/11	4Q/11	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13
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

Thresholds: White > 5.0

Notes

Safety System Functional Failures (PWR)	2Q/11	3Q/11	4Q/11	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13
Safety System Functional Failures	0	0	0	0	0	0	0	1
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**

Licensee Comments:

1Q/13: LER 0500528/0500529/0500530-2012-006-00 for SSFF reported in February 2013 in each of the three units.

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/11**	**3Q/11**	**4Q/11**	**1Q/12**	**2Q/12**	**3Q/12**	**4Q/12**	**1Q/13**
UAI (ΔCDF)	-4.11E-09	-4.11E-09	-4.10E-09	1.42E-08	7.42E-09	5.13E-09	1.52E-09	2.45E-09
URI (ΔCDF)	-6.56E-08	-6.63E-08	-6.69E-08	-6.64E-08	-6.59E-08	-6.54E-08	-6.41E-08	-6.28E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-7.00E-08**	**-7.00E-08**	**-7.10E-08**	**-5.20E-08**	**-5.80E-08**	**-6.00E-08**	**-6.30E-08**	**-6.00E-08**

Licensee Comments:

4Q/11: Revised MSPI Bases Document (Rev 9) in 12/2011 for emergency AC power system. Per FAQ 468, returned all Planned Unavailability Baselines to 2002 ??? 2004, 36 month historical plant data. Revised emergency AC diesel generator demands/runtimes per FAQ 480. No MSPI PRA coefficients were changed.

2Q/11: Changed PRA Parameter(s). A PVNGS PRA Model was completed in January 2011 with a corresponding MSPI Basis Document revision in March 2011. The PRA model revision was a periodic update to the model. As a result of the PRA model change, the Core Damage Frequency and Fussel-Vesely for all monitored trains and components were revised in CDE.

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/11**	**3Q/11**	**4Q/11**	**1Q/12**	**2Q/12**	**3Q/12**	**4Q/12**	**1Q/13**
UAI (ΔCDF)	-1.96E-10	2.68E-09	2.26E-09	9.42E-10	9.45E-10	9.93E-10	2.06E-09	4.99E-10
URI (ΔCDF)	-1.17E-08	-1.14E-08	-1.12E-08	-1.11E-08	-1.11E-08	-1.10E-08	-1.10E-08	-1.09E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-1.20E-08**	**-8.80E-09**	**-8.90E-09**	**-1.00E-08**	**-1.00E-08**	**-1.00E-08**	**-8.90E-09**	**-1.00E-08**

Licensee Comments:

4Q/11: Revised MSPI Bases Document (Rev 9) in 12/2011 for high pressure safety injection system. Per FAQ 468, returned all Planned Unavailability Baselines to 2002 ??? 2004, 36 month historical plant data. The change also reflected a change in maintenance philosophy. Revised HPSI demands/runtimes to address greater than 25% deviation. No MSPI PRA coefficients were changed.

2Q/11: Changed PRA Parameter(s). A PVNGS PRA Model was completed in January 2011 with a corresponding MSPI Basis Document revision in March 2011. The PRA model revision was a periodic update to the model. As a result of the PRA model change, the Core Damage Frequency and Fussel-Vesely for all monitored trains and components were revised in CDE.

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/11	3Q/11	4Q/11	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13
UAI (ΔCDF)	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08
URI (ΔCDF)	-6.29E-08	-6.44E-08	-6.58E-08	-6.57E-08	-6.56E-08	-6.56E-08	-6.41E-08	-6.27E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-1.10E-07**	**-1.10E-07**	**-1.10E-07**	**-1.10E-07**	**-1.10E-07**	**-1.10E-07**	**-1.10E-07**	**-1.10E-07**

Licensee Comments:

4Q/11: Revised MSPI Bases Document (Rev 9) in 12/2011 for heat removal system. Per FAQ 468, returned all Planned Unavailability Baselines to 2002 ??? 2004, 36 month historical plant data. Revised heat removal system demands/runtimes to address greater than 25% deviation. No MSPI PRA coefficients were changed.

2Q/11: Changed PRA Parameter(s). A PVNGS PRA Model was completed in January 2011 with a corresponding MSPI Basis Document revision in March 2011. The PRA model revision was a periodic update to the model. As a result of the PRA model change, the Core Damage Frequency and Fussel-Vesely for all monitored trains and components were revised in CDE.

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/11**	**3Q/11**	**4Q/11**	**1Q/12**	**2Q/12**	**3Q/12**	**4Q/12**	**1Q/13**
UAI (ΔCDF)	-1.46E-09	-1.46E-09	-1.46E-09	8.16E-10	9.04E-10	-8.38E-11	-5.42E-10	-5.35E-10
URI (ΔCDF)	-6.41E-09	-6.29E-09	-6.16E-09	-6.23E-09	-6.30E-09	-6.37E-09	-6.37E-09	-6.37E-09
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-7.90E-09**	**-7.70E-09**	**-7.60E-09**	**-5.40E-09**	**-5.40E-09**	**-6.50E-09**	**-6.90E-09**	**-6.90E-09**

Licensee Comments:

4Q/11: Revised MSPI Bases Document (Rev 9) in 12/2011 for residual heat removal system. Per FAQ 468, returned all Planned Unavailability Baselines to 2002 ??? 2004, 36 month historical plant data. The change also reflected a change in maintenance philosophy. No MSPI PRA coefficients were changed.

2Q/11: Changed PRA Parameter(s). A PVNGS PRA Model was completed in January 2011 with a corresponding MSPI Basis Document revision in March 2011. The PRA model revision was a periodic update to the model. As a result of the PRA model change, the Core Damage Frequency and Fussel-Vesely for all monitored trains and components were revised in CDE.

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/11**	**3Q/11**	**4Q/11**	**1Q/12**	**2Q/12**	**3Q/12**	**4Q/12**	**1Q/13**
UAI (ΔCDF)	3.30E-11	7.14E-11	0.00E+00	1.38E-08	1.40E-08	1.42E-08	1.09E-08	1.22E-08
URI (ΔCDF)	-4.40E-08	-4.44E-08	-4.47E-08	-4.51E-08	-4.54E-08	-4.57E-08	-4.57E-08	-4.57E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-4.40E-08**	**-4.40E-08**	**-4.50E-08**	**-3.10E-08**	**-3.10E-08**	**-3.20E-08**	**-3.50E-08**	**-3.40E-08**

Licensee Comments:

4Q/11: Revised MSPI Bases Document (Rev 9) in 12/2011 for cooling water systems. Per FAQ 468, returned all Planned Unavailability Baselines to 2002 â€" 2004, 36 month historical plant data.

2Q/11: Changed PRA Parameter(s). A PVNGS PRA Model was completed in January 2011 with a corresponding MSPI Basis Document revision in March 2011. The PRA model revision was a periodic update to the model. As a result of the PRA model change, the Core Damage Frequency and Fussel-Vesely for all monitored trains and components were revised in CDE.

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Activity	**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	0.000327	0.000452	0.000340	0.000364	0.000349	0.000389	0.000303	N/A	0.000226	0.000370	0.000223	0.000217
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**	**0**	**0**	**N/A**	**0**	**0**	**0**	**0**

Reactor Coolant System Activity	**4/12**	**5/12**	**6/12**	**7/12**	**8/12**	**9/12**	**10/12**	**11/12**	**12/12**	**1/13**	**2/13**	**3/13**
Maximum activity	0.000228	0.000246	0.000254	0.000270	0.000257	0.000272	0.000289	0.000287	0.000291	0.000298	0.000320	0.000312
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**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Leakage	**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 leakage	0.054	0.038	0.033	0.038	0.055	0.048	0.034	0.039	0.023	0.034	0.026	0.070
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	**0.5**	**0.4**	**0.3**	**0.4**	**0.6**	**0.5**	**0.3**	**0.4**	**0.2**	**0.3**	**0.3**	**0.7**
Reactor Coolant System Leakage	**4/12**	**5/12**	**6/12**	**7/12**	**8/12**	**9/12**	**10/12**	**11/12**	**12/12**	**1/13**	**2/13**	**3/13**
Maximum leakage	0.032	0.074	0.049	0.049	0.050	0.057	0.046	0.049	0.040	0.041	0.029	0.067
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**	**0.7**	**0.5**	**0.5**	**0.5**	**0.6**	**0.5**	**0.5**	**0.4**	**0.4**	**0.3**	**0.7**

Licensee Comments: none

Thresholds: White < 90.0% Yellow < 70.0%

Notes

Drill/Exercise Performance	2Q/11	3Q/11	4Q/11	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13
Successful opportunities	10.0	184.0	33.0	73.0	15.0	182.0	2.0	35.0
Total opportunities	10.0	187.0	34.0	73.0	15.0	187.0	2.0	39.0
Indicator value	**97.5%**	**97.8%**	**97.8%**	**98.4%**	**98.7%**	**98.2%**	**98.2%**	**97.6%**

Licensee Comments:

3Q/12: Drill and exercise successes and opportunities were corrected for Septemper 2012. No color change resulted.

Notes

ERO Drill Participation	2Q/11	3Q/11	4Q/11	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13
Participating Key personnel	90.0	88.0	85.0	99.0	95.0	95.0	90.0	88.0
Total Key personnel	91.0	88.0	86.0	99.0	95.0	95.0	90.0	88.0
Indicator value	**98.9%**	**100.0%**	**98.8%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Licensee Comments:

4Q/11: January and March 2011 participation results were revised based on a self-assessment review. This does not affect current quarter results and no-color change resulted.

3Q/11: Routine review of prior data submissions identifed errors in May and June 2011 inputs. No color change occurred as a result of the corrections.

Thresholds: White < 94.0% Yellow < 90.0%

Notes

Alert & Notification System	2Q/11	3Q/11	4Q/11	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13
Successful siren-tests	912	910	1008	910	912	911	1007	912
Total sirens-tests	912	912	1008	912	912	912	1008	912
Indicator value	**98.5%**	**99.7%**	**99.9%**	**99.9%**	**99.9%**	**99.9%**	**99.9%**	**99.9%**

Licensee Comments:

1Q/13: Two scheduled tests from the Maricopa Country Sherriff's Office ANS station were not completed in February 2013.

Occupational Exposure Control Effectiveness

Thresholds: White > 2.0 Yellow > 5.0

Notes

Occupational Exposure Control Effectiveness	2Q/11	3Q/11	4Q/11	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13
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**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Thresholds: White > 1.0 Yellow > 3.0

Notes

RETS/ODCM Radiological Effluent	2Q/11	3Q/11	4Q/11	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13
RETS/ODCM occurrences	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

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, 2013

Palo Verde 1

2Q/2013 Performance Indicators

The solid trend line represents the current reporting period.

Licensee's General Comments: none

Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

Notes

Unplanned Scrams per 7000 Critical Hrs	3Q/11	4Q/11	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13	2Q/13
Unplanned scrams	1.0	1.0	0	0	0	0	0	0
Critical hours	2108.3	1013.2	2184.0	2184.0	2208.0	2208.0	2112.0	1546.2
Indicator value	**0.8**	**1.9**	**1.9**	**1.9**	**0.9**	**0**	**0**	**0**

Licensee Comments: none

Thresholds: White > 6.0

Notes

Unplanned Power Changes per 7000 Critical Hrs	3Q/11	4Q/11	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13	2Q/13
Unplanned power changes	1.0	0	0	0	0	0	0	0
Critical hours	2108.3	1013.2	2184.0	2184.0	2208.0	2208.0	2112.0	1546.2
Indicator value	**1.6**	**1.9**	**0.9**	**0.9**	**0**	**0**	**0**	**0**

Licensee Comments: none

Thresholds: White > 1.0

Notes

Unplanned Scrams with Complications	3Q/11	4Q/11	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13	2Q/13
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

Thresholds: White > 5.0

Notes

Safety System Functional Failures (PWR)	3Q/11	4Q/11	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13	2Q/13
Safety System Functional Failures	0	0	0	0	0	0	1	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**

Licensee Comments:

1Q/13: LER 0500528/0500529/0500530-2012-006-00 for SSFF reported in February 2013 in each of the three units.

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	**3Q/11**	**4Q/11**	**1Q/12**	**2Q/12**	**3Q/12**	**4Q/12**	**1Q/13**	**2Q/13**
UAI (ΔCDF)	-4.11E-09	-4.10E-09	1.42E-08	7.42E-09	5.13E-09	1.52E-09	2.45E-09	1.01E-08
URI (ΔCDF)	-6.63E-08	-6.69E-08	-6.64E-08	-6.59E-08	-6.54E-08	-6.41E-08	-6.28E-08	-6.15E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-7.00E-08**	**-7.10E-08**	**-5.20E-08**	**-5.80E-08**	**-6.00E-08**	**-6.30E-08**	**-6.00E-08**	**-5.10E-08**

Licensee Comments:

4Q/11: Revised MSPI Bases Document (Rev 9) in 12/2011 for emergency AC power system. Per FAQ 468, returned all Planned Unavailability Baselines to 2002 ??? 2004, 36 month historical plant data. Revised emergency AC diesel generator demands/runtimes per FAQ 480. No MSPI PRA coefficients were changed.

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	**3Q/11**	**4Q/11**	**1Q/12**	**2Q/12**	**3Q/12**	**4Q/12**	**1Q/13**	**2Q/13**
UAI (ΔCDF)	2.68E-09	2.26E-09	9.42E-10	9.45E-10	9.93E-10	2.06E-09	4.99E-10	-1.24E-09
URI (ΔCDF)	-1.14E-08	-1.12E-08	-1.11E-08	-1.11E-08	-1.10E-08	-1.10E-08	-1.09E-08	-1.08E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-8.80E-09**	**-8.90E-09**	**-1.00E-08**	**-1.00E-08**	**-1.00E-08**	**-8.90E-09**	**-1.00E-08**	**-1.20E-08**

Licensee Comments:

4Q/11: Revised MSPI Bases Document (Rev 9) in 12/2011 for high pressure safety injection system. Per FAQ 468, returned all Planned Unavailability Baselines to 2002 ??? 2004, 36 month historical plant data. The change also reflected a change in maintenance philosophy. Revised HPSI demands/runtimes to address greater than 25% deviation. No MSPI PRA coefficients were changed.

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	3Q/11	4Q/11	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13	2Q/13
UAI (ΔCDF)	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08
URI (ΔCDF)	-6.44E-08	-6.58E-08	-6.57E-08	-6.56E-08	-6.56E-08	-6.41E-08	-6.27E-08	-6.12E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-1.10E-07**	**-1.10E-07**	**-1.10E-07**	**-1.10E-07**	**-1.10E-07**	**-1.10E-07**	**-1.10E-07**	**-1.10E-07**

Licensee Comments:

4Q/11: Revised MSPI Bases Document (Rev 9) in 12/2011 for heat removal system. Per FAQ 468, returned all Planned Unavailability Baselines to 2002 ??? 2004, 36 month historical plant data. Revised heat removal system demands/runtimes to address greater than 25% deviation. No MSPI PRA coefficients were changed.

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	**3Q/11**	**4Q/11**	**1Q/12**	**2Q/12**	**3Q/12**	**4Q/12**	**1Q/13**	**2Q/13**
UAI (ΔCDF)	-1.46E-09	-1.46E-09	8.16E-10	9.04E-10	-8.38E-11	-5.42E-10	-5.35E-10	-9.69E-10
URI (ΔCDF)	-6.29E-09	-6.16E-09	-6.23E-09	-6.30E-09	-6.37E-09	-6.37E-09	-6.37E-09	-6.37E-09
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-7.70E-09**	**-7.60E-09**	**-5.40E-09**	**-5.40E-09**	**-6.50E-09**	**-6.90E-09**	**-6.90E-09**	**-7.30E-09**

Licensee Comments:

4Q/11: Revised MSPI Bases Document (Rev 9) in 12/2011 for residual heat removal system. Per FAQ 468, returned all Planned Unavailability Baselines to 2002 ??? 2004, 36 month historical plant data. The change also reflected a change in maintenance philosophy. No MSPI PRA coefficients were changed.

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	**3Q/11**	**4Q/11**	**1Q/12**	**2Q/12**	**3Q/12**	**4Q/12**	**1Q/13**	**2Q/13**
UAI (ΔCDF)	7.14E-11	0.00E+00	1.38E-08	1.40E-08	1.42E-08	1.09E-08	1.22E-08	1.78E-08
URI (ΔCDF)	-4.44E-08	-4.47E-08	-4.51E-08	-4.54E-08	-4.57E-08	-4.57E-08	-4.57E-08	-4.57E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-4.40E-08**	**-4.50E-08**	**-3.10E-08**	**-3.10E-08**	**-3.20E-08**	**-3.50E-08**	**-3.40E-08**	**-2.80E-08**

Licensee Comments:

4Q/11: Revised MSPI Bases Document (Rev 9) in 12/2011 for cooling water systems. Per FAQ 468, returned all Planned Unavailability Baselines to 2002 â€" 2004, 36 month historical plant data.

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Activity	7/11	8/11	9/11	10/11	11/11	12/11	1/12	2/12	3/12	4/12	5/12	6/12
Maximum activity	0.000364	0.000349	0.000389	0.000303	N/A	0.000226	0.000370	0.000223	0.000217	0.000228	0.000246	0.000254
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**	**N/A**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Reactor Coolant System Activity	7/12	8/12	9/12	10/12	11/12	12/12	1/13	2/13	3/13	4/13	5/13	6/13
Maximum activity	0.000270	0.000257	0.000272	0.000289	0.000287	0.000291	0.000298	0.000320	0.000312	N/A	0.000177	0.000194
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**	**0**	**0**	**0**	**0**	**N/A**	**0**	**0**

Licensee Comments:

6/13: No Unit 1 reactor coolant system activity was reported for April 2013 because the analysis was not performed during the April 2013 Unit 1 refueling outage.

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Leakage	**7/11**	**8/11**	**9/11**	**10/11**	**11/11**	**12/11**	**1/12**	**2/12**	**3/12**	**4/12**	**5/12**	**6/12**
Maximum leakage	0.038	0.055	0.048	0.034	0.039	0.023	0.034	0.026	0.070	0.032	0.074	0.049
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	**0.4**	**0.6**	**0.5**	**0.3**	**0.4**	**0.2**	**0.3**	**0.3**	**0.7**	**0.3**	**0.7**	**0.5**
Reactor Coolant System Leakage	**7/12**	**8/12**	**9/12**	**10/12**	**11/12**	**12/12**	**1/13**	**2/13**	**3/13**	**4/13**	**5/13**	**6/13**
Maximum leakage	0.049	0.050	0.057	0.046	0.049	0.040	0.041	0.029	0.067	0.006	0.047	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	**0.5**	**0.5**	**0.6**	**0.5**	**0.5**	**0.4**	**0.4**	**0.3**	**0.7**	**0.1**	**0.5**	**0.5**

Licensee Comments: none

Thresholds: White < 90.0% Yellow < 70.0%

Notes

Drill/Exercise Performance	3Q/11	4Q/11	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13	2Q/13
Successful opportunities	184.0	33.0	73.0	15.0	182.0	2.0	35.0	52.0
Total opportunities	187.0	34.0	73.0	15.0	187.0	2.0	39.0	52.0
Indicator value	**97.8%**	**97.8%**	**98.4%**	**98.7%**	**98.2%**	**98.2%**	**97.6%**	**97.8%**

Licensee Comments:

3Q/12: Drill and exercise successes and opportunities were corrected for Septemper 2012. No color change resulted.

Thresholds: White < 80.0% Yellow < 60.0%

Notes

ERO Drill Participation	3Q/11	4Q/11	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13	2Q/13
Participating Key personnel	88.0	85.0	99.0	95.0	95.0	90.0	88.0	87.0
Total Key personnel	88.0	86.0	99.0	95.0	95.0	90.0	88.0	87.0
Indicator value	**100.0%**	**98.8%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Licensee Comments:

4Q/11: January and March 2011 participation results were revised based on a self-assessment review. This does not affect current quarter results and no-color change resulted.

3Q/11: Routine review of prior data submissions identifed errors in May and June 2011 inputs. No color change occurred as a result of the corrections.

Notes

Alert & Notification System	3Q/11	4Q/11	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13	2Q/13
Successful siren-tests	910	1008	910	912	911	1007	912	912
Total sirens-tests	912	1008	912	912	912	1008	912	912
Indicator value	**99.7%**	**99.9%**	**99.9%**	**99.9%**	**99.9%**	**99.9%**	**99.9%**	**99.9%**

Licensee Comments:

1Q/13: Two scheduled tests from the Maricopa Country Sherriff's Office ANS station were not completed in February 2013.

Thresholds: White > 2.0 Yellow > 5.0

Notes

Occupational Exposure Control Effectiveness	3Q/11	4Q/11	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13	2Q/13
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**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Thresholds: White > 1.0 Yellow > 3.0

Notes

RETS/ODCM Radiological Effluent	3Q/11	4Q/11	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13	2Q/13
RETS/ODCM occurrences	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

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: August 19, 2013

Palo Verde 1

3Q/2013 Performance Indicators

The solid trend line represents the current reporting period.

Licensee's General Comments: none

Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

Notes

Unplanned Scrams per 7000 Critical Hrs	4Q/11	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13	2Q/13	3Q/13
Unplanned scrams	1.0	0	0	0	0	0	0	0
Critical hours	1013.2	2184.0	2184.0	2208.0	2208.0	2112.0	1546.2	2208.0
Indicator value	**1.9**	**1.9**	**1.9**	**0.9**	**0**	**0**	**0**	**0**

Licensee Comments: none

Thresholds: White > 6.0

Notes

Unplanned Power Changes per 7000 Critical Hrs	4Q/11	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13	2Q/13	3Q/13
Unplanned power changes	0	0	0	0	0	0	0	1.0
Critical hours	1013.2	2184.0	2184.0	2208.0	2208.0	2112.0	1546.2	2208.0
Indicator value	**1.9**	**0.9**	**0.9**	**0**	**0**	**0**	**0**	**0.9**

Licensee Comments: none

Thresholds: White > 1.0

Notes

Unplanned Scrams with Complications	4Q/11	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13	2Q/13	3Q/13
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

Thresholds: White > 5.0

Notes

Safety System Functional Failures (PWR)	4Q/11	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13	2Q/13	3Q/13
Safety System Functional Failures	0	0	0	0	0	1	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**1**

Licensee Comments:

1Q/13: LER 0500528/0500529/0500530-2012-006-00 for SSFF reported in February 2013 in each of the three units.

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	**4Q/11**	**1Q/12**	**2Q/12**	**3Q/12**	**4Q/12**	**1Q/13**	**2Q/13**	**3Q/13**
UAI (ΔCDF)	-4.10E-09	1.42E-08	7.42E-09	5.13E-09	1.52E-09	2.45E-09	1.01E-08	9.02E-09
URI (ΔCDF)	-6.69E-08	-6.64E-08	-6.59E-08	-6.54E-08	-6.41E-08	-6.28E-08	-6.15E-08	-6.00E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-7.10E-08**	**-5.20E-08**	**-5.80E-08**	**-6.00E-08**	**-6.30E-08**	**-6.00E-08**	**-5.10E-08**	**-5.10E-08**

Licensee Comments:

4Q/11: Revised MSPI Bases Document (Rev 9) in 12/2011 for emergency AC power system. Per FAQ 468, returned all Planned Unavailability Baselines to 2002 ??? 2004, 36 month historical plant data. Revised emergency AC diesel generator demands/runtimes per FAQ 480. No MSPI PRA coefficients were changed.

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	**4Q/11**	**1Q/12**	**2Q/12**	**3Q/12**	**4Q/12**	**1Q/13**	**2Q/13**	**3Q/13**
UAI (ΔCDF)	2.26E-09	9.42E-10	9.45E-10	9.93E-10	2.06E-09	4.99E-10	-1.24E-09	-5.88E-10
URI (ΔCDF)	-1.12E-08	-1.11E-08	-1.11E-08	-1.10E-08	-1.10E-08	-1.09E-08	-1.08E-08	-1.07E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-8.90E-09**	**-1.00E-08**	**-1.00E-08**	**-1.00E-08**	**-8.90E-09**	**-1.00E-08**	**-1.20E-08**	**-1.10E-08**

Licensee Comments:

4Q/11: Revised MSPI Bases Document (Rev 9) in 12/2011 for high pressure safety injection system. Per FAQ 468, returned all Planned Unavailability Baselines to 2002 ??? 2004, 36 month historical plant data. The change also reflected a change in maintenance philosophy. Revised HPSI demands/runtimes to address greater than 25% deviation. No MSPI PRA coefficients were changed.

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	**4Q/11**	**1Q/12**	**2Q/12**	**3Q/12**	**4Q/12**	**1Q/13**	**2Q/13**	**3Q/13**
UAI (ΔCDF)	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08
URI (ΔCDF)	-6.58E-08	-6.57E-08	-6.56E-08	-6.56E-08	-6.41E-08	-6.27E-08	-6.12E-08	-5.97E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-1.10E-07**	**-1.10E-07**	**-1.10E-07**	**-1.10E-07**	**-1.10E-07**	**-1.10E-07**	**-1.10E-07**	**-1.10E-07**

Licensee Comments:

4Q/11: Revised MSPI Bases Document (Rev 9) in 12/2011 for heat removal system. Per FAQ 468, returned all Planned Unavailability Baselines to 2002 ??? 2004, 36 month historical plant data. Revised heat removal system demands/runtimes to address greater than 25% deviation. No MSPI PRA coefficients were changed.

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	**4Q/11**	**1Q/12**	**2Q/12**	**3Q/12**	**4Q/12**	**1Q/13**	**2Q/13**	**3Q/13**
UAI (ΔCDF)	-1.46E-09	8.16E-10	9.04E-10	-8.38E-11	-5.42E-10	-5.35E-10	-9.69E-10	1.17E-10
URI (ΔCDF)	-6.16E-09	-6.23E-09	-6.30E-09	-6.37E-09	-6.37E-09	-6.37E-09	-6.37E-09	-6.37E-09
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-7.60E-09**	**-5.40E-09**	**-5.40E-09**	**-6.50E-09**	**-6.90E-09**	**-6.90E-09**	**-7.30E-09**	**-6.30E-09**

Licensee Comments:

4Q/11: Revised MSPI Bases Document (Rev 9) in 12/2011 for residual heat removal system. Per FAQ 468, returned all Planned Unavailability Baselines to 2002 ??? 2004, 36 month historical plant data. The change also reflected a change in maintenance philosophy. No MSPI PRA coefficients were changed.

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	**4Q/11**	**1Q/12**	**2Q/12**	**3Q/12**	**4Q/12**	**1Q/13**	**2Q/13**	**3Q/13**
UAI (ΔCDF)	0.00E+00	1.38E-08	1.40E-08	1.42E-08	1.09E-08	1.22E-08	1.78E-08	1.75E-08
URI (ΔCDF)	-4.47E-08	-4.51E-08	-4.54E-08	-4.57E-08	-4.57E-08	-4.57E-08	-4.57E-08	-4.57E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-4.50E-08**	**-3.10E-08**	**-3.10E-08**	**-3.20E-08**	**-3.50E-08**	**-3.40E-08**	**-2.80E-08**	**-2.80E-08**

Licensee Comments:

4Q/11: Revised MSPI Bases Document (Rev 9) in 12/2011 for cooling water systems. Per FAQ 468, returned all Planned Unavailability Baselines to 2002 â€" 2004, 36 month historical plant data.

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Activity	10/11	11/11	12/11	1/12	2/12	3/12	4/12	5/12	6/12	7/12	8/12	9/12
Maximum activity	0.000303	N/A	0.000226	0.000370	0.000223	0.000217	0.000228	0.000246	0.000254	0.000270	0.000257	0.000272
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**	**N/A**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Reactor Coolant System Activity	10/12	11/12	12/12	1/13	2/13	3/13	4/13	5/13	6/13	7/13	8/13	9/13
Maximum activity	0.000289	0.000287	0.000291	0.000298	0.000320	0.000312	N/A	0.000177	0.000194	0.000209	0.000209	0.000219
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**	**0**	**N/A**	**0**	**0**	**0**	**0**	**0**

Licensee Comments:

6/13: No Unit 1 reactor coolant system activity was reported for April 2013 because the analysis was not performed during the April 2013 Unit 1 refueling outage.

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Leakage	10/11	11/11	12/11	1/12	2/12	3/12	4/12	5/12	6/12	7/12	8/12	9/12
Maximum leakage	0.034	0.039	0.023	0.034	0.026	0.070	0.032	0.074	0.049	0.049	0.050	0.057
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**	**0.4**	**0.2**	**0.3**	**0.3**	**0.7**	**0.3**	**0.7**	**0.5**	**0.5**	**0.5**	**0.6**
Reactor Coolant System Leakage	**10/12**	**11/12**	**12/12**	**1/13**	**2/13**	**3/13**	**4/13**	**5/13**	**6/13**	**7/13**	**8/13**	**9/13**
Maximum leakage	0.046	0.049	0.040	0.041	0.029	0.067	0.006	0.047	0.050	0.048	0.050	0.040
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	**0.5**	**0.5**	**0.4**	**0.4**	**0.3**	**0.7**	**0.1**	**0.5**	**0.5**	**0.5**	**0.5**	**0.4**

Licensee Comments: none

Thresholds: White < 90.0% Yellow < 70.0%

Notes

Drill/Exercise Performance	4Q/11	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13	2Q/13	3Q/13
Successful opportunities	33.0	73.0	15.0	182.0	2.0	35.0	52.0	77.0
Total opportunities	34.0	73.0	15.0	187.0	2.0	39.0	52.0	78.0
Indicator value	**97.8%**	**98.4%**	**98.7%**	**98.2%**	**98.2%**	**97.6%**	**97.8%**	**97.7%**

Licensee Comments:

3Q/12: Drill and exercise successes and opportunities were corrected for Septemper 2012. No color change resulted.

Thresholds: White < 80.0% Yellow < 60.0%

Notes

ERO Drill Participation	4Q/11	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13	2Q/13	3Q/13
Participating Key personnel	85.0	99.0	95.0	95.0	90.0	90.0	87.0	89.0
Total Key personnel	86.0	99.0	95.0	95.0	90.0	90.0	87.0	89.0
Indicator value	**98.8%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Licensee Comments:

1Q/13: Total number of key and participating personnel for March 2013 were corrected, no change in result or color.

4Q/11: January and March 2011 participation results were revised based on a self-assessment review. This does not affect current quarter results and no-color change resulted.

Thresholds: White < 94.0% Yellow < 90.0%

Notes

Alert & Notification System	4Q/11	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13	2Q/13	3Q/13
Successful siren-tests	1008	910	912	911	1007	912	912	912
Total sirens-tests	1008	912	912	912	1008	912	912	912
Indicator value	**99.9%**	**99.9%**	**99.9%**	**99.9%**	**99.9%**	**99.9%**	**99.9%**	**100.0%**

Licensee Comments:

1Q/13: Two scheduled tests from the Maricopa Country Sherriff's Office ANS station were not completed in February 2013.

Thresholds: White > 2.0 Yellow > 5.0

Notes

Occupational Exposure Control Effectiveness	4Q/11	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13	2Q/13	3Q/13
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**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Thresholds: White > 1.0 Yellow > 3.0

Notes

RETS/ODCM Radiological Effluent	4Q/11	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13	2Q/13	3Q/13
RETS/ODCM occurrences	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

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: October 22, 2013

Palo Verde 1

4Q/2013 Performance Indicators

The solid trend line represents the current reporting period.

Licensee's General Comments: none

Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

Notes

Unplanned Scrams per 7000 Critical Hrs	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13	2Q/13	3Q/13	4Q/13
Unplanned scrams	0	0	0	0	0	0	0	0
Critical hours	2184.0	2184.0	2208.0	2208.0	2112.0	1546.2	2208.0	2208.0
Indicator value	**1.9**	**1.9**	**0.9**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Thresholds: White > 6.0

Notes

Unplanned Power Changes per 7000 Critical Hrs	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13	2Q/13	3Q/13	4Q/13
Unplanned power changes	0	0	0	0	0	0	1.0	1.0
Critical hours	2184.0	2184.0	2208.0	2208.0	2112.0	1546.2	2208.0	2208.0
Indicator value	**0.9**	**0.9**	**0**	**0**	**0**	**0**	**0.9**	**1.7**

Licensee Comments: none

Thresholds: White > 1.0

Notes

Unplanned Scrams with Complications	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13	2Q/13	3Q/13	4Q/13
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

Thresholds: White > 5.0

Notes

Safety System Functional Failures (PWR)	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13	2Q/13	3Q/13	4Q/13
Safety System Functional Failures	0	0	0	0	1	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**1**	**1**	**1**	**1**

Licensee Comments:

1Q/13: LER 0500528/0500529/0500530-2012-006-00 for SSFF reported in February 2013 in each of the three units.

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/12**	**2Q/12**	**3Q/12**	**4Q/12**	**1Q/13**	**2Q/13**	**3Q/13**	**4Q/13**
UAI (ΔCDF)	1.42E-08	7.42E-09	5.13E-09	1.52E-09	2.45E-09	1.01E-08	9.02E-09	8.49E-09
URI (ΔCDF)	-6.64E-08	-6.59E-08	-6.54E-08	-6.41E-08	-6.28E-08	-6.15E-08	-6.00E-08	-5.85E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-5.20E-08**	**-5.80E-08**	**-6.00E-08**	**-6.30E-08**	**-6.00E-08**	**-5.10E-08**	**-5.10E-08**	**-5.00E-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	**1Q/12**	**2Q/12**	**3Q/12**	**4Q/12**	**1Q/13**	**2Q/13**	**3Q/13**	**4Q/13**
UAI (ΔCDF)	9.42E-10	9.45E-10	9.93E-10	2.06E-09	4.99E-10	-1.24E-09	-5.88E-10	-1.28E-09
URI (ΔCDF)	-1.11E-08	-1.11E-08	-1.10E-08	-1.10E-08	-1.09E-08	-1.08E-08	-1.07E-08	-1.06E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-1.00E-08**	**-1.00E-08**	**-1.00E-08**	**-8.90E-09**	**-1.00E-08**	**-1.20E-08**	**-1.10E-08**	**-1.20E-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	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13	2Q/13	3Q/13	4Q/13
UAI (ΔCDF)	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08
URI (ΔCDF)	-6.57E-08	-6.56E-08	-6.56E-08	-6.41E-08	-6.27E-08	-6.12E-08	-5.97E-08	-5.82E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-1.10E-07**	**-1.10E-07**	**-1.10E-07**	**-1.10E-07**	**-1.10E-07**	**-1.10E-07**	**-1.10E-07**	**-1.10E-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	**1Q/12**	**2Q/12**	**3Q/12**	**4Q/12**	**1Q/13**	**2Q/13**	**3Q/13**	**4Q/13**
UAI (ΔCDF)	8.16E-10	9.04E-10	-8.38E-11	-5.42E-10	-5.35E-10	-9.69E-10	1.17E-10	-2.38E-10
URI (ΔCDF)	-6.23E-09	-6.30E-09	-6.37E-09	-6.37E-09	-6.37E-09	-6.37E-09	-6.37E-09	-6.37E-09
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-5.40E-09**	**-5.40E-09**	**-6.50E-09**	**-6.90E-09**	**-6.90E-09**	**-7.30E-09**	**-6.30E-09**	**-6.60E-09**

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/12**	**2Q/12**	**3Q/12**	**4Q/12**	**1Q/13**	**2Q/13**	**3Q/13**	**4Q/13**
UAI (ΔCDF)	1.38E-08	1.40E-08	1.42E-08	1.09E-08	1.22E-08	1.78E-08	1.75E-08	1.51E-08
URI (ΔCDF)	-4.51E-08	-4.54E-08	-4.57E-08	-4.57E-08	-4.57E-08	-4.57E-08	-4.57E-08	-4.57E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-3.10E-08**	**-3.10E-08**	**-3.20E-08**	**-3.50E-08**	**-3.40E-08**	**-2.80E-08**	**-2.80E-08**	**-3.10E-08**

Licensee Comments: none

Reactor Coolant System Activity

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Activity	**1/12**	**2/12**	**3/12**	**4/12**	**5/12**	**6/12**	**7/12**	**8/12**	**9/12**	**10/12**	**11/12**	**12/12**
Maximum activity	0.000370	0.000223	0.000217	0.000228	0.000246	0.000254	0.000270	0.000257	0.000272	0.000289	0.000287	0.000291
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**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Reactor Coolant System Activity	**1/13**	**2/13**	**3/13**	**4/13**	**5/13**	**6/13**	**7/13**	**8/13**	**9/13**	**10/13**	**11/13**	**12/13**
Maximum activity	0.000298	0.000320	0.000312	N/A	0.000177	0.000194	0.000209	0.000209	0.000219	0.000236	0.000217	0.000230
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**	**N/A**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments:

6/13: No Unit 1 reactor coolant system activity was reported for April 2013 because the analysis was not performed during the April 2013 Unit 1 refueling outage.

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Leakage	1/12	2/12	3/12	4/12	5/12	6/12	7/12	8/12	9/12	10/12	11/12	12/12
Maximum leakage	0.034	0.026	0.070	0.032	0.074	0.049	0.049	0.050	0.057	0.046	0.049	0.040
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**	**0.3**	**0.7**	**0.3**	**0.7**	**0.5**	**0.5**	**0.5**	**0.6**	**0.5**	**0.5**	**0.4**

Reactor Coolant System Leakage	1/13	2/13	3/13	4/13	5/13	6/13	7/13	8/13	9/13	10/13	11/13	12/13
Maximum leakage	0.041	0.029	0.067	0.006	0.047	0.050	0.048	0.050	0.040	0.022	0.029	0.037
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	**0.4**	**0.3**	**0.7**	**0.1**	**0.5**	**0.5**	**0.5**	**0.5**	**0.4**	**0.2**	**0.3**	**0.4**

Licensee Comments: none

Thresholds: White < 90.0% Yellow < 70.0%

Notes

Drill/Exercise Performance	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13	2Q/13	3Q/13	4Q/13
Successful opportunities	73.0	15.0	182.0	2.0	35.0	52.0	77.0	83.0
Total opportunities	73.0	15.0	187.0	2.0	39.0	52.0	78.0	84.0
Indicator value	**98.4%**	**98.7%**	**98.2%**	**98.2%**	**97.6%**	**97.8%**	**97.7%**	**97.9%**

Licensee Comments:

3Q/12: Drill and exercise successes and opportunities were corrected for Septemper 2012. No color change resulted.

Thresholds: White < 80.0% Yellow < 60.0%

Notes

ERO Drill Participation	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13	2Q/13	3Q/13	4Q/13
Participating Key personnel	99.0	95.0	95.0	90.0	90.0	87.0	89.0	98.0
Total Key personnel	99.0	95.0	95.0	90.0	90.0	87.0	89.0	98.0
Indicator value	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Licensee Comments:

1Q/13: Total number of key and participating personnel for March 2013 were corrected, no change in result or color.

Thresholds: White < 94.0% Yellow < 90.0%

Notes

Alert & Notification System	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13	2Q/13	3Q/13	4Q/13
Successful siren-tests	910	912	911	1007	912	912	912	1008
Total sirens-tests	912	912	912	1008	912	912	912	1008
Indicator value	**99.9%**	**99.9%**	**99.9%**	**99.9%**	**99.9%**	**99.9%**	**100.0%**	**100.0%**

Licensee Comments:

1Q/13: Two scheduled tests from the Maricopa Country Sherriff's Office ANS station were not completed in February 2013.

Thresholds: White > 2.0 Yellow > 5.0

Notes

Occupational Exposure Control Effectiveness	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13	2Q/13	3Q/13	4Q/13
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**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Thresholds: White > 1.0 Yellow > 3.0

Notes

RETS/ODCM Radiological Effluent	1Q/12	2Q/12	3Q/12	4Q/12	1Q/13	2Q/13	3Q/13	4Q/13
RETS/ODCM occurrences	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

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: January 22, 2014

Palo Verde 1

1Q/2014 Performance Indicators

The solid trend line represents the current reporting period.

Licensee's General Comments: none

Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

Notes

Unplanned Scrams per 7000 Critical Hrs	2Q/12	3Q/12	4Q/12	1Q/13	2Q/13	3Q/13	4Q/13	1Q/14
Unplanned scrams	0	0	0	0	0	0	0	0
Critical hours	2184.0	2208.0	2208.0	2112.0	1546.2	2208.0	2208.0	2160.0
Indicator value	**1.9**	**0.9**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Thresholds: White > 6.0

Notes

Unplanned Power Changes per 7000 Critical Hrs	2Q/12	3Q/12	4Q/12	1Q/13	2Q/13	3Q/13	4Q/13	1Q/14
Unplanned power changes	0	0	0	0	0	1.0	1.0	0
Critical hours	2184.0	2208.0	2208.0	2112.0	1546.2	2208.0	2208.0	2160.0
Indicator value	**0.9**	**0**	**0**	**0**	**0**	**0.9**	**1.7**	**1.7**

Licensee Comments: none

Unplanned Scrams with Complications

Thresholds: White > 1.0

Notes

Unplanned Scrams with Complications	2Q/12	3Q/12	4Q/12	1Q/13	2Q/13	3Q/13	4Q/13	1Q/14
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

Thresholds: White > 5.0

Notes

Safety System Functional Failures (PWR)	2Q/12	3Q/12	4Q/12	1Q/13	2Q/13	3Q/13	4Q/13	1Q/14
Safety System Functional Failures	0	0	0	1	0	0	0	0
Indicator value	**0**	**0**	**0**	**1**	**1**	**1**	**1**	**0**

Licensee Comments:

1Q/13: LER 0500528/0500529/0500530-2012-006-00 for SSFF reported in February 2013 in each of the three units.

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/12**	**3Q/12**	**4Q/12**	**1Q/13**	**2Q/13**	**3Q/13**	**4Q/13**	**1Q/14**
UAI (ΔCDF)	7.42E-09	5.13E-09	1.52E-09	2.45E-09	1.01E-08	9.02E-09	8.49E-09	4.28E-09
URI (ΔCDF)	-6.59E-08	-6.54E-08	-6.41E-08	-6.28E-08	-6.15E-08	-6.00E-08	-5.85E-08	-5.66E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-5.80E-08**	**-6.00E-08**	**-6.30E-08**	**-6.00E-08**	**-5.10E-08**	**-5.10E-08**	**-5.00E-08**	**-5.20E-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/12**	**3Q/12**	**4Q/12**	**1Q/13**	**2Q/13**	**3Q/13**	**4Q/13**	**1Q/14**
UAI (ΔCDF)	9.45E-10	9.93E-10	2.06E-09	4.99E-10	-1.24E-09	-5.88E-10	-1.28E-09	-1.44E-09
URI (ΔCDF)	-1.11E-08	-1.10E-08	-1.10E-08	-1.09E-08	-1.08E-08	-1.07E-08	-1.06E-08	-1.05E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-1.00E-08**	**-1.00E-08**	**-8.90E-09**	**-1.00E-08**	**-1.20E-08**	**-1.10E-08**	**-1.20E-08**	**-1.20E-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/12**	**3Q/12**	**4Q/12**	**1Q/13**	**2Q/13**	**3Q/13**	**4Q/13**	**1Q/14**
UAI (ΔCDF)	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08
URI (ΔCDF)	-6.56E-08	-6.56E-08	-6.41E-08	-6.27E-08	-6.12E-08	-5.97E-08	-5.82E-08	-5.63E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-1.10E-07**	**-1.10E-07**	**-1.10E-07**	**-1.10E-07**	**-1.10E-07**	**-1.10E-07**	**-1.10E-07**	**-1.00E-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/12**	**3Q/12**	**4Q/12**	**1Q/13**	**2Q/13**	**3Q/13**	**4Q/13**	**1Q/14**
UAI (ΔCDF)	9.04E-10	-8.38E-11	-5.42E-10	-5.35E-10	-9.69E-10	1.17E-10	-2.38E-10	-2.83E-10
URI (ΔCDF)	-6.30E-09	-6.37E-09	-6.37E-09	-6.37E-09	-6.37E-09	-6.37E-09	-6.37E-09	-6.37E-09
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-5.40E-09**	**-6.50E-09**	**-6.90E-09**	**-6.90E-09**	**-7.30E-09**	**-6.30E-09**	**-6.60E-09**	**-6.70E-09**

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/12**	**3Q/12**	**4Q/12**	**1Q/13**	**2Q/13**	**3Q/13**	**4Q/13**	**1Q/14**
UAI (ΔCDF)	1.40E-08	1.42E-08	1.09E-08	1.22E-08	1.78E-08	1.75E-08	1.51E-08	9.35E-09
URI (ΔCDF)	-4.54E-08	-4.57E-08	-4.57E-08	-4.57E-08	-4.57E-08	-4.57E-08	-4.57E-08	-4.57E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-3.10E-08**	**-3.20E-08**	**-3.50E-08**	**-3.40E-08**	**-2.80E-08**	**-2.80E-08**	**-3.10E-08**	**-3.60E-08**

Licensee Comments: none

Reactor Coolant System Activity

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Activity	**4/12**	**5/12**	**6/12**	**7/12**	**8/12**	**9/12**	**10/12**	**11/12**	**12/12**	**1/13**	**2/13**	**3/13**
Maximum activity	0.000228	0.000246	0.000254	0.000270	0.000257	0.000272	0.000289	0.000287	0.000291	0.000298	0.000320	0.000312
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**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

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	N/A	0.000177	0.000194	0.000209	0.000209	0.000219	0.000236	0.000217	0.000230	0.000250	0.000255	0.000257
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**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments:

6/13: No Unit 1 reactor coolant system activity was reported for April 2013 because the analysis was not performed during the April 2013 Unit 1 refueling outage.

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Leakage	**4/12**	**5/12**	**6/12**	**7/12**	**8/12**	**9/12**	**10/12**	**11/12**	**12/12**	**1/13**	**2/13**	**3/13**
Maximum leakage	0.032	0.074	0.049	0.049	0.050	0.057	0.046	0.049	0.040	0.041	0.029	0.067
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**	**0.7**	**0.5**	**0.5**	**0.5**	**0.6**	**0.5**	**0.5**	**0.4**	**0.4**	**0.3**	**0.7**
Reactor Coolant System Leakage	**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 leakage	0.006	0.047	0.050	0.048	0.050	0.040	0.022	0.029	0.037	0.025	0.051	0.042
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	**0.1**	**0.5**	**0.5**	**0.5**	**0.5**	**0.4**	**0.2**	**0.3**	**0.4**	**0.3**	**0.5**	**0.4**

Licensee Comments: none

Thresholds: White < 90.0% Yellow < 70.0%

Notes

Drill/Exercise Performance	2Q/12	3Q/12	4Q/12	1Q/13	2Q/13	3Q/13	4Q/13	1Q/14
Successful opportunities	15.0	182.0	2.0	35.0	52.0	77.0	83.0	83.0
Total opportunities	15.0	187.0	2.0	39.0	52.0	78.0	85.0	85.0
Indicator value	**98.7%**	**98.2%**	**98.2%**	**97.6%**	**97.8%**	**97.7%**	**97.7%**	**97.4%**

Licensee Comments:

4Q/13: A plant condition was discovered that resulted in a previously unidentified missed emergency action level classification in November 2013. No color change resulted.

3Q/12: Drill and exercise successes and opportunities were corrected for Septemper 2012. No color change resulted.

Thresholds: White < 80.0% Yellow < 60.0%

Notes

ERO Drill Participation	2Q/12	3Q/12	4Q/12	1Q/13	2Q/13	3Q/13	4Q/13	1Q/14
Participating Key personnel	95.0	95.0	90.0	90.0	87.0	89.0	98.0	94.0
Total Key personnel	95.0	95.0	90.0	90.0	87.0	89.0	98.0	94.0
Indicator value	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Licensee Comments:

1Q/13: Total number of key and participating personnel for March 2013 were corrected, no change in result or color.

Thresholds: White < 94.0% Yellow < 90.0%

Notes

Alert & Notification System	2Q/12	3Q/12	4Q/12	1Q/13	2Q/13	3Q/13	4Q/13	1Q/14
Successful siren-tests	912	911	1007	864	912	912	1008	912
Total sirens-tests	912	912	1008	864	912	912	1008	912
Indicator value	**99.9%**	**99.9%**	**99.9%**	**99.9%**	**99.9%**	**100.0%**	**100.0%**	**100.0%**

Licensee Comments:

1Q/13: Comment and data correction: One scheduled test from the Maricopa Country Sherriff's Office ANS station was not completed in February 2013 and data was incorrectly tabulated. No color change.

1Q/13: Two scheduled tests from the Maricopa Country Sherriff's Office ANS station were not completed in February 2013.

Occupational Exposure Control Effectiveness

Thresholds: White > 2.0 Yellow > 5.0

Notes

Occupational Exposure Control Effectiveness	2Q/12	3Q/12	4Q/12	1Q/13	2Q/13	3Q/13	4Q/13	1Q/14
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**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Thresholds: White > 1.0 Yellow > 3.0

Notes

RETS/ODCM Radiological Effluent	2Q/12	3Q/12	4Q/12	1Q/13	2Q/13	3Q/13	4Q/13	1Q/14
RETS/ODCM occurrences	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

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, 2014

Palo Verde 1

2Q/2014 Performance Indicators

The solid trend line represents the current reporting period.

Licensee's General Comments: none

Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

Notes

Unplanned Scrams per 7000 Critical Hrs	3Q/12	4Q/12	1Q/13	2Q/13	3Q/13	4Q/13	1Q/14	2Q/14
Unplanned scrams	0	0	0	0	0	0	0	0
Critical hours	2208.0	2208.0	2112.0	1546.2	2208.0	2208.0	2160.0	2184.0
Indicator value	**0.9**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Thresholds: White > 6.0

Notes

Unplanned Power Changes per 7000 Critical Hrs	3Q/12	4Q/12	1Q/13	2Q/13	3Q/13	4Q/13	1Q/14	2Q/14
Unplanned power changes	0	0	0	0	1.0	1.0	0	0
Critical hours	2208.0	2208.0	2112.0	1546.2	2208.0	2208.0	2160.0	2184.0
Indicator value	**0**	**0**	**0**	**0**	**0.9**	**1.7**	**1.7**	**1.6**

Licensee Comments: none

Thresholds: White > 1.0

Notes

Unplanned Scrams with Complications	3Q/12	4Q/12	1Q/13	2Q/13	3Q/13	4Q/13	1Q/14	2Q/14
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

Thresholds: White > 5.0

Notes

Safety System Functional Failures (PWR)	3Q/12	4Q/12	1Q/13	2Q/13	3Q/13	4Q/13	1Q/14	2Q/14
Safety System Functional Failures	0	0	1	0	0	0	0	0
Indicator value	**0**	**0**	**1**	**1**	**1**	**1**	**0**	**0**

Licensee Comments:

1Q/13: LER 0500528/0500529/0500530-2012-006-00 for SSFF reported in February 2013 in each of the three units.

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	**3Q/12**	**4Q/12**	**1Q/13**	**2Q/13**	**3Q/13**	**4Q/13**	**1Q/14**	**2Q/14**
UAI (ΔCDF)	5.13E-09	1.52E-09	2.45E-09	1.01E-08	9.02E-09	8.49E-09	4.28E-09	4.20E-09
URI (ΔCDF)	-6.54E-08	-6.41E-08	-6.28E-08	-6.15E-08	-6.00E-08	-5.85E-08	-5.66E-08	-5.48E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-6.00E-08**	**-6.30E-08**	**-6.00E-08**	**-5.10E-08**	**-5.10E-08**	**-5.00E-08**	**-5.20E-08**	**-5.10E-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	**3Q/12**	**4Q/12**	**1Q/13**	**2Q/13**	**3Q/13**	**4Q/13**	**1Q/14**	**2Q/14**
UAI (ΔCDF)	9.93E-10	2.06E-09	4.99E-10	-1.24E-09	-5.88E-10	-1.28E-09	-1.44E-09	-1.50E-09
URI (ΔCDF)	-1.10E-08	-1.10E-08	-1.09E-08	-1.08E-08	-1.07E-08	-1.06E-08	-1.05E-08	-1.04E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-1.00E-08**	**-8.90E-09**	**-1.00E-08**	**-1.20E-08**	**-1.10E-08**	**-1.20E-08**	**-1.20E-08**	**-1.20E-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	**3Q/12**	**4Q/12**	**1Q/13**	**2Q/13**	**3Q/13**	**4Q/13**	**1Q/14**	**2Q/14**
UAI (ΔCDF)	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08
URI (ΔCDF)	-6.56E-08	-6.41E-08	-6.27E-08	-6.12E-08	-5.97E-08	-5.82E-08	-5.63E-08	-5.47E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-1.10E-07**	**-1.10E-07**	**-1.10E-07**	**-1.10E-07**	**-1.10E-07**	**-1.10E-07**	**-1.00E-07**	**-1.00E-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	**3Q/12**	**4Q/12**	**1Q/13**	**2Q/13**	**3Q/13**	**4Q/13**	**1Q/14**	**2Q/14**
UAI (ΔCDF)	-8.38E-11	-5.42E-10	-5.35E-10	-9.69E-10	1.17E-10	-2.38E-10	-2.83E-10	-4.52E-10
URI (ΔCDF)	-6.37E-09	-6.37E-09	-6.37E-09	-6.37E-09	-6.37E-09	-6.37E-09	-6.37E-09	-6.37E-09
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-6.50E-09**	**-6.90E-09**	**-6.90E-09**	**-7.30E-09**	**-6.30E-09**	**-6.60E-09**	**-6.70E-09**	**-6.80E-09**

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	**3Q/12**	**4Q/12**	**1Q/13**	**2Q/13**	**3Q/13**	**4Q/13**	**1Q/14**	**2Q/14**
UAI (ΔCDF)	1.42E-08	1.09E-08	1.22E-08	1.78E-08	1.75E-08	1.51E-08	9.35E-09	1.11E-08
URI (ΔCDF)	-4.57E-08	-4.57E-08	-4.57E-08	-4.57E-08	-4.57E-08	-4.57E-08	-4.57E-08	-4.57E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-3.20E-08**	**-3.50E-08**	**-3.40E-08**	**-2.80E-08**	**-2.80E-08**	**-3.10E-08**	**-3.60E-08**	**-3.50E-08**

Licensee Comments: none

Reactor Coolant System Activity

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Activity	**7/12**	**8/12**	**9/12**	**10/12**	**11/12**	**12/12**	**1/13**	**2/13**	**3/13**	**4/13**	**5/13**	**6/13**
Maximum activity	0.000270	0.000257	0.000272	0.000289	0.000287	0.000291	0.000298	0.000320	0.000312	N/A	0.000177	0.000194
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**	**0**	**0**	**0**	**0**	**N/A**	**0**	**0**

Reactor Coolant System Activity	**7/13**	**8/13**	**9/13**	**10/13**	**11/13**	**12/13**	**1/14**	**2/14**	**3/14**	**4/14**	**5/14**	**6/14**
Maximum activity	0.000209	0.000209	0.000219	0.000236	0.000217	0.000230	0.000250	0.000255	0.000257	0.000263	0.000277	0.000274
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**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments:

6/13: No Unit 1 reactor coolant system activity was reported for April 2013 because the analysis was not performed during the April 2013 Unit 1 refueling outage.

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Leakage	7/12	8/12	9/12	10/12	11/12	12/12	1/13	2/13	3/13	4/13	5/13	6/13
Maximum leakage	0.049	0.050	0.057	0.046	0.049	0.040	0.041	0.029	0.067	0.006	0.047	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	**0.5**	**0.5**	**0.6**	**0.5**	**0.5**	**0.4**	**0.4**	**0.3**	**0.7**	**0.1**	**0.5**	**0.5**

Reactor Coolant System Leakage	7/13	8/13	9/13	10/13	11/13	12/13	1/14	2/14	3/14	4/14	5/14	6/14
Maximum leakage	0.048	0.050	0.040	0.022	0.029	0.037	0.025	0.051	0.042	0.028	0.033	0.065
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	**0.5**	**0.5**	**0.4**	**0.2**	**0.3**	**0.4**	**0.3**	**0.5**	**0.4**	**0.3**	**0.3**	**0.7**

Licensee Comments: none

Thresholds: White < 90.0% Yellow < 70.0%

Notes

Drill/Exercise Performance	3Q/12	4Q/12	1Q/13	2Q/13	3Q/13	4Q/13	1Q/14	2Q/14
Successful opportunities	182.0	2.0	35.0	52.0	77.0	83.0	83.0	14.0
Total opportunities	187.0	2.0	39.0	52.0	78.0	85.0	85.0	14.0
Indicator value	**98.2%**	**98.2%**	**97.6%**	**97.8%**	**97.7%**	**97.7%**	**97.4%**	**97.4%**

Licensee Comments:

4Q/13: A plant condition was discovered that resulted in a previously unidentified missed emergency action level classification in November 2013. No color change resulted.

3Q/12: Drill and exercise successes and opportunities were corrected for Septemper 2012. No color change resulted.

Thresholds: White < 80.0% Yellow < 60.0%

Notes

ERO Drill Participation	3Q/12	4Q/12	1Q/13	2Q/13	3Q/13	4Q/13	1Q/14	2Q/14
Participating Key personnel	95.0	90.0	90.0	87.0	89.0	98.0	94.0	92.0
Total Key personnel	95.0	90.0	90.0	87.0	89.0	98.0	94.0	92.0
Indicator value	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Licensee Comments:

1Q/13: Total number of key and participating personnel for March 2013 were corrected, no change in result or color.

Thresholds: White < 94.0% Yellow < 90.0%

Notes

Alert & Notification System	3Q/12	4Q/12	1Q/13	2Q/13	3Q/13	4Q/13	1Q/14	2Q/14
Successful siren-tests	911	1007	864	912	912	1008	912	912
Total sirens-tests	912	1008	864	912	912	1008	912	912
Indicator value	**99.9%**	**99.9%**	**99.9%**	**99.9%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Licensee Comments:

1Q/13: Comment and data correction: One scheduled test from the Maricopa Country Sherriff's Office ANS station was not completed in February 2013 and data was incorrectly tabulated. No color change.

1Q/13: Two scheduled tests from the Maricopa Country Sherriff's Office ANS station were not completed in February 2013.

Occupational Exposure Control Effectiveness

Thresholds: White > 2.0 Yellow > 5.0

Notes

Occupational Exposure Control Effectiveness	3Q/12	4Q/12	1Q/13	2Q/13	3Q/13	4Q/13	1Q/14	2Q/14
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**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Thresholds: White > 1.0 Yellow > 3.0

Notes

RETS/ODCM Radiological Effluent	3Q/12	4Q/12	1Q/13	2Q/13	3Q/13	4Q/13	1Q/14	2Q/14
RETS/ODCM occurrences	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

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: July 31, 2014

Palo Verde 1

3Q/2014 Performance Indicators

The solid trend line represents the current reporting period.

Licensee's General Comments: none

Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

Notes

Unplanned Scrams per 7000 Critical Hrs	4Q/12	1Q/13	2Q/13	3Q/13	4Q/13	1Q/14	2Q/14	3Q/14
Unplanned scrams	0	0	0	0	0	0	0	0
Critical hours	2208.0	2112.0	1546.2	2208.0	2208.0	2160.0	2184.0	2208.0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Thresholds: White > 6.0

Notes

Unplanned Power Changes per 7000 Critical Hrs	4Q/12	1Q/13	2Q/13	3Q/13	4Q/13	1Q/14	2Q/14	3Q/14
Unplanned power changes	0	0	0	1.0	1.0	0	0	0
Critical hours	2208.0	2112.0	1546.2	2208.0	2208.0	2160.0	2184.0	2208.0
Indicator value	**0**	**0**	**0**	**0.9**	**1.7**	**1.7**	**1.6**	**0.8**

Licensee Comments: none

Thresholds: White > 1.0

Notes

Unplanned Scrams with Complications	4Q/12	1Q/13	2Q/13	3Q/13	4Q/13	1Q/14	2Q/14	3Q/14
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

Thresholds: White > 5.0

Notes

Safety System Functional Failures (PWR)	4Q/12	1Q/13	2Q/13	3Q/13	4Q/13	1Q/14	2Q/14	3Q/14
Safety System Functional Failures	0	1	0	0	0	0	0	0
Indicator value	**0**	**1**	**1**	**1**	**1**	**0**	**0**	**0**

Licensee Comments:

1Q/13: LER 0500528/0500529/0500530-2012-006-00 for SSFF reported in February 2013 in each of the three units.

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	**4Q/12**	**1Q/13**	**2Q/13**	**3Q/13**	**4Q/13**	**1Q/14**	**2Q/14**	**3Q/14**
UAI (ΔCDF)	1.52E-09	2.45E-09	1.01E-08	9.02E-09	8.49E-09	4.28E-09	4.20E-09	1.15E-08
URI (ΔCDF)	-6.41E-08	-6.28E-08	-6.15E-08	-6.00E-08	-5.85E-08	-5.66E-08	-5.48E-08	1.19E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-6.30E-08**	**-6.00E-08**	**-5.10E-08**	**-5.10E-08**	**-5.00E-08**	**-5.20E-08**	**-5.10E-08**	**2.30E-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	**4Q/12**	**1Q/13**	**2Q/13**	**3Q/13**	**4Q/13**	**1Q/14**	**2Q/14**	**3Q/14**
UAI (ΔCDF)	2.06E-09	4.99E-10	-1.24E-09	-5.88E-10	-1.28E-09	-1.44E-09	-1.50E-09	-1.52E-09
URI (ΔCDF)	-1.10E-08	-1.09E-08	-1.08E-08	-1.07E-08	-1.06E-08	-1.05E-08	-1.04E-08	-1.03E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-8.90E-09**	**-1.00E-08**	**-1.20E-08**	**-1.10E-08**	**-1.20E-08**	**-1.20E-08**	**-1.20E-08**	**-1.20E-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	**4Q/12**	**1Q/13**	**2Q/13**	**3Q/13**	**4Q/13**	**1Q/14**	**2Q/14**	**3Q/14**
UAI (ΔCDF)	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08
URI (ΔCDF)	-6.41E-08	-6.27E-08	-6.12E-08	-5.97E-08	-5.82E-08	-5.63E-08	-5.47E-08	-5.31E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-1.10E-07**	**-1.10E-07**	**-1.10E-07**	**-1.10E-07**	**-1.10E-07**	**-1.00E-07**	**-1.00E-07**	**-1.00E-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	**4Q/12**	**1Q/13**	**2Q/13**	**3Q/13**	**4Q/13**	**1Q/14**	**2Q/14**	**3Q/14**
UAI (ΔCDF)	-5.42E-10	-5.35E-10	-9.69E-10	1.17E-10	-2.38E-10	-2.83E-10	-4.52E-10	-5.53E-10
URI (ΔCDF)	-6.37E-09	-6.37E-09	-6.37E-09	-6.37E-09	-6.37E-09	-6.37E-09	-6.37E-09	-6.37E-09
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-6.90E-09**	**-6.90E-09**	**-7.30E-09**	**-6.30E-09**	**-6.60E-09**	**-6.70E-09**	**-6.80E-09**	**-6.90E-09**

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	**4Q/12**	**1Q/13**	**2Q/13**	**3Q/13**	**4Q/13**	**1Q/14**	**2Q/14**	**3Q/14**
UAI (ΔCDF)	1.09E-08	1.22E-08	1.78E-08	1.75E-08	1.51E-08	9.35E-09	1.11E-08	1.46E-08
URI (ΔCDF)	-4.57E-08	-4.57E-08	-4.57E-08	-4.57E-08	-4.57E-08	-4.57E-08	-4.57E-08	-4.57E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-3.50E-08**	**-3.40E-08**	**-2.80E-08**	**-2.80E-08**	**-3.10E-08**	**-3.60E-08**	**-3.50E-08**	**-3.10E-08**

Licensee Comments: none

Reactor Coolant System Activity

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Activity	**10/12**	**11/12**	**12/12**	**1/13**	**2/13**	**3/13**	**4/13**	**5/13**	**6/13**	**7/13**	**8/13**	**9/13**
Maximum activity	0.000289	0.000287	0.000291	0.000298	0.000320	0.000312	N/A	0.000177	0.000194	0.000209	0.000209	0.000219
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**	**0**	**N/A**	**0**	**0**	**0**	**0**	**0**

Reactor Coolant System Activity	**10/13**	**11/13**	**12/13**	**1/14**	**2/14**	**3/14**	**4/14**	**5/14**	**6/14**	**7/14**	**8/14**	**9/14**
Maximum activity	0.000236	0.000217	0.000230	0.000250	0.000255	0.000257	0.000263	0.000277	0.000274	0.000495	0.000278	0.000304
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**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments:

6/13: No Unit 1 reactor coolant system activity was reported for April 2013 because the analysis was not performed during the April 2013 Unit 1 refueling outage.

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Leakage	10/12	11/12	12/12	1/13	2/13	3/13	4/13	5/13	6/13	7/13	8/13	9/13
Maximum leakage	0.046	0.049	0.040	0.041	0.029	0.067	0.006	0.047	0.050	0.048	0.050	0.040
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	**0.5**	**0.5**	**0.4**	**0.4**	**0.3**	**0.7**	**0.1**	**0.5**	**0.5**	**0.5**	**0.5**	**0.4**
Reactor Coolant System Leakage	**10/13**	**11/13**	**12/13**	**1/14**	**2/14**	**3/14**	**4/14**	**5/14**	**6/14**	**7/14**	**8/14**	**9/14**
Maximum leakage	0.022	0.029	0.037	0.025	0.051	0.042	0.028	0.033	0.065	0.066	0.038	0.037
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**	**0.3**	**0.4**	**0.3**	**0.5**	**0.4**	**0.3**	**0.3**	**0.7**	**0.7**	**0.4**	**0.4**

Licensee Comments: none

Thresholds: White < 90.0% Yellow < 70.0%

Notes

Drill/Exercise Performance	4Q/12	1Q/13	2Q/13	3Q/13	4Q/13	1Q/14	2Q/14	3Q/14
Successful opportunities	2.0	35.0	52.0	77.0	83.0	83.0	14.0	74.0
Total opportunities	2.0	39.0	52.0	78.0	85.0	85.0	14.0	80.0
Indicator value	**98.2%**	**97.6%**	**97.8%**	**97.7%**	**97.7%**	**97.4%**	**97.4%**	**96.6%**

Licensee Comments:

4Q/13: A plant condition was discovered that resulted in a previously unidentified missed emergency action level classification in November 2013. No color change resulted.

Thresholds: White < 80.0% Yellow < 60.0%

Notes

ERO Drill Participation	4Q/12	1Q/13	2Q/13	3Q/13	4Q/13	1Q/14	2Q/14	3Q/14
Participating Key personnel	90.0	90.0	87.0	89.0	98.0	94.0	92.0	89.0
Total Key personnel	90.0	90.0	87.0	89.0	98.0	94.0	92.0	89.0
Indicator value	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Licensee Comments:

1Q/13: Total number of key and participating personnel for March 2013 were corrected, no change in result or color.

Thresholds: White < 94.0% Yellow < 90.0%

Notes

Alert & Notification System	4Q/12	1Q/13	2Q/13	3Q/13	4Q/13	1Q/14	2Q/14	3Q/14
Successful siren-tests	1007	864	912	912	1008	912	912	858
Total sirens-tests	1008	864	912	912	1008	912	912	864
Indicator value	**99.9%**	**99.9%**	**99.9%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**99.8%**

Licensee Comments:

1Q/13: Comment and data correction: One scheduled test from the Maricopa Country Sherriff's Office ANS station was not completed in February 2013 and data was incorrectly tabulated. No color change.

1Q/13: Two scheduled tests from the Maricopa Country Sherriff's Office ANS station were not completed in February 2013.

Thresholds: White > 2.0 Yellow > 5.0

Notes

Occupational Exposure Control Effectiveness	4Q/12	1Q/13	2Q/13	3Q/13	4Q/13	1Q/14	2Q/14	3Q/14
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**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Thresholds: White > 1.0 Yellow > 3.0

Notes

RETS/ODCM Radiological Effluent	4Q/12	1Q/13	2Q/13	3Q/13	4Q/13	1Q/14	2Q/14	3Q/14
RETS/ODCM occurrences	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

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: November 3, 2014

Palo Verde 1

4Q/2014 Performance Indicators

The solid trend line represents the current reporting period.

Licensee's General Comments: none

Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

Notes

Unplanned Scrams per 7000 Critical Hrs	1Q/13	2Q/13	3Q/13	4Q/13	1Q/14	2Q/14	3Q/14	4Q/14
Unplanned scrams	0	0	0	0	0	0	0	0
Critical hours	2112.0	1546.2	2208.0	2208.0	2160.0	2184.0	2208.0	1475.5
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Thresholds: White > 6.0

Notes

Unplanned Power Changes per 7000 Critical Hrs	1Q/13	2Q/13	3Q/13	4Q/13	1Q/14	2Q/14	3Q/14	4Q/14
Unplanned power changes	0	0	1.0	1.0	0	0	0	0
Critical hours	2112.0	1546.2	2208.0	2208.0	2160.0	2184.0	2208.0	1475.5
Indicator value	**0**	**0**	**0.9**	**1.7**	**1.7**	**1.6**	**0.8**	**0**

Licensee Comments: none

Thresholds: White > 1.0

Notes

Unplanned Scrams with Complications	1Q/13	2Q/13	3Q/13	4Q/13	1Q/14	2Q/14	3Q/14	4Q/14
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

Thresholds: White > 5.0

Notes

Safety System Functional Failures (PWR)	1Q/13	2Q/13	3Q/13	4Q/13	1Q/14	2Q/14	3Q/14	4Q/14
Safety System Functional Failures	1	0	0	0	0	0	0	0
Indicator value	**1**	**1**	**1**	**1**	**0**	**0**	**0**	**0**

Licensee Comments:

1Q/13: LER 0500528/0500529/0500530-2012-006-00 for SSFF reported in February 2013 in each of the three units.

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/13**	**2Q/13**	**3Q/13**	**4Q/13**	**1Q/14**	**2Q/14**	**3Q/14**	**4Q/14**
UAI (ΔCDF)	2.45E-09	1.01E-08	9.02E-09	8.49E-09	4.28E-09	4.20E-09	1.15E-08	1.33E-08
URI (ΔCDF)	-6.28E-08	-6.15E-08	-6.00E-08	-5.85E-08	-5.66E-08	-5.48E-08	1.19E-08	1.52E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-6.00E-08**	**-5.10E-08**	**-5.10E-08**	**-5.00E-08**	**-5.20E-08**	**-5.10E-08**	**2.30E-08**	**2.90E-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	**1Q/13**	**2Q/13**	**3Q/13**	**4Q/13**	**1Q/14**	**2Q/14**	**3Q/14**	**4Q/14**
UAI (ΔCDF)	4.99E-10	-1.24E-09	-5.88E-10	-1.28E-09	-1.44E-09	-1.50E-09	-1.52E-09	-1.52E-09
URI (ΔCDF)	-1.09E-08	-1.08E-08	-1.07E-08	-1.06E-08	-1.05E-08	-1.04E-08	-1.03E-08	-1.03E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-1.00E-08**	**-1.20E-08**	**-1.10E-08**	**-1.20E-08**	**-1.20E-08**	**-1.20E-08**	**-1.20E-08**	**-1.20E-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	**1Q/13**	**2Q/13**	**3Q/13**	**4Q/13**	**1Q/14**	**2Q/14**	**3Q/14**	**4Q/14**
UAI (ΔCDF)	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08
URI (ΔCDF)	-6.27E-08	-6.12E-08	-5.97E-08	-5.82E-08	-5.63E-08	-5.47E-08	-5.31E-08	-5.15E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-1.10E-07**	**-1.10E-07**	**-1.10E-07**	**-1.10E-07**	**-1.00E-07**	**-1.00E-07**	**-1.00E-07**	**-1.00E-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	**1Q/13**	**2Q/13**	**3Q/13**	**4Q/13**	**1Q/14**	**2Q/14**	**3Q/14**	**4Q/14**
UAI (ΔCDF)	-5.35E-10	-9.69E-10	1.17E-10	-2.38E-10	-2.83E-10	-4.52E-10	-5.53E-10	-1.67E-10
URI (ΔCDF)	-6.37E-09	-6.37E-09	-6.37E-09	-6.37E-09	-6.37E-09	-6.37E-09	-6.37E-09	-6.37E-09
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-6.90E-09**	**-7.30E-09**	**-6.30E-09**	**-6.60E-09**	**-6.70E-09**	**-6.80E-09**	**-6.90E-09**	**-6.50E-09**

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/13**	**2Q/13**	**3Q/13**	**4Q/13**	**1Q/14**	**2Q/14**	**3Q/14**	**4Q/14**
UAI (ΔCDF)	1.22E-08	1.78E-08	1.75E-08	1.51E-08	9.35E-09	1.11E-08	1.46E-08	1.74E-08
URI (ΔCDF)	-4.57E-08	-4.57E-08	-4.57E-08	-4.57E-08	-4.57E-08	-4.57E-08	-4.57E-08	-4.57E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-3.40E-08**	**-2.80E-08**	**-2.80E-08**	**-3.10E-08**	**-3.60E-08**	**-3.50E-08**	**-3.10E-08**	**-2.80E-08**

Licensee Comments: none

Reactor Coolant System Activity

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Activity	**1/13**	**2/13**	**3/13**	**4/13**	**5/13**	**6/13**	**7/13**	**8/13**	**9/13**	**10/13**	**11/13**	**12/13**
Maximum activity	0.000298	0.000320	0.000312	N/A	0.000177	0.000194	0.000209	0.000209	0.000219	0.000236	0.000217	0.000230
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**	**N/A**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Reactor Coolant System Activity	**1/14**	**2/14**	**3/14**	**4/14**	**5/14**	**6/14**	**7/14**	**8/14**	**9/14**	**10/14**	**11/14**	**12/14**
Maximum activity	0.000250	0.000255	0.000257	0.000263	0.000277	0.000274	0.000495	0.000278	0.000304	0.000313	0.000166	0.000179
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**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments:

6/13: No Unit 1 reactor coolant system activity was reported for April 2013 because the analysis was not performed during the April 2013 Unit 1 refueling outage.

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Leakage	**1/13**	**2/13**	**3/13**	**4/13**	**5/13**	**6/13**	**7/13**	**8/13**	**9/13**	**10/13**	**11/13**	**12/13**
Maximum leakage	0.041	0.029	0.067	0.006	0.047	0.050	0.048	0.050	0.040	0.022	0.029	0.037
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	**0.4**	**0.3**	**0.7**	**0.1**	**0.5**	**0.5**	**0.5**	**0.5**	**0.4**	**0.2**	**0.3**	**0.4**
Reactor Coolant System Leakage	**1/14**	**2/14**	**3/14**	**4/14**	**5/14**	**6/14**	**7/14**	**8/14**	**9/14**	**10/14**	**11/14**	**12/14**
Maximum leakage	0.025	0.051	0.042	0.028	0.033	0.065	0.066	0.038	0.037	0.027	0.096	0.028
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**	**0.5**	**0.4**	**0.3**	**0.3**	**0.7**	**0.7**	**0.4**	**0.4**	**0.3**	**1.0**	**0.3**

Licensee Comments: none

Thresholds: White < 90.0% Yellow < 70.0%

Notes

Drill/Exercise Performance	1Q/13	2Q/13	3Q/13	4Q/13	1Q/14	2Q/14	3Q/14	4Q/14
Successful opportunities	35.0	52.0	77.0	83.0	83.0	14.0	74.0	137.0
Total opportunities	39.0	52.0	78.0	85.0	85.0	14.0	80.0	139.0
Indicator value	**97.6%**	**97.8%**	**97.7%**	**97.7%**	**97.4%**	**97.4%**	**96.6%**	**97.0%**

Licensee Comments:

4Q/13: A plant condition was discovered that resulted in a previously unidentified missed emergency action level classification in November 2013. No color change resulted.

Thresholds: White < 80.0% Yellow < 60.0%

Notes

ERO Drill Participation	1Q/13	2Q/13	3Q/13	4Q/13	1Q/14	2Q/14	3Q/14	4Q/14
Participating Key personnel	90.0	87.0	89.0	98.0	94.0	92.0	89.0	85.0
Total Key personnel	90.0	87.0	89.0	98.0	94.0	92.0	89.0	85.0
Indicator value	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Licensee Comments:

1Q/13: Total number of key and participating personnel for March 2013 were corrected, no change in result or color.

Thresholds: White < 94.0% Yellow < 90.0%

Notes

Alert & Notification System	1Q/13	2Q/13	3Q/13	4Q/13	1Q/14	2Q/14	3Q/14	4Q/14
Successful siren-tests	864	912	912	1008	912	912	858	960
Total sirens-tests	864	912	912	1008	912	912	864	960
Indicator value	**99.9%**	**99.9%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**99.8%**	**99.8%**

Licensee Comments:

1Q/13: Comment and data correction: One scheduled test from the Maricopa Country Sherriff's Office ANS station was not completed in February 2013 and data was incorrectly tabulated. No color change.

1Q/13: Two scheduled tests from the Maricopa Country Sherriff's Office ANS station were not completed in February 2013.

Occupational Exposure Control Effectiveness

Thresholds: White > 2.0 Yellow > 5.0

Notes

Occupational Exposure Control Effectiveness	1Q/13	2Q/13	3Q/13	4Q/13	1Q/14	2Q/14	3Q/14	4Q/14
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**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Thresholds: White > 1.0 Yellow > 3.0

Notes

RETS/ODCM Radiological Effluent	1Q/13	2Q/13	3Q/13	4Q/13	1Q/14	2Q/14	3Q/14	4Q/14
RETS/ODCM occurrences	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

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: February 3, 2015

Palo Verde 1

1Q/2015 Performance Indicators

The solid trend line represents the current reporting period.

Licensee's General Comments: none

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	0
Critical hours	1546.2	2208.0	2208.0	2160.0	2184.0	2208.0	1475.5	2160.0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

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	1.0	1.0	0	0	0	0	0
Critical hours	1546.2	2208.0	2208.0	2160.0	2184.0	2208.0	1475.5	2160.0
Indicator value	**0**	**0.9**	**1.7**	**1.7**	**1.6**	**0.8**	**0**	**0**

Licensee Comments: none

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
Indicator value	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Licensee Comments: none

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	0	0	0	0	0	0	0	0
Indicator value	**1**	**1**	**1**	**0**	**0**	**0**	**0**	**0**

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/13**	**3Q/13**	**4Q/13**	**1Q/14**	**2Q/14**	**3Q/14**	**4Q/14**	**1Q/15**
UAI (ΔCDF)	1.01E-08	9.02E-09	8.49E-09	4.28E-09	4.20E-09	1.15E-08	1.33E-08	5.61E-09
URI (ΔCDF)	-6.15E-08	-6.00E-08	-5.85E-08	-5.66E-08	-5.48E-08	1.19E-08	1.52E-08	1.52E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-5.10E-08**	**-5.10E-08**	**-5.00E-08**	**-5.20E-08**	**-5.10E-08**	**2.30E-08**	**2.90E-08**	**2.10E-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/13**	**3Q/13**	**4Q/13**	**1Q/14**	**2Q/14**	**3Q/14**	**4Q/14**	**1Q/15**
UAI (ΔCDF)	-1.24E-09	-5.88E-10	-1.28E-09	-1.44E-09	-1.50E-09	-1.52E-09	-1.52E-09	-1.52E-09
URI (ΔCDF)	-1.08E-08	-1.07E-08	-1.06E-08	-1.05E-08	-1.04E-08	-1.03E-08	-1.03E-08	-1.03E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-1.20E-08**	**-1.10E-08**	**-1.20E-08**	**-1.20E-08**	**-1.20E-08**	**-1.20E-08**	**-1.20E-08**	**-1.20E-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/13**	**3Q/13**	**4Q/13**	**1Q/14**	**2Q/14**	**3Q/14**	**4Q/14**	**1Q/15**
UAI (ΔCDF)	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08
URI (ΔCDF)	-6.12E-08	-5.97E-08	-5.82E-08	-5.63E-08	-5.47E-08	-5.31E-08	-5.15E-08	-5.15E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-1.10E-07**	**-1.10E-07**	**-1.10E-07**	**-1.00E-07**	**-1.00E-07**	**-1.00E-07**	**-1.00E-07**	**-1.00E-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/13**	**3Q/13**	**4Q/13**	**1Q/14**	**2Q/14**	**3Q/14**	**4Q/14**	**1Q/15**
UAI (ΔCDF)	-9.69E-10	1.17E-10	-2.38E-10	-2.83E-10	-4.52E-10	-5.53E-10	-1.67E-10	-4.19E-10
URI (ΔCDF)	-6.37E-09	-6.37E-09	-6.37E-09	-6.37E-09	-6.37E-09	-6.37E-09	-6.37E-09	-6.37E-09
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-7.30E-09**	**-6.30E-09**	**-6.60E-09**	**-6.70E-09**	**-6.80E-09**	**-6.90E-09**	**-6.50E-09**	**-6.80E-09**

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/13**	**3Q/13**	**4Q/13**	**1Q/14**	**2Q/14**	**3Q/14**	**4Q/14**	**1Q/15**
UAI (ΔCDF)	1.78E-08	1.75E-08	1.51E-08	9.35E-09	1.11E-08	1.46E-08	1.74E-08	1.16E-08
URI (ΔCDF)	-4.57E-08	-4.57E-08	-4.57E-08	-4.57E-08	-4.57E-08	-4.57E-08	-4.57E-08	-4.57E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-2.80E-08**	**-2.80E-08**	**-3.10E-08**	**-3.60E-08**	**-3.50E-08**	**-3.10E-08**	**-2.80E-08**	**-3.40E-08**

Licensee Comments: none

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	N/A	0.000177	0.000194	0.000209	0.000209	0.000219	0.000236	0.000217	0.000230	0.000250	0.000255	0.000257
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**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Reactor Coolant System Activity	**4/14**	**5/14**	**6/14**	**7/14**	**8/14**	**9/14**	**10/14**	**11/14**	**12/14**	**1/15**	**2/15**	**3/15**
Maximum activity	0.000263	0.000277	0.000274	0.000495	0.000278	0.000304	0.000313	0.000166	0.000179	0.000180	0.000187	0.000188
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**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments:

6/13: No Unit 1 reactor coolant system activity was reported for April 2013 because the analysis was not performed during the April 2013 Unit 1 refueling outage.

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Leakage	**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 leakage	0.006	0.047	0.050	0.048	0.050	0.040	0.022	0.029	0.037	0.025	0.051	0.042
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	**0.1**	**0.5**	**0.5**	**0.5**	**0.5**	**0.4**	**0.2**	**0.3**	**0.4**	**0.3**	**0.5**	**0.4**
Reactor Coolant System Leakage	**4/14**	**5/14**	**6/14**	**7/14**	**8/14**	**9/14**	**10/14**	**11/14**	**12/14**	**1/15**	**2/15**	**3/15**
Maximum leakage	0.028	0.033	0.065	0.066	0.038	0.037	0.027	0.096	0.028	0.050	0.050	0.043
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**	**0.3**	**0.7**	**0.7**	**0.4**	**0.4**	**0.3**	**1.0**	**0.3**	**0.5**	**0.5**	**0.4**

Licensee Comments: none

Thresholds: White < 90.0% Yellow < 70.0%

Notes

Drill/Exercise Performance	2Q/13	3Q/13	4Q/13	1Q/14	2Q/14	3Q/14	4Q/14	1Q/15
Successful opportunities	52.0	77.0	83.0	81.0	14.0	74.0	137.0	42.0
Total opportunities	52.0	78.0	85.0	83.0	14.0	80.0	139.0	42.0
Indicator value	**97.8%**	**97.7%**	**97.7%**	**97.4%**	**97.4%**	**96.5%**	**97.0%**	**97.7%**

Licensee Comments:

1Q/15: Corrected March 2014 EP01 drill success and total opportunities that included one item that should not have been counted. Discovered in March 2015. No color change as a result.

1Q/14: Corrected March 2014 EP01 drill success and total opportunities that included one item that should not have been counted. Discovered in March 2015. No color change as a result.

4Q/13: A plant condition was discovered that resulted in a previously unidentified missed emergency action level classification in November 2013. No color change resulted.

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	87.0	89.0	98.0	94.0	92.0	89.0	85.0	91.0
Total Key personnel	87.0	89.0	98.0	94.0	92.0	89.0	85.0	93.0
Indicator value	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**97.8%**

Licensee Comments: none

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	912	912	1008	912	912	858	960	908
Total sirens-tests	912	912	1008	912	912	864	960	912
Indicator value	**99.9%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**99.8%**	**99.8%**	**99.7%**

Licensee Comments: none

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
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

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
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

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

Palo Verde 1

2Q/2015 Performance Indicators

The solid trend line represents the current reporting period.

Licensee's General Comments: none

Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

Notes

Unplanned Scrams per 7000 Critical Hrs	3Q/13	4Q/13	1Q/14	2Q/14	3Q/14	4Q/14	1Q/15	2Q/15
Unplanned scrams	0	0	0	0	0	0	0	0
Critical hours	2208.0	2208.0	2160.0	2184.0	2208.0	1475.5	2160.0	2184.0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Thresholds: White > 6.0

Notes

Unplanned Power Changes per 7000 Critical Hrs	3Q/13	4Q/13	1Q/14	2Q/14	3Q/14	4Q/14	1Q/15	2Q/15
Unplanned power changes	1.0	1.0	0	0	0	0	0	0
Critical hours	2208.0	2208.0	2160.0	2184.0	2208.0	1475.5	2160.0	2184.0
Indicator value	**0.9**	**1.7**	**1.7**	**1.6**	**0.8**	**0**	**0**	**0**

Licensee Comments: none

Thresholds: White > 1.0

Notes

Unplanned Scrams with Complications	3Q/13	4Q/13	1Q/14	2Q/14	3Q/14	4Q/14	1Q/15	2Q/15
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

Thresholds: White > 5.0

Notes

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

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	3Q/13	4Q/13	1Q/14	2Q/14	3Q/14	4Q/14	1Q/15	2Q/15
UAI (ΔCDF)	8.97E-09	8.44E-09	4.22E-09	4.15E-09	1.15E-08	1.27E-08	5.03E-09	5.02E-09
URI (ΔCDF)	-6.00E-08	-5.85E-08	-5.66E-08	-5.48E-08	1.19E-08	1.52E-08	1.52E-08	1.52E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-5.10E-08**	**-5.00E-08**	**-5.20E-08**	**-5.10E-08**	**2.30E-08**	**2.80E-08**	**2.00E-08**	**2.00E-08**

Licensee Comments:

2Q/15: In May 2015, planned unavailability hours from March 2013 were adjusted resulting in a net decrease of 9.59 planned unavailability hours for the 3 year period ending in June 2015. The adjustments were made to account for hours unavailable vs. hours inoperable, previously recorded and not have resulted in a color change.

4Q/14: In May 2015, planned unavailability hours from March 2013 were adjusted resulting in a net decrease of 9.59 planned unavailability hours for the 3 year period ending in June 2015. The adjustments were made to account for hours unavailable vs. hours inoperable, previously recorded and not have resulted in a color change.

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	**3Q/13**	**4Q/13**	**1Q/14**	**2Q/14**	**3Q/14**	**4Q/14**	**1Q/15**	**2Q/15**
UAI (ΔCDF)	-5.88E-10	-1.28E-09	-1.44E-09	-1.50E-09	-1.52E-09	-1.52E-09	-1.52E-09	-1.52E-09
URI (ΔCDF)	-1.07E-08	-1.06E-08	-1.05E-08	-1.04E-08	-1.03E-08	-1.03E-08	-1.03E-08	-1.03E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-1.10E-08**	**-1.20E-08**	**-1.20E-08**	**-1.20E-08**	**-1.20E-08**	**-1.20E-08**	**-1.20E-08**	**-1.20E-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	**3Q/13**	**4Q/13**	**1Q/14**	**2Q/14**	**3Q/14**	**4Q/14**	**1Q/15**	**2Q/15**
UAI (ΔCDF)	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08
URI (ΔCDF)	-5.97E-08	-5.82E-08	-5.63E-08	-5.47E-08	-5.31E-08	-5.15E-08	-5.15E-08	-5.15E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-1.10E-07**	**-1.10E-07**	**-1.00E-07**	**-1.00E-07**	**-1.00E-07**	**-1.00E-07**	**-1.00E-07**	**-1.00E-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	**3Q/13**	**4Q/13**	**1Q/14**	**2Q/14**	**3Q/14**	**4Q/14**	**1Q/15**	**2Q/15**
UAI (ΔCDF)	1.17E-10	-2.38E-10	-2.83E-10	-4.52E-10	-5.53E-10	-1.67E-10	-4.19E-10	-7.93E-10
URI (ΔCDF)	-6.37E-09	-6.37E-09	-6.37E-09	-6.37E-09	-6.37E-09	-6.37E-09	-6.37E-09	-6.37E-09
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-6.30E-09**	**-6.60E-09**	**-6.70E-09**	**-6.80E-09**	**-6.90E-09**	**-6.50E-09**	**-6.80E-09**	**-7.20E-09**

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	**3Q/13**	**4Q/13**	**1Q/14**	**2Q/14**	**3Q/14**	**4Q/14**	**1Q/15**	**2Q/15**
UAI (ΔCDF)	1.75E-08	1.51E-08	9.35E-09	1.11E-08	1.46E-08	1.74E-08	1.16E-08	1.14E-08
URI (ΔCDF)	-4.57E-08	-4.57E-08	-4.57E-08	-4.57E-08	-4.57E-08	-4.57E-08	-4.57E-08	-4.57E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-2.80E-08**	**-3.10E-08**	**-3.60E-08**	**-3.50E-08**	**-3.10E-08**	**-2.80E-08**	**-3.40E-08**	**-3.40E-08**

Licensee Comments: none

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Activity	**7/13**	**8/13**	**9/13**	**10/13**	**11/13**	**12/13**	**1/14**	**2/14**	**3/14**	**4/14**	**5/14**	**6/14**
Maximum activity	0.000209	0.000209	0.000219	0.000236	0.000217	0.000230	0.000250	0.000255	0.000257	0.000263	0.000277	0.000274
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**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Reactor Coolant System Activity	**7/14**	**8/14**	**9/14**	**10/14**	**11/14**	**12/14**	**1/15**	**2/15**	**3/15**	**4/15**	**5/15**	**6/15**
Maximum activity	0.000495	0.000278	0.000304	0.000313	0.000166	0.000179	0.000180	0.000187	0.000188	0.000190	0.000198	0.000212
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**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Leakage	**7/13**	**8/13**	**9/13**	**10/13**	**11/13**	**12/13**	**1/14**	**2/14**	**3/14**	**4/14**	**5/14**	**6/14**
Maximum leakage	0.048	0.050	0.040	0.022	0.029	0.037	0.025	0.051	0.042	0.028	0.033	0.065
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	**0.5**	**0.5**	**0.4**	**0.2**	**0.3**	**0.4**	**0.3**	**0.5**	**0.4**	**0.3**	**0.3**	**0.7**
Reactor Coolant System Leakage	**7/14**	**8/14**	**9/14**	**10/14**	**11/14**	**12/14**	**1/15**	**2/15**	**3/15**	**4/15**	**5/15**	**6/15**
Maximum leakage	0.066	0.038	0.037	0.027	0.096	0.028	0.050	0.050	0.043	0.044	0.064	0.055
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	**0.7**	**0.4**	**0.4**	**0.3**	**1.0**	**0.3**	**0.5**	**0.5**	**0.4**	**0.4**	**0.6**	**0.6**

Licensee Comments: none

Thresholds: White < 90.0% Yellow < 70.0%

Notes

Drill/Exercise Performance	3Q/13	4Q/13	1Q/14	2Q/14	3Q/14	4Q/14	1Q/15	2Q/15
Successful opportunities	77.0	83.0	81.0	14.0	74.0	137.0	42.0	38.0
Total opportunities	78.0	85.0	83.0	14.0	80.0	139.0	42.0	38.0
Indicator value	**97.7%**	**97.7%**	**97.4%**	**97.4%**	**96.5%**	**97.0%**	**97.7%**	**97.7%**

Licensee Comments:

1Q/15: Corrected March 2014 EP01 drill success and total opportunities that included one item that should not have been counted. Discovered in March 2015. No color change as a result.

1Q/14: Corrected March 2014 EP01 drill success and total opportunities that included one item that should not have been counted. Discovered in March 2015. No color change as a result.

4Q/13: A plant condition was discovered that resulted in a previously unidentified missed emergency action level classification in November 2013. No color change resulted.

Thresholds: White < 80.0% Yellow < 60.0%

Notes

ERO Drill Participation	3Q/13	4Q/13	1Q/14	2Q/14	3Q/14	4Q/14	1Q/15	2Q/15
Participating Key personnel	89.0	98.0	94.0	92.0	89.0	85.0	91.0	91.0
Total Key personnel	89.0	98.0	94.0	92.0	89.0	85.0	93.0	91.0
Indicator value	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**97.8%**	**100.0%**

Licensee Comments: none

Thresholds: White < 94.0% Yellow < 90.0%

Notes

Alert & Notification System	3Q/13	4Q/13	1Q/14	2Q/14	3Q/14	4Q/14	1Q/15	2Q/15
Successful siren-tests	912	1008	912	912	858	960	908	912
Total sirens-tests	912	1008	912	912	864	960	912	912
Indicator value	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**99.8%**	**99.8%**	**99.7%**	**99.7%**

Licensee Comments: none

Thresholds: White > 2.0 Yellow > 5.0

Notes

Occupational Exposure Control Effectiveness	3Q/13	4Q/13	1Q/14	2Q/14	3Q/14	4Q/14	1Q/15	2Q/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
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Thresholds: White > 1.0 Yellow > 3.0

Notes

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

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: July 24, 2015

Palo Verde 1

3Q/2015 Performance Indicators

The solid trend line represents the current reporting period.

Licensee's General Comments: none

Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

Notes

Unplanned Scrams per 7000 Critical Hrs	4Q/13	1Q/14	2Q/14	3Q/14	4Q/14	1Q/15	2Q/15	3Q/15
Unplanned scrams	0	0	0	0	0	0	0	0
Critical hours	2208.0	2160.0	2184.0	2208.0	1475.5	2160.0	2184.0	2208.0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Thresholds: White > 6.0

Notes

Unplanned Power Changes per 7000 Critical Hrs	4Q/13	1Q/14	2Q/14	3Q/14	4Q/14	1Q/15	2Q/15	3Q/15
Unplanned power changes	1.0	0	0	0	0	0	0	0
Critical hours	2208.0	2160.0	2184.0	2208.0	1475.5	2160.0	2184.0	2208.0
Indicator value	**1.7**	**1.7**	**1.6**	**0.8**	**0**	**0**	**0**	**0**

Licensee Comments: none

Thresholds: White > 1.0

Notes

Unplanned Scrams with Complications	4Q/13	1Q/14	2Q/14	3Q/14	4Q/14	1Q/15	2Q/15	3Q/15
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

Thresholds: White > 5.0

Notes

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

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	**4Q/13**	**1Q/14**	**2Q/14**	**3Q/14**	**4Q/14**	**1Q/15**	**2Q/15**	**3Q/15**
UAI (ΔCDF)	7.77E-09	3.55E-09	3.48E-09	1.08E-08	1.13E-08	3.58E-09	3.58E-09	3.35E-09
URI (ΔCDF)	-5.85E-08	-5.66E-08	-5.48E-08	1.19E-08	1.52E-08	1.52E-08	1.52E-08	1.52E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-5.10E-08**	**-5.30E-08**	**-5.10E-08**	**2.30E-08**	**2.60E-08**	**1.90E-08**	**1.90E-08**	**1.90E-08**

Licensee Comments:

3Q/15: In 3rd Quarter 2015, updated unavailability for EDG 1A for interval March 2013 - October 2014, net change was (-) 12.43 hours and EDG 1B for May 2013, net change was (-) 10.62 hours , no color change as a result.

2Q/15: In May 2015, planned unavailability hours from March 2013 were adjusted resulting in a net decrease of 9.59 planned unavailability hours for the 3 year period ending in June 2015. The adjustments were made to account for hours unavailable vs. hours inoperable, previously recorded and not have resulted in a color change.

2Q/15: In May 2015, planned unavailability hours from March 2013 were adjusted resulting in a net decrease of 9.59 planned unavailability hours for the 3 year period ending in June 2015. The adjustments were made to account for hours unavailable vs. hours inoperable, previously recorded and not have resulted in a color change.

4Q/14: In May 2015, planned unavailability hours from March 2013 were adjusted resulting in a net decrease of 9.59 planned unavailability hours for the 3 year period ending in June 2015. The adjustments were made to account for hours unavailable vs. hours inoperable, previously recorded and not have resulted in a color change.

Additionally, In 3rd Quarter 2015, updated October 2014 unavailability for EDG 1A, net change was (-) 11.32 hours, no color change as a result.

4Q/14: In May 2015, planned unavailability hours from March 2013 were adjusted resulting in a net decrease of 9.59 planned unavailability hours for the 3 year period ending in June 2015. The adjustments were made to account for hours unavailable vs. hours inoperable, previously recorded and not have resulted in a color change.

3Q/14: In 3rd Quarter 2015, updated August 2014 unavailability for EDG 1A, net change was ( ) 0.72 hours, no color change as a result.

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	**4Q/13**	**1Q/14**	**2Q/14**	**3Q/14**	**4Q/14**	**1Q/15**	**2Q/15**	**3Q/15**
UAI (ΔCDF)	-1.28E-09	-1.44E-09	-1.50E-09	-1.52E-09	-1.52E-09	-1.52E-09	-1.52E-09	-1.52E-09
URI (ΔCDF)	-1.06E-08	-1.05E-08	-1.04E-08	-1.03E-08	-1.03E-08	-1.03E-08	-1.03E-08	-1.03E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-1.20E-08**	**-1.20E-08**	**-1.20E-08**	**-1.20E-08**	**-1.20E-08**	**-1.20E-08**	**-1.20E-08**	**-1.20E-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	**4Q/13**	**1Q/14**	**2Q/14**	**3Q/14**	**4Q/14**	**1Q/15**	**2Q/15**	**3Q/15**
UAI (ΔCDF)	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08
URI (ΔCDF)	-5.82E-08	-5.63E-08	-5.47E-08	-5.31E-08	-5.15E-08	-5.15E-08	-5.15E-08	-5.15E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-1.10E-07**	**-1.00E-07**	**-1.00E-07**	**-1.00E-07**	**-1.00E-07**	**-1.00E-07**	**-1.00E-07**	**-1.00E-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	**4Q/13**	**1Q/14**	**2Q/14**	**3Q/14**	**4Q/14**	**1Q/15**	**2Q/15**	**3Q/15**
UAI (ΔCDF)	-2.38E-10	-2.83E-10	-4.52E-10	-5.53E-10	-1.67E-10	-4.19E-10	-7.93E-10	-1.16E-09
URI (ΔCDF)	-6.37E-09	-6.37E-09	-6.37E-09	-6.37E-09	-6.37E-09	-6.37E-09	-6.37E-09	-6.37E-09
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-6.60E-09**	**-6.70E-09**	**-6.80E-09**	**-6.90E-09**	**-6.50E-09**	**-6.80E-09**	**-7.20E-09**	**-7.50E-09**

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	**4Q/13**	**1Q/14**	**2Q/14**	**3Q/14**	**4Q/14**	**1Q/15**	**2Q/15**	**3Q/15**
UAI (ΔCDF)	1.51E-08	9.35E-09	1.11E-08	1.46E-08	1.74E-08	1.16E-08	1.14E-08	1.12E-08
URI (ΔCDF)	-4.57E-08	-4.57E-08	-4.57E-08	-4.57E-08	-4.57E-08	-4.57E-08	-4.57E-08	-4.57E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-3.10E-08**	**-3.60E-08**	**-3.50E-08**	**-3.10E-08**	**-2.80E-08**	**-3.40E-08**	**-3.40E-08**	**-3.40E-08**

Licensee Comments: none

Reactor Coolant System Activity

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Activity	**10/13**	**11/13**	**12/13**	**1/14**	**2/14**	**3/14**	**4/14**	**5/14**	**6/14**	**7/14**	**8/14**	**9/14**
Maximum activity	0.000236	0.000217	0.000230	0.000250	0.000255	0.000257	0.000263	0.000277	0.000274	0.000495	0.000278	0.000304
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**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Reactor Coolant System Activity	**10/14**	**11/14**	**12/14**	**1/15**	**2/15**	**3/15**	**4/15**	**5/15**	**6/15**	**7/15**	**8/15**	**9/15**
Maximum activity	0.000313	0.000166	0.000179	0.000180	0.000187	0.000188	0.000190	0.000198	0.000212	0.000210	0.000230	0.000281
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**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Leakage	10/13	11/13	12/13	1/14	2/14	3/14	4/14	5/14	6/14	7/14	8/14	9/14
Maximum leakage	0.022	0.029	0.037	0.025	0.051	0.042	0.028	0.033	0.065	0.066	0.038	0.037
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**	**0.3**	**0.4**	**0.3**	**0.5**	**0.4**	**0.3**	**0.3**	**0.7**	**0.7**	**0.4**	**0.4**
Reactor Coolant System Leakage	**10/14**	**11/14**	**12/14**	**1/15**	**2/15**	**3/15**	**4/15**	**5/15**	**6/15**	**7/15**	**8/15**	**9/15**
Maximum leakage	0.027	0.096	0.028	0.050	0.050	0.043	0.044	0.064	0.055	0.052	0.046	0.036
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**	**1.0**	**0.3**	**0.5**	**0.5**	**0.4**	**0.4**	**0.6**	**0.6**	**0.5**	**0.5**	**0.4**

Licensee Comments: none

Thresholds: White < 90.0% Yellow < 70.0%

Notes

Drill/Exercise Performance	4Q/13	1Q/14	2Q/14	3Q/14	4Q/14	1Q/15	2Q/15	3Q/15
Successful opportunities	83.0	81.0	14.0	74.0	137.0	42.0	38.0	50.0
Total opportunities	85.0	83.0	14.0	80.0	139.0	42.0	38.0	50.0
Indicator value	**97.7%**	**97.4%**	**97.4%**	**96.5%**	**97.0%**	**97.7%**	**97.7%**	**97.7%**

Licensee Comments:

1Q/15: Corrected March 2014 EP01 drill success and total opportunities that included one item that should not have been counted. Discovered in March 2015. No color change as a result.

1Q/14: Corrected March 2014 EP01 drill success and total opportunities that included one item that should not have been counted. Discovered in March 2015. No color change as a result.

4Q/13: A plant condition was discovered that resulted in a previously unidentified missed emergency action level classification in November 2013. No color change resulted.

Thresholds: White < 80.0% Yellow < 60.0%

Notes

ERO Drill Participation	4Q/13	1Q/14	2Q/14	3Q/14	4Q/14	1Q/15	2Q/15	3Q/15
Participating Key personnel	98.0	94.0	92.0	89.0	85.0	91.0	91.0	95.0
Total Key personnel	98.0	94.0	92.0	89.0	85.0	93.0	91.0	95.0
Indicator value	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**97.8%**	**100.0%**	**100.0%**

Licensee Comments: none

Thresholds: White < 94.0% Yellow < 90.0%

Notes

Alert & Notification System	4Q/13	1Q/14	2Q/14	3Q/14	4Q/14	1Q/15	2Q/15	3Q/15
Successful siren-tests	1008	912	912	858	960	908	912	909
Total sirens-tests	1008	912	912	864	960	912	912	912
Indicator value	**100.0%**	**100.0%**	**100.0%**	**99.8%**	**99.8%**	**99.7%**	**99.7%**	**99.8%**

Licensee Comments: none

Thresholds: White > 2.0 Yellow > 5.0

Notes

Occupational Exposure Control Effectiveness	4Q/13	1Q/14	2Q/14	3Q/14	4Q/14	1Q/15	2Q/15	3Q/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
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Thresholds: White > 1.0 Yellow > 3.0

Notes

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

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: December 15, 2015

Palo Verde 1

4Q/2015 Performance Indicators

The solid trend line represents the current reporting period.

Licensee's General Comments: none

Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

Notes

Unplanned Scrams per 7000 Critical Hrs	1Q/14	2Q/14	3Q/14	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15
Unplanned scrams	0	0	0	0	0	0	0	0
Critical hours	2160.0	2184.0	2208.0	1475.5	2160.0	2184.0	2208.0	2208.0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Thresholds: White > 6.0

Notes

Unplanned Power Changes per 7000 Critical Hrs	1Q/14	2Q/14	3Q/14	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15
Unplanned power changes	0	0	0	0	0	0	0	0
Critical hours	2160.0	2184.0	2208.0	1475.5	2160.0	2184.0	2208.0	2208.0
Indicator value	**1.7**	**1.6**	**0.8**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Thresholds: White > 1.0

Notes

Unplanned Scrams with Complications	1Q/14	2Q/14	3Q/14	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15
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

Thresholds: White > 5.0

Notes

Safety System Functional Failures (PWR)	1Q/14	2Q/14	3Q/14	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15
Safety System Functional Failures	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

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	**1Q/14**	**2Q/14**	**3Q/14**	**4Q/14**	**1Q/15**	**2Q/15**	**3Q/15**	**4Q/15**
UAI (ΔCDF)	3.55E-09	3.48E-09	1.08E-08	1.13E-08	3.58E-09	3.58E-09	3.35E-09	4.40E-09
URI (ΔCDF)	-5.66E-08	-5.48E-08	1.19E-08	1.52E-08	1.52E-08	1.52E-08	1.52E-08	1.52E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-5.30E-08**	**-5.10E-08**	**2.30E-08**	**2.60E-08**	**1.90E-08**	**1.90E-08**	**1.90E-08**	**2.00E-08**

Licensee Comments:

3Q/15: In 3rd Quarter 2015, updated unavailability for EDG 1A for interval March 2013 - October 2014, net change was (-) 12.43 hours and EDG 1B for May 2013, net change was (-) 10.62 hours , no color change as a result.

2Q/15: In May 2015, planned unavailability hours from March 2013 were adjusted resulting in a net decrease of 9.59 planned unavailability hours for the 3 year period ending in June 2015. The adjustments were made to account for hours unavailable vs. hours inoperable, previously recorded and not have resulted in a color change.

2Q/15: In May 2015, planned unavailability hours from March 2013 were adjusted resulting in a net decrease of 9.59 planned unavailability hours for the 3 year period ending in June 2015. The adjustments were made to account for hours unavailable vs. hours inoperable, previously recorded and not have resulted in a color change.

4Q/14: In May 2015, planned unavailability hours from March 2013 were adjusted resulting in a net decrease of 9.59 planned unavailability hours for the 3 year period ending in June 2015. The adjustments were made to account for hours unavailable vs. hours inoperable, previously recorded and not have resulted in a color change.

Additionally, In 3rd Quarter 2015, updated October 2014 unavailability for EDG 1A, net change was (-) 11.32 hours, no color change as a result.

4Q/14: In May 2015, planned unavailability hours from March 2013 were adjusted resulting in a net decrease of 9.59 planned unavailability hours for the 3 year period ending in June 2015. The adjustments were made to account for hours unavailable vs. hours inoperable, previously recorded and not have resulted in a color change.

3Q/14: In 3rd Quarter 2015, updated August 2014 unavailability for EDG 1A, net change was ( ) 0.72 hours, no color change as a result.

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/14**	**2Q/14**	**3Q/14**	**4Q/14**	**1Q/15**	**2Q/15**	**3Q/15**	**4Q/15**
UAI (ΔCDF)	-1.44E-09	-1.50E-09	-1.52E-09	-1.52E-09	-1.52E-09	-1.52E-09	-1.52E-09	-1.52E-09
URI (ΔCDF)	-1.05E-08	-1.04E-08	-1.03E-08	-1.03E-08	-1.03E-08	-1.03E-08	-1.03E-08	-1.03E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-1.20E-08**	**-1.20E-08**	**-1.20E-08**	**-1.20E-08**	**-1.20E-08**	**-1.20E-08**	**-1.20E-08**	**-1.20E-08**

Licensee Comments: none

Notes

Mitigating Systems Performance Index, Heat Removal System	1Q/14	2Q/14	3Q/14	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15
UAI (ΔCDF)	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08
URI (ΔCDF)	-5.63E-08	-5.47E-08	-5.31E-08	-5.15E-08	-5.15E-08	-5.15E-08	-5.15E-08	-5.15E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-1.00E-07**	**-1.00E-07**	**-1.00E-07**	**-1.00E-07**	**-1.00E-07**	**-1.00E-07**	**-1.00E-07**	**-1.00E-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	**1Q/14**	**2Q/14**	**3Q/14**	**4Q/14**	**1Q/15**	**2Q/15**	**3Q/15**	**4Q/15**
UAI (ΔCDF)	-2.83E-10	-4.52E-10	-5.53E-10	-1.67E-10	-4.19E-10	-7.93E-10	-1.16E-09	-1.19E-09
URI (ΔCDF)	-6.37E-09	-6.37E-09	-6.37E-09	-6.37E-09	-6.37E-09	-6.37E-09	-6.37E-09	-6.37E-09
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-6.70E-09**	**-6.80E-09**	**-6.90E-09**	**-6.50E-09**	**-6.80E-09**	**-7.20E-09**	**-7.50E-09**	**-7.60E-09**

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/14**	**2Q/14**	**3Q/14**	**4Q/14**	**1Q/15**	**2Q/15**	**3Q/15**	**4Q/15**
UAI (ΔCDF)	9.35E-09	1.11E-08	1.46E-08	1.74E-08	1.16E-08	1.14E-08	1.12E-08	1.11E-08
URI (ΔCDF)	-4.57E-08	-4.57E-08	-4.57E-08	-4.57E-08	-4.57E-08	-4.57E-08	-4.57E-08	-4.57E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-3.60E-08**	**-3.50E-08**	**-3.10E-08**	**-2.80E-08**	**-3.40E-08**	**-3.40E-08**	**-3.40E-08**	**-3.50E-08**

Licensee Comments: none

Reactor Coolant System Activity

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Activity	**1/14**	**2/14**	**3/14**	**4/14**	**5/14**	**6/14**	**7/14**	**8/14**	**9/14**	**10/14**	**11/14**	**12/14**
Maximum activity	0.000250	0.000255	0.000257	0.000263	0.000277	0.000274	0.000495	0.000278	0.000304	0.000313	0.000166	0.000179
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**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Reactor Coolant System Activity	**1/15**	**2/15**	**3/15**	**4/15**	**5/15**	**6/15**	**7/15**	**8/15**	**9/15**	**10/15**	**11/15**	**12/15**
Maximum activity	0.000180	0.000187	0.000188	0.000190	0.000198	0.000212	0.000210	0.000230	0.000281	0.000257	0.000254	0.000278
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**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Leakage	**1/14**	**2/14**	**3/14**	**4/14**	**5/14**	**6/14**	**7/14**	**8/14**	**9/14**	**10/14**	**11/14**	**12/14**
Maximum leakage	0.025	0.051	0.042	0.028	0.033	0.065	0.066	0.038	0.037	0.027	0.096	0.028
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**	**0.5**	**0.4**	**0.3**	**0.3**	**0.7**	**0.7**	**0.4**	**0.4**	**0.3**	**1.0**	**0.3**
Reactor Coolant System Leakage	**1/15**	**2/15**	**3/15**	**4/15**	**5/15**	**6/15**	**7/15**	**8/15**	**9/15**	**10/15**	**11/15**	**12/15**
Maximum leakage	0.050	0.050	0.043	0.044	0.064	0.055	0.052	0.046	0.036	0.058	0.068	0.056
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	**0.5**	**0.5**	**0.4**	**0.4**	**0.6**	**0.6**	**0.5**	**0.5**	**0.4**	**0.6**	**0.7**	**0.6**

Licensee Comments: none

Thresholds: White < 90.0% Yellow < 70.0%

Notes

Drill/Exercise Performance	1Q/14	2Q/14	3Q/14	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15
Successful opportunities	81.0	14.0	74.0	137.0	42.0	38.0	50.0	164.0
Total opportunities	83.0	14.0	80.0	139.0	42.0	38.0	50.0	165.0
Indicator value	**97.4%**	**97.4%**	**96.5%**	**97.0%**	**97.7%**	**97.7%**	**97.7%**	**98.2%**

Licensee Comments:

1Q/15: Corrected March 2014 EP01 drill success and total opportunities that included one item that should not have been counted. Discovered in March 2015. No color change as a result.

1Q/14: Corrected March 2014 EP01 drill success and total opportunities that included one item that should not have been counted. Discovered in March 2015. No color change as a result.

Thresholds: White < 80.0% Yellow < 60.0%

Notes

ERO Drill Participation	1Q/14	2Q/14	3Q/14	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15
Participating Key personnel	94.0	92.0	89.0	85.0	91.0	91.0	95.0	91.0
Total Key personnel	94.0	92.0	89.0	85.0	93.0	91.0	95.0	91.0
Indicator value	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**97.8%**	**100.0%**	**100.0%**	**100.0%**

Licensee Comments: none

Thresholds: White < 94.0% Yellow < 90.0%

Notes

Alert & Notification System	1Q/14	2Q/14	3Q/14	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15
Successful siren-tests	912	912	858	960	908	912	909	1008
Total sirens-tests	912	912	864	960	912	912	912	1008
Indicator value	**100.0%**	**100.0%**	**99.8%**	**99.8%**	**99.7%**	**99.7%**	**99.8%**	**99.8%**

Licensee Comments: none

Thresholds: White > 2.0 Yellow > 5.0

Notes

Occupational Exposure Control Effectiveness	1Q/14	2Q/14	3Q/14	4Q/14	1Q/15	2Q/15	3Q/15	4Q/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
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Thresholds: White > 1.0 Yellow > 3.0

Notes

RETS/ODCM Radiological Effluent	1Q/14	2Q/14	3Q/14	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15
RETS/ODCM occurrences	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

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: March 1, 2016

Palo Verde 1

1Q/2016 Performance Indicators

The solid trend line represents the current reporting period.

Licensee's General Comments: none

Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

Notes

Unplanned Scrams per 7000 Critical Hrs	2Q/14	3Q/14	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16
Unplanned scrams	0	0	0	0	0	0	0	0
Critical hours	2184.0	2208.0	1475.5	2160.0	2184.0	2208.0	2208.0	2184.0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Thresholds: White > 6.0

Notes

Unplanned Power Changes per 7000 Critical Hrs	2Q/14	3Q/14	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16
Unplanned power changes	0	0	0	0	0	0	0	0
Critical hours	2184.0	2208.0	1475.5	2160.0	2184.0	2208.0	2208.0	2184.0
Indicator value	**1.6**	**0.8**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Thresholds: White > 1.0

Notes

Unplanned Scrams with Complications	2Q/14	3Q/14	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16
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 (PWR)

Thresholds: White > 5.0

Notes

Safety System Functional Failures (PWR)	2Q/14	3Q/14	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16
Safety System Functional Failures	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

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/14**	**3Q/14**	**4Q/14**	**1Q/15**	**2Q/15**	**3Q/15**	**4Q/15**	**1Q/16**
UAI (ΔCDF)	3.48E-09	1.08E-08	1.13E-08	3.58E-09	3.58E-09	3.35E-09	4.40E-09	5.38E-09
URI (ΔCDF)	-5.48E-08	1.19E-08	1.52E-08	1.52E-08	1.52E-08	1.52E-08	1.52E-08	1.52E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-5.10E-08**	**2.30E-08**	**2.60E-08**	**1.90E-08**	**1.90E-08**	**1.90E-08**	**2.00E-08**	**2.10E-08**

Licensee Comments:

3Q/15: In 3rd Quarter 2015, updated unavailability for EDG 1A for interval March 2013 - October 2014, net change was (-) 12.43 hours and EDG 1B for May 2013, net change was (-) 10.62 hours , no color change as a result.

2Q/15: In May 2015, planned unavailability hours from March 2013 were adjusted resulting in a net decrease of 9.59 planned unavailability hours for the 3 year period ending in June 2015. The adjustments were made to account for hours unavailable vs. hours inoperable, previously recorded and not have resulted in a color change.

2Q/15: In May 2015, planned unavailability hours from March 2013 were adjusted resulting in a net decrease of 9.59 planned unavailability hours for the 3 year period ending in June 2015. The adjustments were made to account for hours unavailable vs. hours inoperable, previously recorded and not have resulted in a color change.

4Q/14: In May 2015, planned unavailability hours from March 2013 were adjusted resulting in a net decrease of 9.59 planned unavailability hours for the 3 year period ending in June 2015. The adjustments were made to account for hours unavailable vs. hours inoperable, previously recorded and not have resulted in a color change.

Additionally, In 3rd Quarter 2015, updated October 2014 unavailability for EDG 1A, net change was (-) 11.32 hours, no color change as a result.

4Q/14: In May 2015, planned unavailability hours from March 2013 were adjusted resulting in a net decrease of 9.59 planned unavailability hours for the 3 year period ending in June 2015. The adjustments were made to account for hours unavailable vs. hours inoperable, previously recorded and not have resulted in a color change.

3Q/14: In 3rd Quarter 2015, updated August 2014 unavailability for EDG 1A, net change was ( ) 0.72 hours, no color change as a result.

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/14**	**3Q/14**	**4Q/14**	**1Q/15**	**2Q/15**	**3Q/15**	**4Q/15**	**1Q/16**
UAI (ΔCDF)	-1.50E-09	-1.52E-09	-1.52E-09	-1.52E-09	-1.52E-09	-1.52E-09	-1.52E-09	-1.52E-09
URI (ΔCDF)	-1.04E-08	-1.03E-08	-1.03E-08	-1.03E-08	-1.03E-08	-1.03E-08	-1.03E-08	-1.03E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-1.20E-08**	**-1.20E-08**	**-1.20E-08**	**-1.20E-08**	**-1.20E-08**	**-1.20E-08**	**-1.20E-08**	**-1.20E-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/14**	**3Q/14**	**4Q/14**	**1Q/15**	**2Q/15**	**3Q/15**	**4Q/15**	**1Q/16**
UAI (ΔCDF)	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08
URI (ΔCDF)	-5.47E-08	-5.31E-08	-5.15E-08	-5.15E-08	-5.15E-08	-5.15E-08	-5.15E-08	-5.15E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-1.00E-07**	**-1.00E-07**	**-1.00E-07**	**-1.00E-07**	**-1.00E-07**	**-1.00E-07**	**-1.00E-07**	**-1.00E-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/14**	**3Q/14**	**4Q/14**	**1Q/15**	**2Q/15**	**3Q/15**	**4Q/15**	**1Q/16**
UAI (ΔCDF)	-4.52E-10	-5.53E-10	-1.67E-10	-4.19E-10	-7.93E-10	-1.16E-09	-1.19E-09	-4.58E-10
URI (ΔCDF)	-6.37E-09	-6.37E-09	-6.37E-09	-6.37E-09	-6.37E-09	-6.37E-09	-6.37E-09	-6.37E-09
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-6.80E-09**	**-6.90E-09**	**-6.50E-09**	**-6.80E-09**	**-7.20E-09**	**-7.50E-09**	**-7.60E-09**	**-6.80E-09**

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/14**	**3Q/14**	**4Q/14**	**1Q/15**	**2Q/15**	**3Q/15**	**4Q/15**	**1Q/16**
UAI (ΔCDF)	1.11E-08	1.46E-08	1.74E-08	1.16E-08	1.14E-08	1.12E-08	1.11E-08	1.06E-08
URI (ΔCDF)	-4.57E-08	-4.57E-08	-4.57E-08	-4.57E-08	-4.57E-08	-4.57E-08	-4.57E-08	-4.57E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-3.50E-08**	**-3.10E-08**	**-2.80E-08**	**-3.40E-08**	**-3.40E-08**	**-3.40E-08**	**-3.50E-08**	**-3.50E-08**

Licensee Comments: none

Reactor Coolant System Activity

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Activity	**4/14**	**5/14**	**6/14**	**7/14**	**8/14**	**9/14**	**10/14**	**11/14**	**12/14**	**1/15**	**2/15**	**3/15**
Maximum activity	0.000263	0.000277	0.000274	0.000495	0.000278	0.000304	0.000313	0.000166	0.000179	0.000180	0.000187	0.000188
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**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Reactor Coolant System Activity	**4/15**	**5/15**	**6/15**	**7/15**	**8/15**	**9/15**	**10/15**	**11/15**	**12/15**	**1/16**	**2/16**	**3/16**
Maximum activity	0.000190	0.000198	0.000212	0.000210	0.000230	0.000281	0.000257	0.000254	0.000278	0.000307	0.000286	0.000292
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**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Leakage	**4/14**	**5/14**	**6/14**	**7/14**	**8/14**	**9/14**	**10/14**	**11/14**	**12/14**	**1/15**	**2/15**	**3/15**
Maximum leakage	0.028	0.033	0.065	0.066	0.038	0.037	0.027	0.096	0.028	0.050	0.050	0.043
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**	**0.3**	**0.7**	**0.7**	**0.4**	**0.4**	**0.3**	**1.0**	**0.3**	**0.5**	**0.5**	**0.4**
Reactor Coolant System Leakage	**4/15**	**5/15**	**6/15**	**7/15**	**8/15**	**9/15**	**10/15**	**11/15**	**12/15**	**1/16**	**2/16**	**3/16**
Maximum leakage	0.044	0.064	0.055	0.052	0.046	0.036	0.058	0.068	0.056	0.060	0.071	0.122
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	**0.4**	**0.6**	**0.6**	**0.5**	**0.5**	**0.4**	**0.6**	**0.7**	**0.6**	**0.6**	**0.7**	**1.2**

Licensee Comments: none

Thresholds: White < 90.0% Yellow < 70.0%

Notes

Drill/Exercise Performance	2Q/14	3Q/14	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16
Successful opportunities	14.0	74.0	137.0	42.0	38.0	50.0	163.0	201.0
Total opportunities	14.0	80.0	139.0	42.0	38.0	50.0	164.0	204.0
Indicator value	**97.4%**	**96.5%**	**97.0%**	**97.7%**	**97.7%**	**97.7%**	**98.2%**	**98.4%**

Licensee Comments:

4Q/15: The total number of drill / exercise opportunities and successes was revised from 87 to 86 each (no additional failures). No color change resulted.

1Q/15: Corrected March 2014 EP01 drill success and total opportunities that included one item that should not have been counted. Discovered in March 2015. No color change as a result.

Thresholds: White < 80.0% Yellow < 60.0%

Notes

ERO Drill Participation	2Q/14	3Q/14	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16
Participating Key personnel	92.0	89.0	85.0	91.0	91.0	95.0	91.0	89.0
Total Key personnel	92.0	89.0	85.0	93.0	91.0	95.0	91.0	89.0
Indicator value	**100.0%**	**100.0%**	**100.0%**	**97.8%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Licensee Comments: none

Thresholds: White < 94.0% Yellow < 90.0%

Notes

Alert & Notification System	2Q/14	3Q/14	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16
Successful siren-tests	912	858	960	908	912	909	1008	1102
Total sirens-tests	912	864	960	912	912	912	1008	1102
Indicator value	**100.0%**	**99.8%**	**99.8%**	**99.7%**	**99.7%**	**99.8%**	**99.8%**	**99.9%**

Licensee Comments: none

Occupational Exposure Control Effectiveness

Thresholds: White > 2.0 Yellow > 5.0

Notes

Occupational Exposure Control Effectiveness	2Q/14	3Q/14	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16
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**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Thresholds: White > 1.0 Yellow > 3.0

Notes

RETS/ODCM Radiological Effluent	2Q/14	3Q/14	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16
RETS/ODCM occurrences	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

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, 2016

Palo Verde 1

2Q/2016 Performance Indicators

The solid trend line represents the current reporting period.

Licensee's General Comments: none

Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

Notes

Unplanned Scrams per 7000 Critical Hrs	3Q/14	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16
Unplanned scrams	0	0	0	0	0	0	0	0
Critical hours	2208.0	1475.5	2160.0	2184.0	2208.0	2208.0	2184.0	1346.9
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Thresholds: White > 6.0

Notes

Unplanned Power Changes per 7000 Critical Hrs	3Q/14	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16
Unplanned power changes	0	0	0	0	0	0	0	1.0
Critical hours	2208.0	1475.5	2160.0	2184.0	2208.0	2208.0	2184.0	1346.9
Indicator value	**0.8**	**0**	**0**	**0**	**0**	**0**	**0**	**0.9**

Licensee Comments: none

Thresholds: White > 1.0

Notes

Unplanned Scrams with Complications	3Q/14	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16
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 (PWR)

Thresholds: White > 5.0

Notes

Safety System Functional Failures (PWR)	3Q/14	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16
Safety System Functional Failures	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

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	**3Q/14**	**4Q/14**	**1Q/15**	**2Q/15**	**3Q/15**	**4Q/15**	**1Q/16**	**2Q/16**
UAI (ΔCDF)	1.08E-08	1.13E-08	3.58E-09	3.58E-09	3.35E-09	4.40E-09	5.38E-09	-7.47E-10
URI (ΔCDF)	1.19E-08	1.52E-08	1.52E-08	1.52E-08	1.52E-08	1.52E-08	1.52E-08	1.52E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**2.30E-08**	**2.60E-08**	**1.90E-08**	**1.90E-08**	**1.90E-08**	**2.00E-08**	**2.10E-08**	**1.40E-08**

Licensee Comments:

3Q/15: In 3rd Quarter 2015, updated unavailability for EDG 1A for interval March 2013 - October 2014, net change was (-) 12.43 hours and EDG 1B for May 2013, net change was (-) 10.62 hours , no color change as a result.

2Q/15: In May 2015, planned unavailability hours from March 2013 were adjusted resulting in a net decrease of 9.59 planned unavailability hours for the 3 year period ending in June 2015. The adjustments were made to account for hours unavailable vs. hours inoperable, previously recorded and not have resulted in a color change.

2Q/15: In May 2015, planned unavailability hours from March 2013 were adjusted resulting in a net decrease of 9.59 planned unavailability hours for the 3 year period ending in June 2015. The adjustments were made to account for hours unavailable vs. hours inoperable, previously recorded and not have resulted in a color change.

4Q/14: In May 2015, planned unavailability hours from March 2013 were adjusted resulting in a net decrease of 9.59 planned unavailability hours for the 3 year period ending in June 2015. The adjustments were made to account for hours unavailable vs. hours inoperable, previously recorded and not have resulted in a color change.

Additionally, In 3rd Quarter 2015, updated October 2014 unavailability for EDG 1A, net change was (-) 11.32 hours, no color change as a result.

4Q/14: In May 2015, planned unavailability hours from March 2013 were adjusted resulting in a net decrease of 9.59 planned unavailability hours for the 3 year period ending in June 2015. The adjustments were made to account for hours unavailable vs. hours inoperable, previously recorded and not have resulted in a color change.

3Q/14: In 3rd Quarter 2015, updated August 2014 unavailability for EDG 1A, net change was ( ) 0.72 hours, no color change as a result.

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	**3Q/14**	**4Q/14**	**1Q/15**	**2Q/15**	**3Q/15**	**4Q/15**	**1Q/16**	**2Q/16**
UAI (ΔCDF)	-1.52E-09	-1.52E-09	-1.52E-09	-1.52E-09	-1.52E-09	-1.52E-09	-1.52E-09	-1.52E-09
URI (ΔCDF)	-1.03E-08	-1.03E-08	-1.03E-08	-1.03E-08	-1.03E-08	-1.03E-08	-1.03E-08	-1.03E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-1.20E-08**	**-1.20E-08**	**-1.20E-08**	**-1.20E-08**	**-1.20E-08**	**-1.20E-08**	**-1.20E-08**	**-1.20E-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	**3Q/14**	**4Q/14**	**1Q/15**	**2Q/15**	**3Q/15**	**4Q/15**	**1Q/16**	**2Q/16**
UAI (ΔCDF)	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08
URI (ΔCDF)	-5.31E-08	-5.15E-08	-5.15E-08	-5.15E-08	-5.15E-08	-5.15E-08	-5.15E-08	-5.15E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-1.00E-07**	**-1.00E-07**	**-1.00E-07**	**-1.00E-07**	**-1.00E-07**	**-1.00E-07**	**-1.00E-07**	**-1.00E-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	**3Q/14**	**4Q/14**	**1Q/15**	**2Q/15**	**3Q/15**	**4Q/15**	**1Q/16**	**2Q/16**
UAI (ΔCDF)	-5.53E-10	-1.67E-10	-4.19E-10	-7.93E-10	-1.16E-09	-1.19E-09	-4.58E-10	-2.81E-10
URI (ΔCDF)	-6.37E-09	-6.37E-09	-6.37E-09	-6.37E-09	-6.37E-09	-6.37E-09	-6.37E-09	-6.37E-09
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-6.90E-09**	**-6.50E-09**	**-6.80E-09**	**-7.20E-09**	**-7.50E-09**	**-7.60E-09**	**-6.80E-09**	**-6.70E-09**

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	**3Q/14**	**4Q/14**	**1Q/15**	**2Q/15**	**3Q/15**	**4Q/15**	**1Q/16**	**2Q/16**
UAI (ΔCDF)	1.46E-08	1.74E-08	1.16E-08	1.14E-08	1.12E-08	1.11E-08	1.06E-08	4.84E-09
URI (ΔCDF)	-4.57E-08	-4.57E-08	-4.57E-08	-4.57E-08	-4.57E-08	-4.57E-08	-4.57E-08	-4.57E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-3.10E-08**	**-2.80E-08**	**-3.40E-08**	**-3.40E-08**	**-3.40E-08**	**-3.50E-08**	**-3.50E-08**	**-4.10E-08**

Licensee Comments: none

Reactor Coolant System Activity

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Activity	**7/14**	**8/14**	**9/14**	**10/14**	**11/14**	**12/14**	**1/15**	**2/15**	**3/15**	**4/15**	**5/15**	**6/15**
Maximum activity	0.000495	0.000278	0.000304	0.000313	0.000166	0.000179	0.000180	0.000187	0.000188	0.000190	0.000198	0.000212
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**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Reactor Coolant System Activity	**7/15**	**8/15**	**9/15**	**10/15**	**11/15**	**12/15**	**1/16**	**2/16**	**3/16**	**4/16**	**5/16**	**6/16**
Maximum activity	0.000210	0.000230	0.000281	0.000257	0.000254	0.000278	0.000307	0.000286	0.000292	0.000314	0.000178	0.000182
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**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Leakage	7/14	8/14	9/14	10/14	11/14	12/14	1/15	2/15	3/15	4/15	5/15	6/15
Maximum leakage	0.066	0.038	0.037	0.027	0.096	0.028	0.050	0.050	0.043	0.044	0.064	0.055
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	**0.7**	**0.4**	**0.4**	**0.3**	**1.0**	**0.3**	**0.5**	**0.5**	**0.4**	**0.4**	**0.6**	**0.6**
Reactor Coolant System Leakage	**7/15**	**8/15**	**9/15**	**10/15**	**11/15**	**12/15**	**1/16**	**2/16**	**3/16**	**4/16**	**5/16**	**6/16**
Maximum leakage	0.052	0.046	0.036	0.058	0.068	0.056	0.060	0.071	0.122	0.411	0.062	0.072
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	**0.5**	**0.5**	**0.4**	**0.6**	**0.7**	**0.6**	**0.6**	**0.7**	**1.2**	**4.1**	**0.6**	**0.7**

Licensee Comments: none

Thresholds: White < 90.0% Yellow < 70.0%

Notes

Drill/Exercise Performance	3Q/14	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16
Successful opportunities	74.0	137.0	42.0	38.0	50.0	163.0	203.0	3.0
Total opportunities	80.0	139.0	42.0	38.0	50.0	164.0	206.0	3.0
Indicator value	**96.5%**	**97.0%**	**97.7%**	**97.7%**	**97.7%**	**98.2%**	**98.4%**	**98.3%**

Licensee Comments:

1Q/16: On March 29, 2016, a new shift manager became qualified in two key ERO positions and completed two opportunities and successes which were not included in the previously submitted data. No color change.

4Q/15: The total number of drill / exercise opportunities and successes was revised from 87 to 86 each (no additional failures). No color change resulted.

1Q/15: Corrected March 2014 EP01 drill success and total opportunities that included one item that should not have been counted. Discovered in March 2015. No color change as a result.

Thresholds: White < 80.0% Yellow < 60.0%

Notes

ERO Drill Participation	3Q/14	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16
Participating Key personnel	89.0	85.0	91.0	91.0	95.0	91.0	91.0	95.0
Total Key personnel	89.0	85.0	93.0	91.0	95.0	91.0	91.0	95.0
Indicator value	**100.0%**	**100.0%**	**97.8%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Licensee Comments:

1Q/16: On March 29, 2016, a new shift manager became qualified in two key ERO positions which were not included in the previously submitted data. No color change.

Thresholds: White < 94.0% Yellow < 90.0%

Notes

Alert & Notification System	3Q/14	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16
Successful siren-tests	858	960	908	912	909	1008	1102	1044
Total sirens-tests	864	960	912	912	912	1008	1102	1044
Indicator value	**99.8%**	**99.8%**	**99.7%**	**99.7%**	**99.8%**	**99.8%**	**99.9%**	**99.9%**

Licensee Comments: none

Thresholds: White > 2.0 Yellow > 5.0

Notes

Occupational Exposure Control Effectiveness	3Q/14	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16
High radiation area occurrences	0	0	0	0	0	0	0	1
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**	**0**	**0**	**0**	**0**	**0**	**0**	**1**

Licensee Comments: none

Thresholds: White > 1.0 Yellow > 3.0

Notes

RETS/ODCM Radiological Effluent	3Q/14	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16
RETS/ODCM occurrences	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

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: July 25, 2016

Palo Verde 1

3Q/2016 Performance Indicators

The solid trend line represents the current reporting period.

Licensee's General Comments: none

Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

Notes

Unplanned Scrams per 7000 Critical Hrs	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16
Unplanned scrams	0	0	0	0	0	0	0	1.0
Critical hours	1475.5	2160.0	2184.0	2208.0	2208.0	2184.0	1346.9	2099.8
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.9**

Licensee Comments: none

Thresholds: White > 6.0

Notes

Unplanned Power Changes per 7000 Critical Hrs	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16
Unplanned power changes	0	0	0	0	0	0	1.0	0
Critical hours	1475.5	2160.0	2184.0	2208.0	2208.0	2184.0	1346.9	2099.8
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0.9**	**0.9**

Licensee Comments: none

Thresholds: White > 1.0

Notes

Unplanned Scrams with Complications	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16
Scrams with complications	0	0	0	0	0	0	0	1.0
Indicator value	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**1.0**

Licensee Comments: none

Thresholds: White > 5.0

Notes

Safety System Functional Failures (PWR)	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16
Safety System Functional Failures	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

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	**4Q/14**	**1Q/15**	**2Q/15**	**3Q/15**	**4Q/15**	**1Q/16**	**2Q/16**	**3Q/16**
UAI (ΔCDF)	1.13E-08	3.58E-09	3.58E-09	3.35E-09	4.40E-09	5.38E-09	-7.47E-10	8.26E-09
URI (ΔCDF)	1.52E-08	1.52E-08	1.52E-08	1.52E-08	1.52E-08	1.52E-08	1.52E-08	1.52E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**2.60E-08**	**1.90E-08**	**1.90E-08**	**1.90E-08**	**2.00E-08**	**2.10E-08**	**1.40E-08**	**2.30E-08**

Licensee Comments:

3Q/15: In 3rd Quarter 2015, updated unavailability for EDG 1A for interval March 2013 - October 2014, net change was (-) 12.43 hours and EDG 1B for May 2013, net change was (-) 10.62 hours , no color change as a result.

2Q/15: In May 2015, planned unavailability hours from March 2013 were adjusted resulting in a net decrease of 9.59 planned unavailability hours for the 3 year period ending in June 2015. The adjustments were made to account for hours unavailable vs. hours inoperable, previously recorded and not have resulted in a color change.

2Q/15: In May 2015, planned unavailability hours from March 2013 were adjusted resulting in a net decrease of 9.59 planned unavailability hours for the 3 year period ending in June 2015. The adjustments were made to account for hours unavailable vs. hours inoperable, previously recorded and not have resulted in a color change.

4Q/14: In May 2015, planned unavailability hours from March 2013 were adjusted resulting in a net decrease of 9.59 planned unavailability hours for the 3 year period ending in June 2015. The adjustments were made to account for hours unavailable vs. hours inoperable, previously recorded and not have resulted in a color change.

Additionally, In 3rd Quarter 2015, updated October 2014 unavailability for EDG 1A, net change was (-) 11.32 hours, no color change as a result.

4Q/14: In May 2015, planned unavailability hours from March 2013 were adjusted resulting in a net decrease of 9.59 planned unavailability hours for the 3 year period ending in June 2015. The adjustments were made to account for hours unavailable vs. hours inoperable, previously recorded and not have resulted in a color change.

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	**4Q/14**	**1Q/15**	**2Q/15**	**3Q/15**	**4Q/15**	**1Q/16**	**2Q/16**	**3Q/16**
UAI (ΔCDF)	-1.52E-09	-1.52E-09	-1.52E-09	-1.52E-09	-1.52E-09	-1.52E-09	-1.52E-09	-1.52E-09
URI (ΔCDF)	-1.03E-08	-1.03E-08	-1.03E-08	-1.03E-08	-1.03E-08	-1.03E-08	-1.03E-08	-1.03E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-1.20E-08**	**-1.20E-08**	**-1.20E-08**	**-1.20E-08**	**-1.20E-08**	**-1.20E-08**	**-1.20E-08**	**-1.20E-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	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16
UAI (ΔCDF)	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08
URI (ΔCDF)	-5.15E-08	-5.15E-08	-5.15E-08	-5.15E-08	-5.15E-08	-5.15E-08	-5.15E-08	-5.15E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-1.00E-07**	**-1.00E-07**	**-1.00E-07**	**-1.00E-07**	**-1.00E-07**	**-1.00E-07**	**-1.00E-07**	**-1.00E-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	**4Q/14**	**1Q/15**	**2Q/15**	**3Q/15**	**4Q/15**	**1Q/16**	**2Q/16**	**3Q/16**
UAI (ΔCDF)	-1.67E-10	-4.19E-10	-7.93E-10	-1.16E-09	-1.19E-09	-4.58E-10	-2.81E-10	-1.28E-09
URI (ΔCDF)	-6.37E-09	-6.37E-09	-6.37E-09	-6.37E-09	-6.37E-09	-6.37E-09	-6.37E-09	-6.37E-09
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-6.50E-09**	**-6.80E-09**	**-7.20E-09**	**-7.50E-09**	**-7.60E-09**	**-6.80E-09**	**-6.70E-09**	**-7.70E-09**

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	**4Q/14**	**1Q/15**	**2Q/15**	**3Q/15**	**4Q/15**	**1Q/16**	**2Q/16**	**3Q/16**
UAI (ΔCDF)	1.74E-08	1.16E-08	1.14E-08	1.12E-08	1.11E-08	1.06E-08	4.84E-09	8.65E-09
URI (ΔCDF)	-4.57E-08	-4.57E-08	-4.57E-08	-4.57E-08	-4.57E-08	-4.57E-08	-4.57E-08	-4.57E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-2.80E-08**	**-3.40E-08**	**-3.40E-08**	**-3.40E-08**	**-3.50E-08**	**-3.50E-08**	**-4.10E-08**	**-3.70E-08**

Licensee Comments: none

Reactor Coolant System Activity

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Activity	**10/14**	**11/14**	**12/14**	**1/15**	**2/15**	**3/15**	**4/15**	**5/15**	**6/15**	**7/15**	**8/15**	**9/15**
Maximum activity	0.000313	0.000166	0.000179	0.000180	0.000187	0.000188	0.000190	0.000198	0.000212	0.000210	0.000230	0.000281
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**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Reactor Coolant System Activity	**10/15**	**11/15**	**12/15**	**1/16**	**2/16**	**3/16**	**4/16**	**5/16**	**6/16**	**7/16**	**8/16**	**9/16**
Maximum activity	0.000257	0.000254	0.000278	0.000307	0.000286	0.000292	0.000314	0.000178	0.000182	0.000193	0.000306	0.000207
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**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Leakage	10/14	11/14	12/14	1/15	2/15	3/15	4/15	5/15	6/15	7/15	8/15	9/15
Maximum leakage	0.027	0.096	0.028	0.050	0.050	0.043	0.044	0.064	0.055	0.052	0.046	0.036
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**	**1.0**	**0.3**	**0.5**	**0.5**	**0.4**	**0.4**	**0.6**	**0.6**	**0.5**	**0.5**	**0.4**
Reactor Coolant System Leakage	**10/15**	**11/15**	**12/15**	**1/16**	**2/16**	**3/16**	**4/16**	**5/16**	**6/16**	**7/16**	**8/16**	**9/16**
Maximum leakage	0.058	0.068	0.056	0.060	0.071	0.122	0.411	0.062	0.072	0.085	0.087	0.084
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	**0.6**	**0.7**	**0.6**	**0.6**	**0.7**	**1.2**	**4.1**	**0.6**	**0.7**	**0.9**	**0.9**	**0.8**

Licensee Comments: none

Thresholds: White < 90.0% Yellow < 70.0%

Notes

Drill/Exercise Performance	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16
Successful opportunities	137.0	42.0	38.0	50.0	163.0	203.0	3.0	46.0
Total opportunities	139.0	42.0	38.0	50.0	164.0	206.0	3.0	48.0
Indicator value	**97.0%**	**97.7%**	**97.7%**	**97.7%**	**98.2%**	**98.4%**	**98.3%**	**98.8%**

Licensee Comments:

1Q/16: On March 29, 2016, a new shift manager became qualified in two key ERO positions and completed two opportunities and successes which were not included in the previously submitted data. No color change.

4Q/15: The total number of drill / exercise opportunities and successes was revised from 87 to 86 each (no additional failures). No color change resulted.

1Q/15: Corrected March 2014 EP01 drill success and total opportunities that included one item that should not have been counted. Discovered in March 2015. No color change as a result.

Thresholds: White < 80.0% Yellow < 60.0%

Notes

ERO Drill Participation	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16
Participating Key personnel	85.0	91.0	91.0	95.0	91.0	91.0	95.0	93.0
Total Key personnel	85.0	93.0	91.0	95.0	91.0	91.0	95.0	93.0
Indicator value	**100.0%**	**97.8%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Licensee Comments:

1Q/16: On March 29, 2016, a new shift manager became qualified in two key ERO positions which were not included in the previously submitted data. No color change.

Thresholds: White < 94.0% Yellow < 90.0%

Notes

Alert & Notification System	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16
Successful siren-tests	960	908	912	909	1008	1102	1044	1102
Total sirens-tests	960	912	912	912	1008	1102	1044	1102
Indicator value	**99.8%**	**99.7%**	**99.7%**	**99.8%**	**99.8%**	**99.9%**	**99.9%**	**100.0%**

Licensee Comments: none

Thresholds: White > 2.0 Yellow > 5.0

Notes

Occupational Exposure Control Effectiveness	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16
High radiation area occurrences	0	0	0	0	0	0	1	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**	**0**	**0**	**0**	**0**	**0**	**1**	**1**

Licensee Comments: none

Thresholds: White > 1.0 Yellow > 3.0

Notes

RETS/ODCM Radiological Effluent	4Q/14	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16
RETS/ODCM occurrences	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

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: October 23, 2016

Palo Verde 1

4Q/2016 Performance Indicators

The solid trend line represents the current reporting period.

Licensee's General Comments: none

Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

Notes

Unplanned Scrams per 7000 Critical Hrs	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16
Unplanned scrams	0	0	0	0	0	0	1.0	0
Critical hours	2160.0	2184.0	2208.0	2208.0	2184.0	1346.9	2099.8	2208.0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0.9**	**0.9**

Licensee Comments: none

Thresholds: White > 6.0

Notes

Unplanned Power Changes per 7000 Critical Hrs	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16
Unplanned power changes	0	0	0	0	0	1.0	0	0
Critical hours	2160.0	2184.0	2208.0	2208.0	2184.0	1346.9	2099.8	2208.0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0.9**	**0.9**	**0.9**

Licensee Comments: none

Thresholds: White > 1.0

Notes

Unplanned Scrams with Complications	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16
Scrams with complications	0	0	0	0	0	0	1.0	0
Indicator value	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**1.0**	**1.0**

Licensee Comments: none

Thresholds: White > 5.0

Notes

Safety System Functional Failures (PWR)	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16
Safety System Functional Failures	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

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	**1Q/15**	**2Q/15**	**3Q/15**	**4Q/15**	**1Q/16**	**2Q/16**	**3Q/16**	**4Q/16**
UAI (ΔCDF)	3.58E-09	3.58E-09	3.35E-09	4.40E-09	5.38E-09	-7.47E-10	8.26E-09	1.07E-08
URI (ΔCDF)	1.52E-08	1.52E-08	1.52E-08	1.52E-08	1.52E-08	1.52E-08	1.52E-08	1.52E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**1.90E-08**	**1.90E-08**	**1.90E-08**	**2.00E-08**	**2.10E-08**	**1.40E-08**	**2.30E-08**	**2.60E-08**

Licensee Comments:

3Q/15: In 3rd Quarter 2015, updated unavailability for EDG 1A for interval March 2013 - October 2014, net change was (-) 12.43 hours and EDG 1B for May 2013, net change was (-) 10.62 hours , no color change as a result.

2Q/15: In May 2015, planned unavailability hours from March 2013 were adjusted resulting in a net decrease of 9.59 planned unavailability hours for the 3 year period ending in June 2015. The adjustments were made to account for hours unavailable vs. hours inoperable, previously recorded and not have resulted in a color change.

2Q/15: In May 2015, planned unavailability hours from March 2013 were adjusted resulting in a net decrease of 9.59 planned unavailability hours for the 3 year period ending in June 2015. The adjustments were made to account for hours unavailable vs. hours inoperable, previously recorded and not have resulted in a color change.

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/15**	**2Q/15**	**3Q/15**	**4Q/15**	**1Q/16**	**2Q/16**	**3Q/16**	**4Q/16**
UAI (ΔCDF)	-1.52E-09	-1.52E-09	-1.52E-09	-1.52E-09	-1.52E-09	-1.52E-09	-1.52E-09	-1.52E-09
URI (ΔCDF)	-1.03E-08	-1.03E-08	-1.03E-08	-1.03E-08	-1.03E-08	-1.03E-08	-1.03E-08	-1.03E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-1.20E-08**	**-1.20E-08**	**-1.20E-08**	**-1.20E-08**	**-1.20E-08**	**-1.20E-08**	**-1.20E-08**	**-1.20E-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	**1Q/15**	**2Q/15**	**3Q/15**	**4Q/15**	**1Q/16**	**2Q/16**	**3Q/16**	**4Q/16**
UAI (ΔCDF)	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08
URI (ΔCDF)	-5.15E-08	-5.15E-08	-5.15E-08	-5.15E-08	-5.15E-08	-5.15E-08	-5.15E-08	-5.15E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-1.00E-07**	**-1.00E-07**	**-1.00E-07**	**-1.00E-07**	**-1.00E-07**	**-1.00E-07**	**-1.00E-07**	**-1.00E-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	**1Q/15**	**2Q/15**	**3Q/15**	**4Q/15**	**1Q/16**	**2Q/16**	**3Q/16**	**4Q/16**
UAI (ΔCDF)	-4.19E-10	-7.93E-10	-1.16E-09	-1.19E-09	-4.58E-10	-2.81E-10	-1.28E-09	-1.38E-09
URI (ΔCDF)	-6.37E-09	-6.37E-09	-6.37E-09	-6.37E-09	-6.37E-09	-6.37E-09	-6.37E-09	-6.37E-09
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-6.80E-09**	**-7.20E-09**	**-7.50E-09**	**-7.60E-09**	**-6.80E-09**	**-6.70E-09**	**-7.70E-09**	**-7.80E-09**

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/15**	**2Q/15**	**3Q/15**	**4Q/15**	**1Q/16**	**2Q/16**	**3Q/16**	**4Q/16**
UAI (ΔCDF)	1.16E-08	1.14E-08	1.12E-08	1.11E-08	1.06E-08	4.84E-09	8.65E-09	8.53E-09
URI (ΔCDF)	-4.57E-08	-4.57E-08	-4.57E-08	-4.57E-08	-4.57E-08	-4.57E-08	-4.57E-08	-4.57E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-3.40E-08**	**-3.40E-08**	**-3.40E-08**	**-3.50E-08**	**-3.50E-08**	**-4.10E-08**	**-3.70E-08**	**-3.70E-08**

Licensee Comments: none

Reactor Coolant System Activity

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Activity	**1/15**	**2/15**	**3/15**	**4/15**	**5/15**	**6/15**	**7/15**	**8/15**	**9/15**	**10/15**	**11/15**	**12/15**
Maximum activity	0.000180	0.000187	0.000188	0.000190	0.000198	0.000212	0.000210	0.000230	0.000281	0.000257	0.000254	0.000278
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**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Reactor Coolant System Activity	**1/16**	**2/16**	**3/16**	**4/16**	**5/16**	**6/16**	**7/16**	**8/16**	**9/16**	**10/16**	**11/16**	**12/16**
Maximum activity	0.000307	0.000286	0.000292	0.000314	0.000178	0.000182	0.000193	0.000306	0.000207	0.000216	0.000223	0.000225
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**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Licensee Comments: none

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Leakage	1/15	2/15	3/15	4/15	5/15	6/15	7/15	8/15	9/15	10/15	11/15	12/15
Maximum leakage	0.050	0.050	0.043	0.044	0.064	0.055	0.052	0.046	0.036	0.058	0.068	0.056
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	**0.5**	**0.5**	**0.4**	**0.4**	**0.6**	**0.6**	**0.5**	**0.5**	**0.4**	**0.6**	**0.7**	**0.6**
Reactor Coolant System Leakage	**1/16**	**2/16**	**3/16**	**4/16**	**5/16**	**6/16**	**7/16**	**8/16**	**9/16**	**10/16**	**11/16**	**12/16**
Maximum leakage	0.060	0.071	0.122	0.411	0.062	0.072	0.085	0.087	0.084	0.065	0.088	0.093
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	**0.6**	**0.7**	**1.2**	**4.1**	**0.6**	**0.7**	**0.9**	**0.9**	**0.8**	**0.7**	**0.9**	**0.9**

Licensee Comments: none

Thresholds: White < 90.0% Yellow < 70.0%

Notes

Drill/Exercise Performance	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16
Successful opportunities	42.0	38.0	50.0	163.0	203.0	3.0	46.0	51.0
Total opportunities	42.0	38.0	50.0	164.0	206.0	3.0	48.0	52.0
Indicator value	**97.7%**	**97.7%**	**97.7%**	**98.2%**	**98.4%**	**98.3%**	**98.8%**	**98.8%**

Licensee Comments:

1Q/16: On March 29, 2016, a new shift manager became qualified in two key ERO positions and completed two opportunities and successes which were not included in the previously submitted data. No color change.

4Q/15: The total number of drill / exercise opportunities and successes was revised from 87 to 86 each (no additional failures). No color change resulted.

1Q/15: Corrected March 2014 EP01 drill success and total opportunities that included one item that should not have been counted. Discovered in March 2015. No color change as a result.

Thresholds: White < 80.0% Yellow < 60.0%

Notes

ERO Drill Participation	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16
Participating Key personnel	91.0	91.0	95.0	91.0	91.0	95.0	93.0	94.0
Total Key personnel	93.0	91.0	95.0	91.0	91.0	95.0	93.0	94.0
Indicator value	**97.8%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Licensee Comments:

1Q/16: On March 29, 2016, a new shift manager became qualified in two key ERO positions which were not included in the previously submitted data. No color change.

Thresholds: White < 94.0% Yellow < 90.0%

Notes

Alert & Notification System	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16
Successful siren-tests	908	912	909	1008	1102	1044	1102	1218
Total sirens-tests	912	912	912	1008	1102	1044	1102	1218
Indicator value	**99.7%**	**99.7%**	**99.8%**	**99.8%**	**99.9%**	**99.9%**	**100.0%**	**100.0%**

Licensee Comments: none

Occupational Exposure Control Effectiveness

Thresholds: White > 2.0 Yellow > 5.0

Notes

Occupational Exposure Control Effectiveness	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16
High radiation area occurrences	0	0	0	0	0	1	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**	**0**	**0**	**0**	**0**	**1**	**1**	**1**

Licensee Comments: none

Thresholds: White > 1.0 Yellow > 3.0

Notes

RETS/ODCM Radiological Effluent	1Q/15	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16
RETS/ODCM occurrences	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

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: January 24, 2017

United States Nuclear Regulatory Commission
Protecting People and the Environment

Palo Verde 1 – Quarterly Performance Indicators

1Q/2017 Performance Indicators

The solid trend line represents the current reporting period.

Licensee's General Comments: none

On this page:

- Unplanned Scrams (IE01)
- Unplanned Power Changes per 7000 Critical Hours (IE03)
- Unplanned Scrams with Complications (IE04)
- Safety System Functional Failures (MS05)
- Emergency AC Power Systems (MS06)
- High Pressure Injection Systems (MS07)
- Heat Removal Systems (MS08)
- Residual Heat Removal Systems (MS09)
- Cooling Water Systems (MS10)
- Reactor Coolant System Activity (BI01)
- Reactor Coolant System Leakage (BI02)
- Drill/Exercise Performance (EP01)
- Emergency Response Organization Drill Participation (EP02)
- Alert and Notification System Reliability (EP03)
- Occupational Exposure Control Effectiveness (OR01)
- RETS/OCDM Radiological Effluent Occurrence (PR01)
- Protected Area Equipment (PP01)

Unplanned Scrams per 7000 Critical Hrs

Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

Notes

Unplanned Scrams per 7000 Critical Hrs	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17
Unplanned scrams	0	0	0	0	0	1.0	0	0
Critical hours	2184.0	2208.0	2208.0	2184.0	1346.9	2099.8	2208.0	2160.0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0.9**	**0.9**	**0.9**

TOP

Licensee Comments: none

Unplanned Power Changes per 7000 Critical Hrs

Thresholds: White > 6.0

Notes

Unplanned Power Changes per 7000 Critical Hrs	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17
Unplanned power changes	0	0	0	0	1.0	0	0	0
Critical hours	2184.0	2208.0	2208.0	2184.0	1346.9	2099.8	2208.0	2160.0
Indicator value	**0**	**0**	**0**	**0**	**0.9**	**0.9**	**0.9**	**0.9**

TOP

Licensee Comments: none

Thresholds: White > 1.0

Notes

Unplanned Scrams with Complications	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17
Scrams with complications	0	0	0	0	0	1.0	0	0
Indicator value	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**1.0**	**1.0**	**1.0**

TOP

Licensee Comments: none

Safety System Functional Failures (PWR)

Thresholds: White > 5.0

Notes

Safety System Functional Failures (PWR)	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17
Safety System Functional Failures	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

TOP

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/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17
UAI (ΔCDF)	3.58E-09	3.35E-09	4.40E-09	5.38E-09	-7.47E-10	8.26E-09	1.07E-08	1.16E-08
URI (ΔCDF)	1.52E-08	1.52E-08	1.52E-08	1.52E-08	1.52E-08	1.52E-08	1.52E-08	1.52E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**1.90E-08**	**1.90E-08**	**2.00E-08**	**2.10E-08**	**1.40E-08**	**2.30E-08**	**2.60E-08**	**2.70E-08**

TOP

Licensee Comments:
3Q/15: In 3rd Quarter 2015, updated unavailability for EDG 1A for interval March 2013 - October 2014, net change was (-) 12.43 hours and EDG 1B for May 2013, net change was (-) 10.62 hours , no color change as a result.
2Q/15: In May 2015, planned unavailability hours from March 2013 were adjusted resulting in a net decrease of 9.59 planned unavailability hours for the 3 year period ending in June 2015. The adjustments were made to account for hours unavailable vs. hours inoperable, previously recorded and not have resulted in a color change.
2Q/15: In May 2015, planned unavailability hours from March 2013 were adjusted resulting in a net decrease of 9.59 planned unavailability hours for the 3 year period ending in June 2015. The adjustments were made to account for hours unavailable vs. hours inoperable, previously recorded and not have resulted in a color change.

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/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17
UAI (ΔCDF)	-1.52E-09	-1.52E-09	-1.52E-09	-1.52E-09	-1.52E-09	-1.52E-09	-1.52E-09	-1.52E-09
URI (ΔCDF)								

	-1.03E-08	-1.03E-08	-1.03E-08	-1.03E-08	-1.03E-08	-1.03E-08	-1.03E-08	-1.03E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-1.20E-08**	**-1.20E-08**	**-1.20E-08**	**-1.20E-08**	**-1.20E-08**	**-1.20E-08**	**-1.20E-08**	**-1.20E-08**

TOP

Licensee Comments: none

Notes

Mitigating Systems Performance Index, Heat Removal System	**2Q/15**	**3Q/15**	**4Q/15**	**1Q/16**	**2Q/16**	**3Q/16**	**4Q/16**	**1Q/17**
UAI (ΔCDF)	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08
URI (ΔCDF)	-5.15E-08	-5.15E-08	-5.15E-08	-5.15E-08	-5.15E-08	-5.15E-08	-5.15E-08	-5.15E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-1.00E-07**	**-1.00E-07**	**-1.00E-07**	**-1.00E-07**	**-1.00E-07**	**-1.00E-07**	**-1.00E-07**	**-1.00E-07**

TOP

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/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17
UAI (ΔCDF)	-7.93E-10	-1.16E-09	-1.19E-09	-4.58E-10	-2.81E-10	-1.28E-09	-1.38E-09	-1.29E-09
URI (ΔCDF)	-6.37E-09	-6.37E-09	-6.37E-09	-6.37E-09	-6.37E-09	-6.37E-09	-6.37E-09	-6.37E-09
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-7.20E-09**	**-7.50E-09**	**-7.60E-09**	**-6.80E-09**	**-6.70E-09**	**-7.70E-09**	**-7.80E-09**	**-7.70E-09**

TOP

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/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17
UAI (ΔCDF)	1.14E-08	1.12E-08	1.11E-08	1.06E-08	4.84E-09	8.65E-09	8.53E-09	8.37E-09
URI (ΔCDF)	-4.57E-08	-4.57E-08	-4.57E-08	-4.57E-08	-4.57E-08	-4.57E-08	-4.57E-08	-4.57E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-3.40E-08**	**-3.40E-08**	**-3.50E-08**	**-3.50E-08**	**-4.10E-08**	**-3.70E-08**	**-3.70E-08**	**-3.70E-08**

TOP

Licensee Comments: none

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Activity	4/15	5/15	6/15	7/15	8/15	9/15	10/15	11/15	12/15	1/16	2/16	3/16
Maximum activity	0.000190	0.000198	0.000212	0.000210	0.000230	0.000281	0.000257	0.000254	0.000278	0.000307	0.000286	0.000292
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**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Reactor Coolant System Activity	4/16	5/16	6/16	7/16	8/16	9/16	10/16	11/16	12/16	1/17	2/17	3/17
Maximum activity	0.000314	0.000178	0.000182	0.000193	0.000306	0.000207	0.000216	0.000223	0.000225	0.000217	0.000248	0.000230
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**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

TOP

Licensee Comments: none

Reactor Coolant System Leakage

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Leakage	4/15	5/15	6/15	7/15	8/15	9/15	10/15	11/15	12/15	1/16	2/16	3/16
Maximum leakage	0.044	0.064	0.055	0.052	0.046	0.036	0.058	0.068	0.056	0.060	0.071	0.122
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	**0.4**	**0.6**	**0.6**	**0.5**	**0.5**	**0.4**	**0.6**	**0.7**	**0.6**	**0.6**	**0.7**	**1.2**

Reactor Coolant System Leakage	4/16	5/16	6/16	7/16	8/16	9/16	10/16	11/16	12/16	1/17	2/17	3/17
Maximum leakage	0.411	0.062	0.072	0.085	0.087	0.084	0.065	0.088	0.093	0.110	0.096	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	**4.1**	**0.6**	**0.7**	**0.9**	**0.9**	**0.8**	**0.7**	**0.9**	**0.9**	**1.1**	**1.0**	**0.9**

TOP

Licensee Comments: none

Drill/Exercise Performance

Thresholds: White < 90.0% Yellow < 70.0%

Notes

Drill/Exercise Performance	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17
Successful opportunities	38.0	50.0	163.0	203.0	3.0	46.0	51.0	80.0
Total opportunities	38.0	50.0	164.0	206.0	3.0	48.0	52.0	82.0
Indicator value	**97.7%**	**97.7%**	**98.2%**	**98.4%**	**98.3%**	**98.8%**	**98.8%**	**98.6%**

TOP

Licensee Comments:
1Q/16: On March 29, 2016, a new shift manager became qualified in two key ERO positions and completed two opportunities and successes which were not included in the previously submitted data. No color change.
4Q/15: The total number of drill / exercise opportunities and successes was revised from 87 to 86 each (no additional failures). No color change resulted.

Thresholds: White < 80.0% Yellow < 60.0%

Notes

ERO Drill Participation	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17
Participating Key personnel	91.0	95.0	91.0	91.0	95.0	93.0	94.0	91.0
Total Key personnel	91.0	95.0	91.0	91.0	95.0	93.0	94.0	91.0
Indicator value	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

TOP

Licensee Comments:
1Q/16: On March 29, 2016, a new shift manager became qualified in two key ERO positions which were not included in the previously submitted data. No color change.

Alert & Notification System

Thresholds: White < 94.0% Yellow < 90.0%

Notes

Alert & Notification System	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17
Successful siren-tests	912	909	1008	1102	1044	1102	1218	1102
Total sirens-tests	912	912	1008	1102	1044	1102	1218	1102
Indicator value	**99.7%**	**99.8%**	**99.8%**	**99.9%**	**99.9%**	**100.0%**	**100.0%**	**100.0%**

TOP

Licensee Comments: none

Notes

Occupational Exposure Control Effectiveness	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17
High radiation area occurrences	0	0	0	0	1	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**	**0**	**0**	**0**	**1**	**1**	**1**	**1**

TOP

Licensee Comments: none

Thresholds: White > 1.0 Yellow > 3.0

Notes

RETS/ODCM Radiological Effluent	2Q/15	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17
RETS/ODCM occurrences	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

TOP

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.

Current data as of: May 5, 2017

Page Last Reviewed/Updated Wednesday, June 07, 2017

Palo Verde 1 – Quarterly Performance Indicators

2Q/2017 Performance Indicators

The solid trend line represents the current reporting period.

Licensee's General Comments: none

On this page:

- Unplanned Scrams (IE01)
- Unplanned Power Changes per 7000 Critical Hours (IE03)
- Unplanned Scrams with Complications (IE04)
- Safety System Functional Failures (MS05)
- Emergency AC Power Systems (MS06)
- High Pressure Injection Systems (MS07)
- Heat Removal Systems (MS08)
- Residual Heat Removal Systems (MS09)
- Cooling Water Systems (MS10)
- Reactor Coolant System Activity (BI01)
- Reactor Coolant System Leakage (BI02)
- Drill/Exercise Performance (EP01)
- Emergency Response Organization Drill Participation (EP02)
- Alert and Notification System Reliability (EP03)
- Occupational Exposure Control Effectiveness (OR01)
- RETS/OCDM Radiological Effluent Occurrence (PR01)
- Protected Area Equipment (PP01)

Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

Notes

Unplanned Scrams per 7000 Critical Hrs	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17
Unplanned scrams	0	0	0	0	1.0	0	0	0
Critical hours	2208.0	2208.0	2184.0	1346.9	2099.8	2208.0	2160.0	2184.0
Indicator value	**0**	**0**	**0**	**0**	**0.9**	**0.9**	**0.9**	**0.8**

TOP

Licensee Comments: none

Thresholds: White > 6.0

Notes

Unplanned Power Changes per 7000 Critical Hrs	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17
Unplanned power changes	0	0	0	1.0	0	0	0	0
Critical hours	2208.0	2208.0	2184.0	1346.9	2099.8	2208.0	2160.0	2184.0
Indicator value	**0**	**0**	**0**	**0.9**	**0.9**	**0.9**	**0.9**	**0**

TOP

Licensee Comments: none

Thresholds: White > 1.0

Notes

Unplanned Scrams with Complications	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17
Scrams with complications	0	0	0	0	1.0	0	0	0
Indicator value	**0.0**	**0.0**	**0.0**	**0.0**	**1.0**	**1.0**	**1.0**	**1.0**

TOP

Licensee Comments: none

Thresholds: White > 5.0

Notes

Safety System Functional Failures (PWR)	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17
Safety System Functional Failures	0	0	0	0	0	0	0	1
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**

TOP

Licensee Comments:
2Q/17: LER 2017-001-00 for the Unit 1 train B essential chilled water system chiller failure was reported on June 14, 2017.

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	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17
UAI (ΔCDF)	3.35E-09	4.40E-09	5.38E-09	-7.47E-10	8.26E-09	1.07E-08	1.16E-08	1.28E-08
URI (ΔCDF)	1.52E-08	1.52E-08	1.52E-08	1.52E-08	1.52E-08	1.52E-08	1.52E-08	1.52E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**1.90E-08**	**2.00E-08**	**2.10E-08**	**1.40E-08**	**2.30E-08**	**2.60E-08**	**2.70E-08**	**2.80E-08**

TOP

Licensee Comments:
3Q/15: In 3rd Quarter 2015, updated unavailability for EDG 1A for interval March 2013 - October 2014, net change was (-) 12.43 hours and EDG 1B for May 2013, net change was (-) 10.62 hours , no color change as a result.

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	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17
UAI (ΔCDF)	-1.52E-09	-1.52E-09	-1.52E-09	-1.52E-09	-1.52E-09	-1.52E-09	-1.52E-09	-1.52E-09
URI (ΔCDF)	-1.03E-08	-1.03E-08	-1.03E-08	-1.03E-08	-1.03E-08	-1.03E-08	-1.03E-08	-1.03E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-1.20E-08**	**-1.20E-08**	**-1.20E-08**	**-1.20E-08**	**-1.20E-08**	**-1.20E-08**	**-1.20E-08**	**-1.20E-08**

TOP

Licensee Comments: none

Notes

Mitigating Systems Performance Index, Heat Removal System	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17
UAI (ΔCDF)	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08	-2.90E-08
URI (ΔCDF)	-5.15E-08	-5.15E-08	-5.15E-08	-5.15E-08	-5.15E-08	-5.15E-08	-5.15E-08	-5.15E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-1.00E-07**	**-1.00E-07**	**-1.00E-07**	**-1.00E-07**	**-1.00E-07**	**-1.00E-07**	**-1.00E-07**	**-8.10E-08**

TOP

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	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17
UAI (ΔCDF)	-1.16E-09	-1.19E-09	-4.58E-10	-2.81E-10	-1.28E-09	-1.38E-09	-1.29E-09	-1.29E-09
URI (ΔCDF)	-6.37E-09	-6.37E-09	-6.37E-09	-6.37E-09	-6.37E-09	-6.37E-09	-6.37E-09	-6.37E-09
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-7.50E-09**	**-7.60E-09**	**-6.80E-09**	**-6.70E-09**	**-7.70E-09**	**-7.80E-09**	**-7.70E-09**	**-7.70E-09**

TOP

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	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17
UAI (ΔCDF)	1.12E-08	1.11E-08	1.06E-08	4.84E-09	8.65E-09	8.53E-09	8.37E-09	6.35E-09
URI (ΔCDF)	-4.57E-08	-4.57E-08	-4.57E-08	-4.57E-08	-4.57E-08	-4.57E-08	-4.57E-08	-4.57E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-3.40E-08**	**-3.50E-08**	**-3.50E-08**	**-4.10E-08**	**-3.70E-08**	**-3.70E-08**	**-3.70E-08**	**-3.90E-08**

TOP

Licensee Comments: none

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Activity	7/15	8/15	9/15	10/15	11/15	12/15	1/16	2/16	3/16	4/16	5/16	6/16
Maximum activity	0.000210	0.000230	0.000281	0.000257	0.000254	0.000278	0.000307	0.000286	0.000292	0.000314	0.000178	0.000182
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**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Reactor Coolant System Activity	7/16	8/16	9/16	10/16	11/16	12/16	1/17	2/17	3/17	4/17	5/17	6/17
Maximum activity	0.000193	0.000306	0.000207	0.000216	0.000223	0.000225	0.000217	0.000248	0.000230	0.000269	0.000274	0.000265
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**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

TOP

Licensee Comments: none

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Leakage	7/15	8/15	9/15	10/15	11/15	12/15	1/16	2/16	3/16	4/16	5/16	6/16
Maximum leakage	0.052	0.046	0.036	0.058	0.068	0.056	0.060	0.071	0.122	0.411	0.062	0.072
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	**0.5**	**0.5**	**0.4**	**0.6**	**0.7**	**0.6**	**0.6**	**0.7**	**1.2**	**4.1**	**0.6**	**0.7**

Reactor Coolant System Leakage	7/16	8/16	9/16	10/16	11/16	12/16	1/17	2/17	3/17	4/17	5/17	6/17
Maximum leakage	0.085	0.087	0.084	0.065	0.088	0.093	0.110	0.096	0.085	0.091	0.097	0.103
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	**0.9**	**0.9**	**0.8**	**0.7**	**0.9**	**0.9**	**1.1**	**1.0**	**0.9**	**0.9**	**1.0**	**1.0**

TOP

Licensee Comments: none

Drill/Exercise Performance

Thresholds: White < 90.0% Yellow < 70.0%

Notes

Drill/Exercise Performance	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17
Successful opportunities	50.0	163.0	203.0	3.0	46.0	51.0	80.0	4.0
Total opportunities	50.0	164.0	206.0	3.0	48.0	52.0	82.0	4.0
Indicator value	**97.7%**	**98.2%**	**98.4%**	**98.3%**	**98.8%**	**98.8%**	**98.6%**	**98.5%**

TOP

Licensee Comments:
1Q/16: On March 29, 2016, a new shift manager became qualified in two key ERO positions and completed two opportunities and successes which were not included in the previously submitted data. No color change.
4Q/15: The total number of drill / exercise opportunities and successes was revised from 87 to 86 each (no additional failures). No color change resulted.

Thresholds: White < 80.0% Yellow < 60.0%

Notes

ERO Drill Participation	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17
Participating Key personnel	95.0	91.0	91.0	95.0	93.0	94.0	91.0	85.0
Total Key personnel	95.0	91.0	91.0	95.0	93.0	94.0	91.0	85.0
Indicator value	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

TOP

Licensee Comments:
1Q/16: On March 29, 2016, a new shift manager became qualified in two key ERO positions which were not included in the previously submitted data. No color change.

Thresholds: White < 94.0% Yellow < 90.0%

Notes

Alert & Notification System	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17
Successful siren-tests	909	1008	1102	1044	1102	1218	1102	1102
Total sirens-tests	912	1008	1102	1044	1102	1218	1102	1102
Indicator value	**99.8%**	**99.8%**	**99.9%**	**99.9%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

TOP

Licensee Comments: none

Thresholds: White > 2.0 Yellow > 5.0

Notes

Occupational Exposure Control Effectiveness	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17
High radiation area occurrences	0	0	0	1	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**	**0**	**0**	**1**	**1**	**1**	**1**	**0**

TOP

Licensee Comments: none

Thresholds: White > 1.0 Yellow > 3.0

Notes

RETS/ODCM Radiological Effluent	3Q/15	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17
RETS/ODCM occurrences	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

TOP

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.

Current data as of: July 26, 2017

Page Last Reviewed/Updated Wednesday, June 07, 2017

United States Nuclear Regulatory Commission
Protecting People and the Environment

Palo Verde 1 – Quarterly Performance Indicators

3Q/2017 Performance Indicators

The solid trend line represents the current reporting period.

Licensee's General Comments: none

On this page:

- Unplanned Scrams (IE01)
- Unplanned Power Changes per 7000 Critical Hours (IE03)
- Unplanned Scrams with Complications (IE04)
- Safety System Functional Failures (MS05)
- Emergency AC Power Systems (MS06)
- High Pressure Injection Systems (MS07)
- Heat Removal Systems (MS08)
- Residual Heat Removal Systems (MS09)
- Cooling Water Systems (MS10)
- Reactor Coolant System Activity (BI01)
- Reactor Coolant System Leakage (BI02)
- Drill/Exercise Performance (EP01)
- Emergency Response Organization Drill Participation (EP02)
- Alert and Notification System Reliability (EP03)
- Occupational Exposure Control Effectiveness (OR01)
- RETS/OCDM Radiological Effluent Occurrence (PR01)
- Protected Area Equipment (PP01)

Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

Notes

Unplanned Scrams per 7000 Critical Hrs	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17
Unplanned scrams	0	0	0	1.0	0	0	0	0
Critical hours	2208.0	2184.0	1346.9	2099.8	2208.0	2160.0	2184.0	2208.0
Indicator value	**0**	**0**	**0**	**0.9**	**0.9**	**0.9**	**0.8**	**0**

TOP

Licensee Comments: none

Thresholds: White > 6.0

Notes

Unplanned Power Changes per 7000 Critical Hrs	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17
Unplanned power changes	0	0	1.0	0	0	0	0	0
Critical hours	2208.0	2184.0	1346.9	2099.8	2208.0	2160.0	2184.0	2208.0
Indicator value	**0**	**0**	**0.9**	**0.9**	**0.9**	**0.9**	**0**	**0**

TOP

Licensee Comments: none

Thresholds: White > 1.0

Notes

Unplanned Scrams with Complications	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17
Scrams with complications	0	0	0	1.0	0	0	0	0
Indicator value	**0.0**	**0.0**	**0.0**	**1.0**	**1.0**	**1.0**	**1.0**	**0.0**

TOP

Licensee Comments: none

Thresholds: White > 5.0

Notes

Safety System Functional Failures (PWR)	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17
Safety System Functional Failures	0	0	0	0	0	0	1	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**

TOP

Licensee Comments:
2Q/17: LER 2017-001-00 for the Unit 1 train B essential chilled water system chiller failure was reported on June 14, 2017.

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	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17
UAI (ΔCDF)	4.40E-09	5.38E-09	-7.47E-10	8.26E-09	1.07E-08	1.16E-08	1.28E-08	4.25E-09
URI (ΔCDF)	1.52E-08	1.52E-08	1.52E-08	1.52E-08	1.52E-08	1.52E-08	1.52E-08	-5.09E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**2.00E-08**	**2.10E-08**	**1.40E-08**	**2.30E-08**	**2.60E-08**	**2.70E-08**	**2.80E-08**	**-4.70E-08**

TOP

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	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17
UAI (ΔCDF)	-1.52E-09	-1.52E-09	-1.52E-09	-1.52E-09	-1.52E-09	-1.52E-09	-1.52E-09	-1.52E-09
URI (ΔCDF)	-1.03E-08	-1.03E-08	-1.03E-08	-1.03E-08	-1.03E-08	-1.03E-08	-1.03E-08	-1.03E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-1.20E-08**	**-1.20E-08**	**-1.20E-08**	**-1.20E-08**	**-1.20E-08**	**-1.20E-08**	**-1.20E-08**	**-1.20E-08**

TOP

Licensee Comments: none

Notes

Mitigating Systems Performance Index, Heat Removal System	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17
UAI (ΔCDF)	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08	-2.90E-08	-2.90E-08
URI (ΔCDF)	-5.15E-08	-5.15E-08	-5.15E-08	-5.15E-08	-5.15E-08	-5.15E-08	-5.15E-08	-5.15E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-1.00E-07**	**-1.00E-07**	**-1.00E-07**	**-1.00E-07**	**-1.00E-07**	**-1.00E-07**	**-8.10E-08**	**-8.10E-08**

TOP

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	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17
UAI (ΔCDF)	-1.19E-09	-4.58E-10	-2.81E-10	-1.28E-09	-1.38E-09	-1.29E-09	-1.29E-09	-1.46E-09
URI (ΔCDF)	-6.37E-09	-6.37E-09	-6.37E-09	-6.37E-09	-6.37E-09	-6.37E-09	-6.37E-09	-6.37E-09
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-7.60E-09**	**-6.80E-09**	**-6.70E-09**	**-7.70E-09**	**-7.80E-09**	**-7.70E-09**	**-7.70E-09**	**-7.80E-09**

TOP

Licensee Comments: none

Notes

Mitigating Systems Performance Index, Cooling Water Systems	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17
UAI (ΔCDF)	1.11E-08	1.06E-08	4.84E-09	8.65E-09	8.53E-09	8.37E-09	6.35E-09	2.69E-09
URI (ΔCDF)	-4.57E-08	-4.57E-08	-4.57E-08	-4.57E-08	-4.57E-08	-4.57E-08	-4.57E-08	-4.57E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-3.50E-08**	**-3.50E-08**	**-4.10E-08**	**-3.70E-08**	**-3.70E-08**	**-3.70E-08**	**-3.90E-08**	**-4.30E-08**

TOP

Licensee Comments: none

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Activity	10/15	11/15	12/15	1/16	2/16	3/16	4/16	5/16	6/16	7/16	8/16	9/16
Maximum activity	0.000257	0.000254	0.000278	0.000307	0.000286	0.000292	0.000314	0.000178	0.000182	0.000193	0.000306	0.000207
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**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Reactor Coolant System Activity	10/16	11/16	12/16	1/17	2/17	3/17	4/17	5/17	6/17	7/17	8/17	9/17
Maximum activity	0.000216	0.000223	0.000225	0.000217	0.000248	0.000230	0.000269	0.000274	0.000265	0.000287	0.000374	0.000273
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**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

TOP

Licensee Comments: none

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Leakage	10/15	11/15	12/15	1/16	2/16	3/16	4/16	5/16	6/16	7/16	8/16	9/16
Maximum leakage	0.058	0.068	0.056	0.060	0.071	0.122	0.411	0.062	0.072	0.085	0.087	0.084
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	**0.6**	**0.7**	**0.6**	**0.6**	**0.7**	**1.2**	**4.1**	**0.6**	**0.7**	**0.9**	**0.9**	**0.8**

Reactor Coolant System Leakage	10/16	11/16	12/16	1/17	2/17	3/17	4/17	5/17	6/17	7/17	8/17	9/17
Maximum leakage	0.065	0.088	0.093	0.110	0.096	0.085	0.091	0.097	0.103	0.098	0.090	0.112
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	**0.7**	**0.9**	**0.9**	**1.1**	**1.0**	**0.9**	**0.9**	**1.0**	**1.0**	**1.0**	**0.9**	**1.1**

TOP

Licensee Comments: none

Notes

Drill/Exercise Performance	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17
Successful opportunities	163.0	203.0	3.0	46.0	51.0	80.0	4.0	20.0
Total opportunities	164.0	206.0	3.0	48.0	52.0	82.0	4.0	20.0
Indicator value	**98.2%**	**98.4%**	**98.3%**	**98.8%**	**98.8%**	**98.6%**	**98.5%**	**98.4%**

TOP

Licensee Comments:
1Q/16: On March 29, 2016, a new shift manager became qualified in two key ERO positions and completed two opportunities and successes which were not included in the previously submitted data. No color change.
4Q/15: The total number of drill / exercise opportunities and successes was revised from 87 to 86 each (no additional failures). No color change resulted.

Thresholds: White < 80.0% Yellow < 60.0%

Notes

ERO Drill Participation	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17
Participating Key personnel	91.0	91.0	95.0	93.0	94.0	91.0	85.0	81.0
Total Key personnel	91.0	91.0	95.0	93.0	94.0	91.0	85.0	81.0
Indicator value	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

TOP

Licensee Comments:
1Q/16: On March 29, 2016, a new shift manager became qualified in two key ERO positions which were not included in the previously submitted data. No color change.

Thresholds: White < 94.0% Yellow < 90.0%

Notes

Alert & Notification System	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17
Successful siren-tests	1008	1102	1044	1102	1218	1102	1102	1102
Total sirens-tests	1008	1102	1044	1102	1218	1102	1102	1102
Indicator value	**99.8%**	**99.9%**	**99.9%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

TOP

Licensee Comments: none

Thresholds: White > 2.0 Yellow > 5.0

Notes

Occupational Exposure Control Effectiveness	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17
High radiation area occurrences	0	0	1	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**	**0**	**1**	**1**	**1**	**1**	**0**	**0**

TOP

Licensee Comments: none

Thresholds: White > 1.0 Yellow > 3.0

Notes

RETS/ODCM Radiological Effluent	4Q/15	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17
RETS/ODCM occurrences	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

TOP

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.

Current data as of: October 31, 2017

Page Last Reviewed/Updated Monday, November 06, 2017

Palo Verde 1 – Quarterly Performance Indicators

4Q/2017 Performance Indicators

The solid trend line represents the current reporting period.

Licensee's General Comments: none

On this page:

- Unplanned Scrams (IE01)
- Unplanned Power Changes per 7000 Critical Hours (IE03)
- Unplanned Scrams with Complications (IE04)
- Safety System Functional Failures (MS05)
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- Alert and Notification System Reliability (EP03)
- Occupational Exposure Control Effectiveness (OR01)
- RETS/OCDM Radiological Effluent Occurrence (PR01)
- Protected Area Equipment (PP01)

Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

Notes

Unplanned Scrams per 7000 Critical Hrs	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17	4Q/17
Unplanned scrams	0	0	1.0	0	0	0	0	0
Critical hours	2184.0	1346.9	2099.8	2208.0	2160.0	2184.0	2208.0	1494.9
Indicator value	**0**	**0**	**0.9**	**0.9**	**0.9**	**0.8**	**0**	**0**

TOP

Licensee Comments: none

Thresholds: White > 6.0

Notes

Unplanned Power Changes per 7000 Critical Hrs	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17	4Q/17
Unplanned power changes	0	1.0	0	0	0	0	0	0
Critical hours	2184.0	1346.9	2099.8	2208.0	2160.0	2184.0	2208.0	1494.9
Indicator value	**0**	**0.9**	**0.9**	**0.9**	**0.9**	**0**	**0**	**0**

TOP

Licensee Comments: none

Thresholds: White > 1.0

Notes

Unplanned Scrams with Complications	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17	4Q/17
Scrams with complications	0	0	1.0	0	0	0	0	0
Indicator value	**0.0**	**0.0**	**1.0**	**1.0**	**1.0**	**1.0**	**0.0**	**0.0**

TOP

Licensee Comments: none

Thresholds: White > 5.0

Notes

Safety System Functional Failures (PWR)	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17	4Q/17
Safety System Functional Failures	0	0	0	0	0	1	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**1**

TOP

Licensee Comments:
2Q/17: LER 2017-001-00 for the Unit 1 train B essential chilled water system chiller failure was reported on June 14, 2017.

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/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17	4Q/17
UAI (ΔCDF)	5.38E-09	-7.47E-10	8.26E-09	1.07E-08	1.16E-08	1.28E-08	4.25E-09	2.54E-09
URI (ΔCDF)	1.52E-08	1.52E-08	1.52E-08	1.52E-08	1.52E-08	1.52E-08	-5.09E-08	1.52E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**2.10E-08**	**1.40E-08**	**2.30E-08**	**2.60E-08**	**2.70E-08**	**2.80E-08**	**-4.70E-08**	**1.80E-08**

TOP

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/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17	4Q/17
UAI (ΔCDF)	-1.52E-09	-1.52E-09	-1.52E-09	-1.52E-09	-1.52E-09	-1.52E-09	-1.52E-09	-1.52E-09
URI (ΔCDF)	-1.03E-08	-1.03E-08	-1.03E-08	-1.03E-08	-1.03E-08	-1.03E-08	-1.03E-08	-1.03E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-1.20E-08**	**-1.20E-08**	**-1.20E-08**	**-1.20E-08**	**-1.20E-08**	**-1.20E-08**	**-1.20E-08**	**-1.20E-08**

TOP

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/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17	4Q/17
UAI (ΔCDF)	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08	-4.84E-08	-2.90E-08	-2.90E-08	-2.90E-08
URI (ΔCDF)	-5.15E-08	-5.15E-08	-5.15E-08	-5.15E-08	-5.15E-08	-5.15E-08	-5.15E-08	-5.15E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-1.00E-07**	**-1.00E-07**	**-1.00E-07**	**-1.00E-07**	**-1.00E-07**	**-8.10E-08**	**-8.10E-08**	**-8.10E-08**

TOP

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/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17	4Q/17
UAI (ΔCDF)	-4.58E-10	-2.81E-10	-1.28E-09	-1.38E-09	-1.29E-09	-1.29E-09	-1.46E-09	-1.46E-09
URI (ΔCDF)	-6.37E-09	-6.37E-09	-6.37E-09	-6.37E-09	-6.37E-09	-6.37E-09	-6.37E-09	-6.37E-09
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-6.80E-09**	**-6.70E-09**	**-7.70E-09**	**-7.80E-09**	**-7.70E-09**	**-7.70E-09**	**-7.80E-09**	**-7.80E-09**

TOP

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/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17	4Q/17
UAI (ΔCDF)	1.06E-08	4.84E-09	8.65E-09	8.53E-09	8.37E-09	6.35E-09	2.69E-09	4.81E-10
URI (ΔCDF)	-4.57E-08	-4.57E-08	-4.57E-08	-4.57E-08	-4.57E-08	-4.57E-08	-4.57E-08	-4.57E-08
PLE	NO	NO	NO	NO	NO	NO	NO	NO
Indicator value	**-3.50E-08**	**-4.10E-08**	**-3.70E-08**	**-3.70E-08**	**-3.70E-08**	**-3.90E-08**	**-4.30E-08**	**-4.50E-08**

TOP

Licensee Comments: none

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Activity	1/16	2/16	3/16	4/16	5/16	6/16	7/16	8/16	9/16	10/16	11/16	12/16
Maximum activity	0.000307	0.000286	0.000292	0.000314	0.000178	0.000182	0.000193	0.000306	0.000207	0.000216	0.000223	0.000225
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**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Reactor Coolant System Activity	1/17	2/17	3/17	4/17	5/17	6/17	7/17	8/17	9/17	10/17	11/17	12/17
Maximum activity	0.000217	0.000248	0.000230	0.000269	0.000274	0.000265	0.000287	0.000374	0.000273	0.000291	0.000195	0.000200
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**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

TOP

Licensee Comments: none

Thresholds: White > 50.0 Yellow > 100.0

Notes

Reactor Coolant System Leakage	1/16	2/16	3/16	4/16	5/16	6/16	7/16	8/16	9/16	10/16	11/16	12/16
Maximum leakage	0.060	0.071	0.122	0.411	0.062	0.072	0.085	0.087	0.084	0.065	0.088	0.093
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	**0.6**	**0.7**	**1.2**	**4.1**	**0.6**	**0.7**	**0.9**	**0.9**	**0.8**	**0.7**	**0.9**	**0.9**

Reactor Coolant System Leakage	1/17	2/17	3/17	4/17	5/17	6/17	7/17	8/17	9/17	10/17	11/17	12/17
Maximum leakage	0.110	0.096	0.085	0.091	0.097	0.103	0.098	0.090	0.112	0.101	0.089	0.069
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	**1.1**	**1.0**	**0.9**	**0.9**	**1.0**	**1.0**	**1.0**	**0.9**	**1.1**	**1.0**	**0.9**	**0.7**

TOP

Licensee Comments: none

Thresholds: White < 90.0% Yellow < 70.0%

Notes

Drill/Exercise Performance	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17	4Q/17
Successful opportunities	203.0	3.0	46.0	51.0	90.0	4.0	20.0	55.0
Total opportunities	206.0	3.0	48.0	52.0	92.0	4.0	20.0	55.0
Indicator value	**98.4%**	**98.3%**	**98.8%**	**98.8%**	**98.6%**	**98.5%**	**98.5%**	**98.3%**

TOP

Licensee Comments:
1Q/17: Updated ERO Drill and Exercise Performance results to include ten opportunities that had been previously left out of the first quarter submittal for January and February 2017. No color change resulted.
1Q/16: On March 29, 2016, a new shift manager became qualified in two key ERO positions and completed two opportunities and successes which were not included in the previously submitted data. No color change.

Notes

ERO Drill Participation	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17	4Q/17
Participating Key personnel	91.0	95.0	93.0	94.0	91.0	85.0	81.0	77.0
Total Key personnel	91.0	95.0	93.0	94.0	91.0	85.0	81.0	77.0
Indicator value	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

TOP

Licensee Comments:
1Q/16: On March 29, 2016, a new shift manager became qualified in two key ERO positions which were not included in the previously submitted data. No color change.

Notes

Alert & Notification System	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17	4Q/17
Successful siren-tests	1102	1044	1102	1218	1102	1102	1102	1218
Total sirens-tests	1102	1044	1102	1218	1102	1102	1102	1218
Indicator value	**99.9%**	**99.9%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

TOP

Licensee Comments: none

Thresholds: White > 2.0 Yellow > 5.0

Notes

Occupational Exposure Control Effectiveness	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17	4Q/17
High radiation area occurrences	0	1	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**	**1**	**1**	**1**	**1**	**0**	**0**	**0**

TOP

Licensee Comments: none

Thresholds: White > 1.0 Yellow > 3.0

Notes

RETS/ODCM Radiological Effluent	1Q/16	2Q/16	3Q/16	4Q/16	1Q/17	2Q/17	3Q/17	4Q/17
RETS/ODCM occurrences	0	0	0	0	0	0	0	0
Indicator value	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

TOP

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.

Current data as of: February 1, 2018

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