

## 4Q/2006 ROP Action Matrix Summary

The assessment program collects information from inspections and performance indicators (PIs) in order to enable the agency to arrive at objective conclusions about the licensee's safety performance. Based on this assessment information, the NRC determines the appropriate level of agency response, including supplemental inspection and pertinent regulatory actions ranging from management meetings up to and including orders for plant shutdown. The Action Matrix Summary listed below reflects overall plant performance and is updated regularly to reflect inputs from the most recent performance indicators and inspection findings. [Physical Protection](#) information is not publicly available and the associated performance indicators and inspection findings are not integrated into the Action Matrix Summary.

Notes have been added to plants that are not in the licensee response column of the Action Matrix.

Plants with current substantive cross-cutting issues are so noted with "PIR," "HP," and/or "SCWE" designations as applicable. Clicking on these designations will take you to the [ROP Substantive Cross Cutting Issues Summary](#) for additional information.

Licensee Response Column	Regulatory Response Column	Degraded Cornerstone Column	Multiple/Repetitive Degraded Cornerstone Column	Unacceptable Performance Column
<a href="#">Arkansas Nuclear 1</a>	<a href="#">Beaver Valley 1<sup>1</sup></a>	<a href="#">Oconee 1<sup>2</sup></a>	<a href="#">Palo Verde 3<sup>3</sup></a>	
<a href="#">Arkansas Nuclear 2</a>	<a href="#">Beaver Valley 2<sup>4</sup></a>	<a href="#">Oconee 2<sup>5</sup></a>	<a href="#">Perry 1<sup>6</sup></a>	
<a href="#">Browns Ferry 2</a>	<a href="#">Braidwood 1<sup>7</sup></a>	<a href="#">Oconee 3<sup>8</sup></a>	<a href="#">Point Beach 1<sup>9</sup></a>	
<a href="#">Browns Ferry 3</a>	<a href="#">Braidwood 2<sup>10</sup></a>	<a href="#">Palo Verde 1<sup>11</sup></a>	<a href="#">Point Beach 2<sup>12</sup></a>	
<a href="#">Byron 1</a>	<a href="#">Brunswick 1<sup>13</sup></a>	<a href="#">Palo Verde 2<sup>14</sup></a>		
<a href="#">Calvert Cliffs 2</a>	<a href="#">Brunswick 2<sup>15</sup></a>			
<a href="#">Catawba 1</a>	<a href="#">Byron 2<sup>16</sup></a>			
<a href="#">Catawba 2</a>	<a href="#">Callaway<sup>17</sup></a>			
<a href="#">Clinton</a>	<a href="#">Calvert Cliffs 1<sup>18</sup></a>			
<a href="#">Columbia Generating Station</a>	<a href="#">Dresden 2<sup>19</sup></a>			
<a href="#">Comanche Peak 1</a>	<a href="#">Kewaunee<sup>20</sup></a>			
<a href="#">Comanche Peak 2</a>	<a href="#">Oyster Creek<sup>21</sup></a>			
<a href="#">Cooper</a>	<a href="#">Quad Cities 1<sup>22</sup></a>			
<a href="#">Crystal River 3</a>	<a href="#">South Texas 2<sup>23</sup></a>			
<a href="#">D.C. Cook 1</a>	<a href="#">Summer<sup>24</sup></a>			
<a href="#">D.C. Cook 2</a>	<a href="#">Surry 1<sup>25</sup></a>			
<a href="#">Davis-Besse</a>	<a href="#">Surry 2<sup>26</sup></a>			
<a href="#">Diablo Canyon 1</a>	<a href="#">Turkey Point 3<sup>27</sup></a>			
<a href="#">Diablo Canyon 2</a>	<a href="#">Vermont Yankee<sup>28</sup></a>			
<a href="#">Dresden 3</a>	<a href="#">Vogtle 1<sup>29</sup></a>			
<a href="#">Duane Arnold</a>	<a href="#">Vogtle 2<sup>30</sup></a>			
<a href="#">Farley 1</a>				
<a href="#">Farley 2</a>				
<a href="#">Fermi 2</a>				
<a href="#">FitzPatrick</a>				
<a href="#">Fort Calhoun</a>				

[Ginna](#)  
[Grand Gulf 1](#)  
[Harris 1](#)  
[Hatch 1](#)  
[Hatch 2](#)  
[Hope Creek 1](#)  
[Indian Point 2<sup>31</sup>](#)  
[Indian Point 3<sup>32</sup>](#)  
[La Salle 1](#)  
[La Salle 2](#)  
[Limerick 1](#)  
[Limerick 2](#)  
[McGuire 1](#)  
[McGuire 2](#)  
[Millstone 2](#)  
[Millstone 3](#)  
[Monticello](#)  
[Nine Mile Point 1](#)  
[Nine Mile Point 2](#)  
[North Anna 1](#)  
[North Anna 2](#)  
[Palisades](#)  
[Peach Bottom 2](#)  
[Peach Bottom 3](#)  
[Pilgrim 1](#)  
[Prairie Island 1](#)  
[Prairie Island 2](#)  
[Quad Cities 2](#)  
[River Bend 1](#)  
[Robinson 2](#)  
[Saint Lucie 1](#)  
[Saint Lucie 2](#)  
[Salem 1](#)  
[Salem 2](#)  
[San Onofre 2](#)  
[San Onofre 3](#)  
[Seabrook 1](#)  
[Sequoyah 1](#)  
[Sequoyah 2](#)  
[South Texas 1](#)  
[Susquehanna 1](#)  
[Susquehanna 2](#)  
[Three Mile Island 1](#)  
[Turkey Point 4](#)  
[Waterford 3](#)  
[Watts Bar 1](#)

Wolf Creek 1

- ▲ Note 1: Beaver Valley Units 1 & 2 were in the Regulatory Response Column due to one White inspection finding in the Emergency Preparedness cornerstone originating in 3Q2006. The White finding involved inadequate dose assessment identified during the June 2006 emergency preparedness exercise.
- ▲ Note 2: All Oconee units are in the degraded cornerstone column due to a white MSPI in emergency AC power (4Q/2006) and a white finding in the mitigating systems cornerstone (the SSF flood wall breach) effective 3Q/2006. Note: The White finding is under appeal.
- ▲ Note 3: Palo Verde Nuclear Generating Station Unit 3 is in the Multiple/Repetitive Degraded Cornerstone Column because of one Yellow finding in the Mitigating Systems Cornerstone originating in 4Q2004 and one White finding in the Mitigating systems Cornerstone. The significance determination for this final Yellow finding and corresponding Notice of violation were issued on April 8, 2005. The supplemental inspection was completed in December 2005. The team determined that the Yellow finding would remain open, because not all of the licensee's root and contributing causes were fully developed, many of the corrective actions were narrowly focused or ineffective, and effectiveness reviews were not adequate. The licensee subsequently informed the NRC that they completed additional corrective actions and were ready for the followup IP 95002 inspection. Region IV completed the followup inspection on September 1, 2006, and determined that the Yellow finding would remain open, because corrective actions taken in response to the root causes and related programmatic concerns involving questioning attitude, technical rigor, and operability determinations were not fully effective. Additionally, licensee performance measures did not take into account all of the relevant data.
- ▲ Note 4: Beaver Valley Units 1 & 2 were in the Regulatory Response Column due to one White inspection finding in the Emergency Preparedness cornerstone originating in 3Q2006. The White finding involved inadequate dose assessment identified during the June 2006 emergency preparedness exercise.
- ▲ Note 5: All Oconee units are in the degraded cornerstone column due to a white MSPI in emergency AC power (4Q/2006) and a white finding in the mitigating systems cornerstone (the SSF flood wall breach) effective 3Q/2006. Note: The White finding is under appeal.
- ▲ Note 6: Perry is in the Multiple/Repetitive Degraded Cornerstone Column due to the Mitigating Systems Cornerstone being degraded with multiple White findings being held open for greater than 4 consecutive quarters. In particular, the White finding initiated in 3Q2003 associated with the ESW pump failure is being held open in accordance with MC 0305 for greater than 4 quarters because corrective actions were ineffective and the pump failed again in May 2004. In addition, the White finding initiated in 4Q2003 for inadequate venting of the RHR/LPCI keep fill system is also being held open in accordance with MC 0305 for greater than 4 quarters pending the implementation of effective corrective actions.
- ▲ Note 7: Braidwood Unit 1 is in the Regulatory Response Column due to one white finding in the Public Radiation Cornerstone originating in 2Q2006.
- ▲ Note 8: All Oconee units are in the degraded cornerstone column due to a white MSPI in emergency AC power (4Q/2006) and a white finding in the mitigating systems cornerstone (the SSF flood wall breach) effective 3Q/2006. Note: The White finding is under appeal.
- ▲ Note 9: Point Beach Unit 1 is in the Multiple/Repetitive Degraded Cornerstone Column due to a red finding and a yellow finding in the Mitigating Systems Cornerstone originating in 1Q2002 and 1Q2003 respectively. Both findings were held open in accordance with IMC 0305 for greater than 4 quarters pending the implementation of effective corrective actions to address performance deficiencies. Corrective Action Letter followup inspections were satisfactorily completed in 4Q2006; therefore, the red and yellow findings will be closed effective January 1, 2007.
- ▲ Note 10: Braidwood Unit 2 is in the Regulatory Response Column due to one white finding in the Public Radiation Cornerstone originating in 2Q2006.
- ▲ Note 11: Palo Verde Nuclear Generating Station, Units 1, 2 and 3 are in the Degraded Cornerstone Column because of one Yellow finding in the Mitigating Systems Cornerstone originating in 4Q2004. The significance determination for this final Yellow finding and corresponding Notice of violation were issued on April 8, 2005. The supplemental inspection was completed in December 2005. The team determined that the Yellow finding would remain open, because not all of the licensee's root and contributing causes were fully developed, many of the corrective actions were narrowly focused or ineffective, and effectiveness reviews were not adequate. The licensee subsequently informed the NRC that they completed additional corrective actions and were ready for the followup IP 95002 inspection. Region IV completed the

followup inspection on September 1, 2006, and determined that the Yellow finding would remain open, because corrective actions taken in response to the root causes and related programmatic concerns involving questioning attitude, technical rigor, and operability determinations were not fully effective. Additionally, licensee performance measures did not take into account all of the relevant data.

- ▲ Note 12: Point Beach Unit 2 is in the Multiple/Repetitive Degraded Cornerstone Column due to two red findings in the Mitigating Systems Cornerstone originating in 1Q2002 and 1Q2003 respectively. Both findings were held open in accordance with IMC 0305 for greater than 4 quarters pending the implementation of effective corrective actions to address performance deficiencies. Corrective Action Letter followup inspections were satisfactorily completed in 4Q2006; therefore, the red findings will be closed effective January 1, 2007.
- ▲ Note 13: Both units are in the Regulatory Response column due to a White performance indicator in the Mitigating System cornerstone (Emergency AC Power Systems) originating in 2Q/2006.
- ▲ Note 14: Palo Verde Nuclear Generating Station, Units 1, 2 and 3 are in the Degraded Cornerstone Column because of one Yellow finding in the Mitigating Systems Cornerstone originating in 4Q2004. The significance determination for this final Yellow finding and corresponding Notice of violation were issued on April 8, 2005. The supplemental inspection was completed in December 2005. The team determined that the Yellow finding would remain open, because not all of the licensee's root and contributing causes were fully developed, many of the corrective actions were narrowly focused or ineffective, and effectiveness reviews were not adequate. The licensee subsequently informed the NRC that they completed additional corrective actions and were ready for the followup IP 95002 inspection. Region IV completed the followup inspection on September 1, 2006, and determined that the Yellow finding would remain open, because corrective actions taken in response to the root causes and related programmatic concerns involving questioning attitude, technical rigor, and operability determinations were not fully effective. Additionally, licensee performance measures did not take into account all of the relevant data.
- ▲ Note 15: Both units are in the Regulatory Response column due to a White performance indicator in the Mitigating System cornerstone (Emergency AC Power Systems) originating in 2Q/2006.
- ▲ Note 16: Byron Unit 2 is in the Regulatory Response Column due to one White Performance indicator in the Mitigating Systems cornerstone originating in 2Q2006 (Mitigating Systems Performance Index, Heat Removal System)
- ▲ Note 17: Callaway Plant is in the Regulatory Response Column because of a White MSPI for the Heat Removal System. This was due to failures of pumps resulting in the unavailability of the auxiliary feedwater system. Region IV completed a supplemental IP 95001 inspection in November 2006, and found that the licensee adequately determined the root and contributing causes of the White performance indicator and established appropriate corrective actions.
- ▲ Note 18: Calvert Cliffs Unit I was in the Regulatory Response Column due to one White inspection finding in the Mitigating System cornerstone originating in 3Q2006. The White finding involved inadequate design control that resulted in the incorrect over-current trip setting for the 1A emergency diesel generator support system supply breaker. The supplemental inspection (95001) for the White finding was completed on January 25, 2007.
- ▲ Note 19: Dresden Unit 2 is in the Regulatory Response Column due to one White Performance indicator in the Initiating Events cornerstone originating in 3Q2006 (Initiating Events, Scrams With Loss Of Normal Heat Removal)
- ▲ Note 20: Kewaunee is in the Regulatory Response Column due to one White Performance indicator in the Initiating Events cornerstone originating in 4Q2006 (Initiating Events, Unplanned Scrams per 7,000 Critical Hours).
- ▲ Note 21: Oyster Creek was in the Regulatory Response Column due to one White inspection finding in the Emergency Preparedness cornerstone originating in 3Q2005. The White finding involved an inadequate response to an event involving grassing of the intake structure. The finding remains open for greater than four quarters pending additional supplemental inspection to confirm that broad corrective actions have been implemented.
- ▲ Note 22: Quad Cities Unit 1 is in the Regulatory Response Column due to one white finding in the Mitigating Systems Cornerstone originating in 2Q2006.
- ▲ Note 23: South Texas Unit 2 is in the Regulatory Response Column because of a White MSPI for the for Emergency AC Power Systems. This was due to a major failure of Emergency Diesel Generator 22 on December 9, 2003, which required significant time to repair. Region IV completed a supplemental

inspection in October 2006, and found that the licensee, adequately determined the root and contributing causes of the White performance indicator and established appropriate corrective actions.

- ▲ Note 24: The unit is in the Regulatory Response column due to a White inspection finding in the Public Radiation cornerstone (Failure to Properly Prepare a Radioactive Material Package for Shipment) originating in 1Q/2006.
- ▲ Note 25: Both units are in the Regulatory Response column due to a White inspection finding in the Emergency Preparedness cornerstone originating in 1Q/2006. During a Full Scale Exercise Critique, the licensee did not identify a weakness associated with a risk-significant planning standard (RSPS).
- ▲ Note 26: Both units are in the Regulatory Response column due to a White inspection finding in the Emergency Preparedness cornerstone originating in 1Q/2006. During a Full Scale Exercise Critique, the licensee did not identify a weakness associated with a risk-significant planning standard (RSPS).
- ▲ Note 27: The unit is in the Regulatory Response Column due to a White Finding in the Initiating Events cornerstone ( a loss of all decay heat removal event). Note: Units 3 and 4 dropped off in 4Q/2006 from the Regulatory Response column for the White finding (originating 4Q/2005) in the Mitigating System cornerstone (AFW inoperable).
- ▲ Note 28: Vermont Yankee was in the Regulatory Response Column due to one White inspection finding in the Public Radiation Safety cornerstone originating in 4Q2006. The White finding involved a Vermont Yankee radioactive material shipment to another site that exceeded Department of Transportation regulatory specifications for external radiation exposure rate on the surface of the affected package.
- ▲ Note 29: Both units are in the Regulatory Response column due to a White finding in the Emergency Preparedness cornerstone originating in 3Q/2006. Note: Unit 2 had a White MSPI for Cooling Water in 3Q/2006. This returned to Green in 4Q/2006
- ▲ Note 30: Unit 2 is in the Regulatory Response column due to a White finding in the Emergency Preparedness cornerstone originating in 3Q/2006 and a White MSPI for Cooling Water in 4Q/2006.
- ▲ Note 31: On December 21, 2006, the EDO approved the deviation memo to continue to provide heightened oversight for Indian Point 2 and 3 plants through calendar year 2007, or until the licensee meets the criteria defined in the deviation memo. The deviation from the Reactor Oversight Process Action Matrix includes oversight activities to monitor licensee actions to: 1) characterize and remediate tritium found onsite, and 2) improve the reliability of the emergency siren system.
- ▲ Note 32: On December 21, 2006, the EDO approved the deviation memo to continue to provide heightened oversight for Indian Point 2 and 3 plants through calendar year 2007, or until the licensee meets the criteria defined in the deviation memo. The deviation from the Reactor Oversight Process Action Matrix includes oversight activities to monitor licensee actions to: 1) characterize and remediate tritium found onsite, and 2) improve the reliability of the emergency siren system.