

Attachment 18



## State of New Jersey

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December 11, 2000

Mr. Loren Plisco  
Reactor Oversight Process Initial Implementation Evaluation Panel  
U. S. Nuclear Regulatory Commission  
Washington, DC 20555

Dear Chairman Plisco:

The New Jersey Radiation Protection Programs appreciate the opportunity to present a brief outline of issues regarding the NRC Reactor Oversight Process (ROP) to the panel for consideration.

### Performance Indicators

1. The current performance indicators are not predictive.
2. Performance indicators must be risk-informed to make the process consistent. So far, the performance indicators themselves, as well as, the corresponding thresholds do not correlate with risk. This calls into question the value of performance indicators as a way to assess performance. We recommend that the current NRC Science and Research effort to develop risk-based performance indicators be expedited.
3. The Corrective Action Program is a vital part of the overall assessment process. Any findings by the NRC inspectors that do not pass the significant risk test are captured and tracked only through the licensee's corrective action program. The maintenance rule is also an important key to corrective action. It has a separate inspection module but has no Significance Determination Process. We recommend that information available from a utility's maintenance rule program could make a useful performance indicator for the corrective action program. For instance the average duration that a system remains in the Red category could be formulated into an indication that corrective actions are ineffective.

4. The NRC should survey the public to determine whether their confidence in the NRC as a regulatory agency is enhanced by performance indicator data. Trust might be increased by clearly pointing out positive and negative implications of the data, reasons for uncertainty in the data, how data were collected and confirmed (if there is a QA process for the data) and how the public might confirm the data through independent sources. Jargon, acronyms, use of passive voice and other "bureaucratic" or unclear writing not only can confuse audiences, but also can be interpreted as a deliberate attempt to hide information. Our recommendation for involving the public in the determination of whether public confidence is enhanced is not just common sense. The NJ Department of Environmental Protection (DEP) has found that such studies provide excellent suggestions for improvement of communications. A study on communicating performance indicators was performed by the Division of Science and Research at the DEP using focus groups. We strongly recommend that the NRC pursue similar studies for an objective measure of their ability to increase public confidence.
5. The NRC should anticipate and use simple explanations to forestall public surprise/outrage over unfamiliar concepts (e.g. nuclear power plants are legally permitted to release radioactivity, nuclear power plants report their own emissions, nuclear power plants report their own performance indicators). Surprised people ignore the indicators themselves.
6. In our review of the second quarter results which were posted on the NRC web page, 98.81% (1832) of the performance indicators were green, 1.08% (20) were white, .11% (2) were yellow and none were red. A total of 19 plants had performance indicators other than green. The third quarter results revealed that, 98.98% (1835) of the performance indicators were green, .92% (17) were white (11 white PIs are declining and look to be serious, while 6 white PIs will probably disappear soon). There were two yellow performance indicators and no red performance indicators. A total of 16 plants had performance indicators other than green.
7. We recommend that the panel engage a statistician to assist with the data analysis. Were the changes that occurred in the performance indicator data between the 2<sup>nd</sup> and 3<sup>rd</sup> quarters significant? The data can be summarized as follows: 12 white performance indicators and 2 yellow performance indicators stayed the same color. There were 5 new white performance indicators that were originally green. There were 8 white performance indicators that turned green. Overall, there are three less plants with colors other than green. This indicates a trend that the performance indicator part of the process is heading toward all green.
8. The statistician should investigate the uncertainty within the current scheme of performance indicators and the sensitivity of those indicators. This could then be used by the panel to assess whether the use of the performance indicators provides an adequate basis upon which to allocate NRC resources.

### Inspections

1. The inspections and the inspectors remain the most important part of any oversight process. Inspections are the only way to look at crosscutting issues such as human performance, corrective action, morale issues, training issues, and failure to follow procedure, problem identification and resolution. These are issues that should be part of every single inspection, yet they might be easily overlooked since they are not straight "checklist" issues. Common sense says that they have risk significance, but they may not be able to be assigned a specific risk number. The panel must consider how they would incorporate crosscutting issues into the process for an overall assessment of plant performance.
2. The inspection modules have all been revised once since the implementation of the new oversight process on April 1, 2000 and some are being revised again. Despite the revision, the number of inspection hours required to perform these inspections is still too low. We recommend that the panel request a detailed accounting of NRC's deployment of resources since the new oversight process was implemented at all nuclear power plants on April 1, 2000. Originally, more inspection hours were needed than the previous process, but that is changing. Plant specific and reactive inspections are down and there will be fewer and fewer "for cause" inspections because "nearly everything is green." It may enhance public confidence to publicize how much time the regulator is inspecting the nuclear power plants. This information could be posted on the NRC web page and might present a very easily understood benchmark for the public.
3. Misleading information regarding inspections is posted on the web site. For example, at the Hope Creek plant, the planned Problem Identification inspection was originally planned for October and November 2000 and this was shown on the web site. However, the Hope Creek inspection was combined with the Salem inspection and rescheduled for February 2001. This represented a significant reduction in inspection hours at Hope Creek during 2000.
4. Decisions to radically change the planned inspections should be made at the mid-cycle or annual assessment period.
5. Many of the findings that were documented in the reports under the old oversight are no longer considered "significant". Now, the inspections are focussed on risk-significant issues. But some good insights could be lost by not documenting less risky issues. These findings may only be communicated verbally during the inspection or at the inspection exit interview, but not in writing, thus not making the information available to the public. This is also an area where there seems to be different understanding by the inspectors and the managers. Is there a threshold for what gets into the report?
6. We recommend that the panel evaluate the numerous miscellaneous findings (104) identified over two quarters that are appearing on the NRC web page and do not have

a clear purpose in the new oversight process. They may indicate emerging issues that need to be integrated into the overall oversight process.

### **Significance Determination Process (SDP)**

1. The SDP process remains complicated and confusing. The process is not transparent. It does appear that when the significance of a finding is being debated, negotiations can take place in an environment where limited persons understand the significance determination process. This is supported by the many changes that are taking place with the SDP and the creation of new SDPs to cover new areas. In fact we don't know what the current SDPs are! Finally, some white findings from last quarter disappeared on the NRC web this quarter. Where did they go? The panel needs to review the application of the SDP.
2. During the two quarters of inspection activity, NRC inspectors identified 562 findings. All but 5 were green or miscellaneous. We understand that a red finding was identified in the 3<sup>rd</sup> quarter and it will appear as a confirmed red finding in the 4<sup>th</sup> quarter. Regardless, this information confirms our contention that the SDP part of the new oversight process is not working correctly.
3. Also, there appear to be inconsistencies in the application of the SDP by inspectors over plants, as well as, over NRC Regions. For example, in Region II, about half of all findings were identified at Oconee 1, 2 and 3. The overall number seems consistent but, on further inspection, the findings are all concentrated at those plants that have numerous green findings. Finally, it is hard to believe that some plants have no findings at all, not even green. The Regional representatives will certainly be able to contribute greatly to your understanding of these issues, and hopefully, you will be able to make their explanations understandable to the public interested in watching the process.

### **Improving Public Confidence**

1. Our attachment B outlines the results of the NRC's mid-cycle review of all nuclear power plants based on the new oversight process. All but 3 plants, operated within the current margin of safety as outlined by the NRC in the recent mid-cycle review. One plant operated with a significant reduction in safety (column 4), three plants operated with a minimal reduction in safety (column 3), and the rest of the plants operated with no change in the level of safety (column 1 or 2). The panel is to determine if this assessment scheme will ensure that nuclear power plant operators continue to self-improve over the long term. You are also to determine if the assessment process improves public confidence.
2. The information provided to the public in the inspection reports and over the NRC web site intentionally lean toward recovery to green. Statements are provided to

explain areas with non-green results. Often statements are made such as "this white is expected to be green by the 4<sup>th</sup> quarter." There is a presumption of effective future performance. Should the NRC be making these types of presumptions on behalf of their licensees? Is that an appropriate regulatory stance?

We look forward to addressing the panel directly at the January meeting. Thank you for considering our points.

Regards,



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Assistant Director  
Radiation Protection Programs  
New Jersey DEP

**Attachments**

C: Gerald P. Nicholls NJDEP  
Kent Tosch, NJ DEP  
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**Attachment A****Inspection Findings Data****2Q00 (April 1, 2000 to June 30, 2000)**

- a. 237 findings during the quarter
- b. 207 green findings
- c. 5 white findings (three disappeared on the 3Q00 web)
- d. 0 yellow or red findings
- e. 25 miscellaneous findings
- f. 37 plants with no findings
- g. 36 plants had 1 cornerstone green
- h. 16 plants had 2 cornerstones green
- i. 8 plants had 3 cornerstones green
- j. 3 plants had 4 cornerstones green
- k. 5 plants at 3 sites had 5 white findings but one was the same for 3 plants at one site so 3 white findings were identified during the quarter.

**3Q00 (July 1, 2000 to September 30, 2000)**

- a. 325 findings during the quarter
- b. 246 green findings
- c. 0 white findings
- d. 0 yellow or red findings – red identified in 3Q00 but confirmed in 4Q00
- e. 79 miscellaneous findings
- f. 15 plants with no findings or miscellaneous findings
- g. 19 plants with no findings and miscellaneous findings
- h. All 103 plants had only green findings or miscellaneous findings (1 plant had a finding identified as yellow or red in 3Q00 but it wasn't determined until 4Q00 that the finding was red)
- i. Region I (26 plants with 4 pilots)
  - 1. 79 green, 0 white, 0 yellow, 0 red, and 23 misc (2 misc green findings which is confusing)
- j. Region II (32 plants with 3 pilots)
  - 1. 52 green, 0 white, 0 yellow, 0 red, and 27 misc (about half of all findings at Oconee 1,2 and 3)
- k. Region III (24 plants with 4 pilots)
  - 1. 74 green (mostly at a few plants), 0 white, 0 yellow, 0 red, and 17 misc
- l. Region IV (21 plants with 2 pilots)
  - 1. 41 green, 0 white, 0 yellow, 0 red and 12 misc

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## ATTACHMENT B

Arkansas - 1	A-B		Ocoee - 1	B	
Arkansas - 2	A-B		Ocoee - 2	A	
Beaver Valley - 1	A-B		Ocoee - 3	A	
Beaver Valley - 2	A-B		Oyster Creek	A	
Braidwood - 1	A		Palisades	B	
Braidwood - 2	A		Palo Verde 1	A	
Browns Ferry - 2	A		Palo Verde 2	A	
Browns Ferry - 3	A		Palo Verde 3	A	
Brunswick - 2	A		Peac Bottom 2	B	
Brunswick - 1	A		Peac Bottom 3	B	
Byron - 1	A	High level of Allegations	Perry	A	
Byron - 2	A		Pilgrim	A	
Callaway	A-B	3 Apparent WHITES	Point Beach 1	B-A	
Calvert Cliffs - 1	B		Point Beach 2	B-A	
Calvert Cliffs - 2	B		Prairie Island 1	A -	EP inspection
Catawba - 1	A		Prairie Island 2	A -	EP inspection
Catawba - 2	A		Quad Cities - 1	C - A	
Clinton	A		Quad Cities - 2	B - A	
Comanche Peak - 1	A		River Bend	A	
Comanche Peak - 2	A		Robison	A -	Spent Fuel Storage
Cook - 1	A-B	Common Weaknesses	Saint Lucie 1	A	
Cook - 2	A-B	Common Weaknesses	Saint Lucie 2	A	
Cooper	A	2 Potential Findings	Salen 1	B	
Crystal River	B-A		Salen 2	B	
Davis Bease	A		San Onofre 2	A -	OSRE
Diablo Canyon - 1	A		San Onofre 3	A -	OSRE
Diablo Canyon - 2	A		Sea truck	A -	EDG SDP
Dresden - 2	B-A	WHITE Physical Protection	Sequoyah 1	A	
Dresden - 3	B-A	WHITE Physical Protection	Sequoyah 2	A	
Duane Arnold	A		South Texas 1	A -	OSRE
Farley - 1	B-A		South Texas 2	A -	OSRE
Farley - 2	C -		Summer	A -	Aux Feed Pump SDP
Fermi	A		Surry1	A	
Fitzpatrick	B		Surry2	A	
Fort Calhoun	A-B	Safeguards	Susquehanna 1	A	
Glena	B-A		Susquehanna 2	A	
Grand Gulf	A		Three Mile Island	A	
Harris	B	2 Outstanding Issues	Turkey Point 3	A -	OSRE
Hatch - 1	A -	OSRE	Turkey Point 4	A -	OSRE
Hatch - 2	A -	OSRE	Vermont Yankee	A	
Hope Creek	A		Vogtle 1	A	
Indian Point - 2	D		Vogtle 2	A	
Indian Point - 3	A		Waterford 3	A -	Security Force
Kewaunee	C		Watts Bar	A	
LaSalle 1	A		WNP	A	
LaSalle 2	A		Wolf Creek	A	
Limerick 1	A				
Limerick 2	A				
McGuire 1	A-B	Spent Fuel Storage			
McGuire 2	A-B				
Millstone 2	B				
Millstone 3	B				
Monticello	A				
Nine Mile Point 1	A				
Nine Mile Point 2	A				
North Anna 1	A				
North Anna 2	A				



## Attachment B (Continued)

## Summary

A	55 plants
A-	14 plants
A to B	10 plants
B	12 plants
B to A	8 plants
C	2 plants
C to A	1 plant
D	1 plant
F	0 plants
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	103 plants

## Key

- A Plant in the licensee response column of the NRC Action Matrix. Safety margin maintained at the plant.
- A- Plant in the licensee response column of the NRC Action Matrix but OSRE follow-up needed. Safety margin maintained at the plant.
- A to B Plant in the licensee response column of the NRC Action Matrix but supplemental inspection will still take place. Safety margin maintained at the plant.
- B Plant is in the regulatory response column of the NRC Action Matrix. Safety margin maintained at the plant.
- B to A Plant is in the regulatory response column of the NRC Action Matrix but no supplemental inspection will take place. Safety margin maintained at the plant.
- C Plant is in the degraded cornerstone column of the NRC Action Matrix. Minimal reduction in safety margin at the plant.
- C to A Plant is in the degraded cornerstone column of the NRC Action Matrix but no supplemental inspection will take place. Minimal reduction in safety margin at the plant.
- D Plant is in the multiple/repetitive degraded cornerstone column of the NRC Action Matrix. Significant reduction in the safety margin at the plant.
- F Plant in the unacceptable performance column of the NRC Action Matrix. Plant can not operate.