



Pennsylvania Department of Environmental Protection

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**RE: Comments on the First Year of Initial Implementation of  
The New Reactor Oversight Process**

Dear Mr. Meyer:

Enclosed are our comments on the first year of initial implementation of the new NRC Reactor Oversight Process (ROP). If you should have any questions or require further information regarding this submittal, please contact Rich Janati of my staff at 717-787-2163.

I appreciate the opportunity to comment on the new ROP.

Sincerely,

David J. Allard, CHP  
Director

Enclosure(s)

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## **PA DEP's Comments on the New Reactor Oversight Process (ROP)**

Does the new ROP satisfy the goals established by the NRC:

- I) Maintain Safety
- II) Enhance Public Confidence
- III) Improve Effectiveness and Efficiency
- IV) Reduce Unnecessary Regulatory Burden

### **I) Maintain Safety:**

- a) There are no signs of declining plant safety at any of the nine operating reactors in Pennsylvania since the new ROP was implemented in April of 2000.
- b) Additional data is needed to confirm the ability of the new process to identify declining safety performance trends in a timely manner. The Pennsylvania Department of Environmental Protection (PA DEP) supports the NRC's initiative to develop "Industry Trends Assessment Process" to evaluate the long-term effectiveness of the new ROP as it relates to the goal of maintaining safety.

It is recommended that this assessment process, at a minimum, include trending of the existing performance indicators and inspection findings, and other risk-significant industry-wide trends such as accident sequence precursors events and common-cause failure events.

- c) It is important that the external stakeholders know if the NRC staff, particularly the regional staff, have confidence in the new ROP and its ability to allow the NRC to identify declining safety performance in a timely manner. Therefore, it is recommended that NRC conduct a survey of its regional staff at the completion of the first year of initial implementation of the new ROP.
- d) There is a disparity between the NRC's goal of "Maintaining Safety" and the industry's goal or standard of "Excellence". This disparity in performance standards could confuse the members of the public.

II) **Enhance Public Confidence – By increasing the predictability, consistency, objectivity, and transparency of the oversight process**

- a) It is very difficult, if not impossible, to measure public confidence in the new ROP in this relatively short period of time. It might take several years before the NRC is able to conclude whether the new ROP has enhanced public confidence.

How will NRC measure public confidence (i.e., public surveys, focus groups, etc.)? What criteria will NRC use to determine if the new ROP has achieved this goal?

- b) NRC regional offices should continue to conduct annual Plant Performance Review meetings in the vicinity of the power plants. This would ensure that the interested citizens have a sufficient understanding of the new process and would also provide an opportunity to inform the public about the plant's overall performance.
- c) The accuracy, consistency and timeliness of the information to the public are important factors in the agency's credibility. The posting of performance indicators and assessment information (inspection reports and their findings) on the NRC website helps improve public confidence in the process.
- d) NRC should establish an effective mechanism to receive public input continuously and on a plant specific basis. The NRC resident inspectors should play a proactive role in this process by being more available and accessible to the local community. It is recommended that the NRC resident inspectors periodically brief interested members of the public (i.e. through informal meetings, etc.) on significant plant issues, and inspection and assessment findings. These periodic meetings would also provide an opportunity for the participants to ask questions and to provide input to the NRC.

**Is the new ROP more objective and predictable than the previous process?**

The new ROP is more objective and predictable. This is due to the combination of performance indicators and a more objective and structured NRC inspection and assessment program, including the significance determination process.

## **Performance Indicators (PIs)**

### **Strengths/Successes:**

- a) PIs are actual plant data and objective criteria for evaluating plant performance.
- b) PIs have been collected consistently and in a timely manner. The public is able to review and scrutinize the PIs.
- c) PIs can help licensees focus their attention on areas that may need improvement.

### **Weaknesses/Challenges:**

- a) Variations in plant designs, plant technical specifications and operating procedures have complicated the process. Examples are PIs for reactor coolant system (RCS) and scrams with a loss of normal heat removal.
- b) Some PIs could result in unintended consequences. Examples are unplanned power reduction and unplanned scrams. The industry is concerned that these PIs could potentially result in wrong decisions by the plant operators to avoid non-green finding(s).

These complicated factors and unintended consequences associated with PIs should have been identified and addressed during the implementation of the pilot program. Also, it is important to point out that changes to the existing program, without providing adequate justification, could potentially jeopardize the stakeholders' confidence in the process.

- c) The bases for setting the existing PI thresholds are inconsistent. The thresholds for some of the PIs (i.e., reactor scram, safety system unavailability) are based on probabilistic risk assessment (PRA) insights. Others are based on regulatory requirements or technical specification limits (i.e., RCS leakage, RCS specific activity), and some are based on professional judgment (i.e., security, emergency response).

Additionally, the thresholds for PIs that are based on regulatory requirements are high (i.e., RCS specific activity). Some of the PI thresholds that are based on PRA insights have very high thresholds (i.e.,

unplanned scram and scrams with a loss of heat removal - “yellow” and “red” thresholds) and may have undesired results with the public.

The relatively large number of “green” findings is partly due to high thresholds for some of the PIs.

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

#### **Strengths/Successes:**

- a) The SDP allows for more consistent and risk-based decisions by the NRC.
- b) The licensees are more inclined to perform risk analysis to identify risk significance of certain events.

#### **Weaknesses/Challenges:**

- a) SDP is a complex and complicated process for the public to understand.
- b) There are unnecessary challenges to the SDP non-green findings by licensees. This is mostly the result of licensees disproportionate concern about non-green findings.
- c) At present, the NRC regional offices do not have adequate number of risk analysts. Does NRC expect the resident inspectors to develop this expertise? Is NRC considering increasing the risk analysis expertise in the regional offices to implement the process effectively? or a combination of both?

### **Inspection**

#### **Strengths/Successes:**

- a) Inspections are more focused on risk significant issues.
- b) The quality of inspection reports has improved.
- c) Communications between the NRC inspectors and licensees’ staff

have improved.

Weaknesses/Challenges:

- a) NRC baseline inspections should focus more on crosscutting issues (human performance, safety-conscious work environment, and corrective action program). It is recommended that NRC use the INPO report findings, as an additional resource, to focus on areas that are more problematic or have the potential of being precursors to larger problems.
- b) No-color issues and findings in the inspection reports are causing some confusion to the public; particularly the no-color issues that result in violations that are assigned a color code.

Other:

- a) Changes to inspection schedule should be communicated to the external stakeholders in a timely manner.
- b) NRC should promote and encourage states' participation in the NRC inspections. This would help improve external stakeholders' confidence in the process.

- III) **Improve Effectiveness and Efficiency – By Focusing on Risk Significant Issues and,**
- IV) **Reduce Unnecessary Regulatory Burden – As the Process Becomes More Efficient and Effective**

It is recommended that NRC conduct a survey of its staff and the industry in order to determine whether the new process has accomplished these goals.

PA DEP has the following observations:

- a) NRC inspectors are focusing more on inspection preparation and less on inspection documentation.
- b) NRC inspectors are spending more time on reviewing documents and less time on actual physical inspections.

- c) Licensees are spending considerable amount of time on data collection and reporting associated with the PIs. However, this increase in burden has been offset by changes in the assessment and enforcement program.
- d) Some members of the public continue to be skeptical of the idea of “reducing unnecessary burden” on licensees.

### **Overall**

1. It is premature at this time to make a firm conclusion as to whether the new Reactor Oversight Process (ROP) satisfies the goals established by the NRC.
2. The new ROP is more objective and predictable than the previous process, but there are areas that require improvement.
3. NRC should evaluate the effectiveness of the new ROP periodically and make improvements in a systematic and timely manner.
4. NRC should continue to receive feedback from its external stakeholders, particularly members of the public, in order to improve public confidence in the new ROP.