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**From:** <jim.riccio@wdc.greenpeace.org>
**To:** <nrcrep@nrc.gov>
**Date:** Tue, Jan 7, 2003 12:49 PM
**Subject:** Greenpeace comments on NRC's ROP

Dear Sir or Madmam:

Attached are Greenpeace's comment on the NRC's ROP.

I realize that these comments are late however I hope the NRC will consider them any way. I doubt agency is overflowing with public input given the fact that the NRC failed to place its request for comment on its own web site and had failed to seek comment from those of us that had previously participated int he NRC process.

Sincerely,



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Template = ADM-013

E-RFDS = ADM-03
Cc = M. Monley (MJM3)

**Mail Envelope Properties** (3E1B133B.76A : 14 : 5994)

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| **Subject:** | Greenpeace comments on NRC's ROP |
| **Creation Date:** | Tue, Jan 7, 2003 1:01 PM |
| **From:** | <jim.riccio@wdc.greenpeace.org> |
| **Created By:** | jim.riccio@wdc.greenpeace.org |

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| **Files** | **Size** | **Date & Time** |
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| MESSAGE | 513 | Tuesday, January 7, 2003 1:01 PM |
| Part.001 | 497 | |
| GP Comments on NRC ROP.doc | | 61440 |
| Mime.822 | 86743 | |

**Options**

| | |
|---|---|
| **Expiration Date:** | None |
| **Priority:** | Standard |
| **Reply Requested:** | No |
| **Return Notification:** | None |
| **Concealed Subject:** | No |
| **Security:** | Standard |

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**Comments of James Riccio**
**Greenpeace Nuclear Policy Analyst**
**to**
**The U.S. Nuclear Regulatory Commission**
**on the**
**Third Year of Implementation of the Reactor Oversight Process**

January 7, 2003

In April 2000, the U.S. Nuclear Regulatory Commission implemented the current reactor oversight process. The new process was not introduced due to any new regulatory insight or any substantive improvement in the performance of the nuclear industry. Rather, the new process was necessitated by the fact that the NRC senior management repeatedly failed to address declining performance at nuclear reactors until the problems devolved into accidents or scandal landed the agency on the cover of TIME magazine. As the U.S. General Accounting Office pointed out, "NRC has not taken aggressive enforcement action to force the licensees to fix their long-standing safety problems on a timely basis. As a result, the plant's condition has worsened, making safety margins smaller." (U.S. General Accounting Office, Nuclear Regulation: Preventing Problem Plants Requires More Effective NRC Action, GAO/RCED-97-145, May 1997, pp. 2 & 3.) Unfortunately the GAO's findings are as true today as the day they were written in 1997 in the wake of the Millstone fiasco.

The oversight "process" was not the problem The NRC has always had the information necessary to make the correct assessments of problem nuclear plants. NRC senior managers either lacked the will or the integrity to act upon the data they had in hand. Unfortunately, little has changed in the nearly three years since the implementation of the new oversight process. NRC senior management has continued to place the economics of the nuclear industry ahead of the public health and safety. Since the implementation of the new oversight sight process, NRC senior management has continued to scuttle efforts of its own staff to regulate the industry and have allowed reactors to operate to point of breakdown. Seemingly a pattern has developed that has gone unnoticed by the Commission NRC staff attempts to enforce the regulations and potentially shut down a reactor, NRC senior management intervenes to prevent the "unnecessary regulatory burden" of actually complying with the regulations and allows the reactor to continue to operate until it is forced to shut down by incident or accident.

The debacle at Davis Besse is not an anomaly; it is merely NRC business as usual. When the NRC first instituted the revised reactor oversight process, the staff was surveyed. The majority of those surveyed thought that the new reactor oversight process would not catch slipping plant performance before there had been significant reduction in safety margin. Guess what? They were right!

When the revised reactor oversight process was first proposed, the agency and industry claimed that the revision was warranted due to the improved performance of the industry rather than necessitated by the failure of the NRC to adequately regulate reactors. Despite repeated claims of improved performance by the nuclear industry, it is evident to anyone familiar with the NRC and the nuclear industry that the industry is not operating any better, the NRC is merely regulating less. NEI and others in the nuclear industry have pointed to improved capacity factors as indicia of improved performance. In fact, the recent rise in capacity factors can be attributed to NRC's deregulation rather than improved industry performance.

In order to stem the tide of nuclear power plant shutdowns in the 1990s, the NRC and the nuclear

industry need to improve the economics of reactors. The agency and industry accomplished this by re-writing the technical specifications for each design wiping out 40% of the reasons to shutdown the reactor. According to the Executive Director for Operations for the NRC, James Taylor, the "improved" technical specifications would save licensees as much as $1 million per reactor per year. (U.S. Nuclear Regulatory Commission, Remarks by James Taylor, Executive Director for Operations, U.S. Nuclear Regulatory Commission at the Nuclear Energy Institute, Strategic Issues Advisory Committee, Washington DC, November 9, 1995, pp. 7-9.) But of course the NRC purportedly regulates safety not economics....right.

While the "improved" technical specifications certainly improved the bottom line for the nuclear industry they have not improved the safety of nuclear power plants. In fact the new technical specifications have actually increased the risk! According to Chairman Meserve, the improved technical specifications "allow hot shutdown to be specified as the endpoint for some TS action statements that now require plants to go to cold shutdown." (U.S. Nuclear Regulatory Commission, Proposed Staff Plan For Low Power And Shutdown Risk Analysis Research To Support Risk-Informed Regulatory Decision Making, Commission Voting Record, SECY-00-0007, March 31, 2000, p. 3.) The Chairman further acknowledges that:

> the elevated temperatures and pressures during hot shutdown conditions may also lead to increased risk; I note that significant draindown events over the past few years, such as the ones at Wolf Creek (1994) and Waterford (1999) were exacerbated because the reactor coolant system pressure was elevated In the specific case of Wolf Creek, this also led to the potential for common-cause failure of key safety systems that might have been needed to mitigate the event, had operators failed to diagnose the situation. (Id at p. 3.)

When coupled with other agency and industry initiatives such as power up-rates and allowing higher burn up for fuel rods the NRC has actually increased both the risk and consequences of a nuclear power plant accident under the guise of "improved" regulation. This has led Greenpeace to conclude that risk informed regulation, including the new reactor oversight process, means that the public is exposed to more risk while the nuclear industry is exposed to less regulation.

According the Federal Register Notice that solicited public input, the revised reactor oversight process inherently encompasses the NRC's performance goals to:

(1) Maintain safety by establishing and implementing a regulatory oversight process that ensures that plants are operated safely.

(2) Enhance public confidence by increasing the predictability, consistency, and objectivity of the oversight process; providing timely and understandable information; and providing opportunities for meaningful involvement by the public.

(3) Improve the effectiveness, efficiency, and realism of the oversight process by implementing a process of continuous improvement.

(4) Reduce unnecessary regulatory burden through the consistent application of the process and incorporation of lessons learned.

Unfortunately it appears that the NRC's priorities have been misplaced. The agency has so blindly pursued risk informed regulation as a means of reducing regulatory burden that it has allowed the nuclear industry to run its reactors to the point of break down. The agency has reduced regulatory burden but it has failed to maintain safety and in the process it has thoroughly undermined public confidence in the NRC and its new oversight process.

Our specific comments follow.

**(1) Does the Performance Indicator Program minimize the potential for licensees to take actions that adversely impact plant safety?**

No. Unfortunately, the new program when coupled with other "risk-informed" initiatives has allowed licensees to delude themselves into ignoring safety problems. The agency and industry use of Probabilistic Risk Assessment or PRA, which is more dark art than science at this point, has cajoled reactor operators into a false sense of security and allowed licensees to ignore problems until they devolve into accidents.

**(2) Does appropriate overlap exist between the Performance Indicator Program and the Inspection Program?**

No. The focus on risk significance in both PI's and the inspection program has created a blind spot in the NRC's regulation of the nuclear industry. This has allowed licensees to miss indications that all is not well with their nuclear power plant merely because the problems were not in a risk significant system.

**(3) Do reporting conflicts exist, or is there unnecessary overlap between reporting requirements of the ROP and those associated with the Institute of Nuclear Power Operations (INPO), the World Association of Nuclear Operations (WANO), or the Maintenance Rule?**

Unnecessary overlap? Perhaps the NRC's memory has slipped, or that NEI's influence in the agency has become so pervasive that the agency has forgotten that it works for the American people not the nuclear industry! INPO and WANO are not government institutions, they do not make their information public, and when their reports are leaked to public interest groups INPO threatens these organizations with SLAP suits.

The NRC has already attempted to rely on INPO reporting requirements and been slapped down by members of Congress for abdicating its responsibility to an industry group.
I don't care if WANO and INPO requirements are duplicative or not. Nor should the NRC. Regulation of the nuclear industry is supposed to be conducted by the NRC not some independent industry group.

The mere fact that the NRC is asking this question reveals just how out of touch the agency is with it mandate.

**(4) Does NEI 99-02, "Regulatory Assessment Performance Indicator Guideline" provide clear guidance regarding Performance Indicators?**

NEI's definitions have continued the long held NRC/NEI practice of linguistic deregulation. Whenever the NRC or NEI could not get a performance indicator to trend downward they would merely redefine the indicator to get the results they wanted. I have repeatedly documented this practice in the Nuclear Lemons reports I wrote for Public Citizen over the last decade. NRC has allowed the industry to continue this practice in NEI-99-02.

Under the new assessment regime, NRC has manipulated the one of the only indicators that it and NEI couldn't get to trend downward under the previous program, safety system failures. The NRC has allowed the industry to split hairs over the difference between functionality and operability by adding a caveat to the performance indicator. Rather than track safety system failures, the new program will track safety system functional failures. The NRC should not attempt to excuse these safety system failures away by applying some ex-post facto justification based upon risk insights that may or may not be accurate.

Even with the added caveat placed upon safety system failures, we are already seeing industry attempts to manipulate the new indicators. In discussions before the Pilot Plant Evaluation Panel, NRC staff stated that inspections had found 10 Safety System Functional Failures that were not reported and that most of them had to do with whether it was a "functional" failure or not. While NEI and the licensees have already attempted to explain these problems away as a misunderstanding the new indicators, it is important to note that the NRC regional personnel also stated that:

> "we also have some situations where determining that something constituted a functional failure would have effected a bonus being given to the site....At the implementation level we have found many ways in which performance indicators can be miscounted, misrepresented or influenced, some of which, based on my discussions with the plant over this period, I'm not sure that plant and utility management were even aware of interpretations that some of their staff were making"

(U.S. Nuclear Regulatory Commission, Pilot Program Evaluation Panel Meeting Proceedings, November 17, 1999, p. 28.)

**(5) Is the information in the inspection reports useful to you?**

Yes.

**(6) Does the Significance Determination Process yield equivalent results for issues of similar significance in all ROP cornerstones?**

No. The SDP is little more than an excuse generator and a way to downplay the significance of industry screw-ups. It does not produce "equivalent results". But the agency is already well aware of that. It has attempted to school its employees in the use of the SDP precisely because the SDP was not repeatable. If it's not repeatable, its not science!

The SDP is also seemingly susceptible to lobbying by the industry. Since its implementation there are several instances where the original SDP determination has been altered. This leads to the impression, articulated by my colleague Paul Leventhal of NCI, that " the NRC is a wholly owned subsidiary of the nuclear industry." The industry's ability to manipulate the process and help NRC determine what color code NRC will impose undermines the legitimacy of the entire reactor oversight process.

**(7) Does the NRC take appropriate actions to address performance issues for those licensees outside of the Licensee Response Column of the Action Matrix?**

The NRC has repeatedly deviated from the action matrix. This inconsistency in application of the process undermines the legitimacy of the ROP and the NRC. When the public witnesses this manipulation of the severity level, i.e. shifting findings from Red to Yellow of Yellow to White, it bolsters the viewed that the NRC is a captured agency beholding only to the nuclear industry and their toadies on capitol hill.

**(8) Is the information contained in assessment reports relevant, useful, and written in plain English?**

Yes.

**Questions Related to the Efficacy of the Overall Reactor Oversight Process (ROP)**

**(9) Are the ROP oversight activities predictable (i.e., controlled by the process) and objective (i.e., based on supported facts, rather than relying on subjecting judgement)?**

No. Even if the NRC were to magically become less susceptible to industry manipulation and influence, the SDP does not produce the same outcomes with the same data. The transparency that it took years to achieve under the previous regime has been totally lost. Rather than Senior managers holding up in some back room to gin up a watch list, we have a bunch of pencil pushers using PRAs and an SDP that are inadequate to the task at hand. Even if the NRC and the industry can improve the quality of the PRAs, the NRC failure to hold licensees to the design basis in their FSAR thoroughly undermines the NRC's use of risk insights in the regulation of nuclear reactors.

**(10) Is the ROP risk-informed, in that the NRC's actions are graduated on the basis of increased significance?**

See above.

**(11) Is the ROP understandable and are the processes, procedures and products clear and written in plain English?**

No! I challenge anyone at NRC to clearly explain the SDP!

**(12) Does the ROP provide adequate assurance that plants are being operated and maintained safely?**

No. Adequate assurance of safety has always been linked to the licensee's fidelity to the FSAR and compliance with NRC regulations. As in the past, a NRC effort to reconstitute the design basis of the existing reactors was short-circuited.

**(13) Does the ROP improve the efficiency, effectiveness, and realism of the regulatory process?**

No. The ROP has become a source of scorn and ridicule for the NRC. Just as failure of the "watch list" process resulted in extended outages for the Millstone reactors, the failure of the current ROP has resulted in increased risk to the public and an extended outage for Davis Besse.

**(14) Does the ROP enhance public confidence?**

No. The NRC and NEI manipulation of the process has further undermined what little confidence the public had in the NRC. The ability of senior management to manipulate the regulatory process has not changed under the new program. Public confidence will only be restored when the NRC holds licensees accountable. As Dr. Jill Lipoti of the New Jersey Department of Environmental Protection pointed out during the implementation of new ROP, "This isn't regulation its negotiation!" Absent new senior management at the NRC public confidence in the agency will remain justifiably low.

**(15) Has the public been afforded adequate opportunity to participate in the ROP and to provide inputs and comments?**

The only way this question could be answered in the affirmative is if NRC included the industry in its definition of "public."

**(16) Has the NRC been responsive to public inputs and comments on the ROP?**

No. This lack of responsiveness is what led me to withdraw from the implementation panel several years ago. Members of the public have specifically asked the NRC to develop the performance indicators so as not to further to the impression that the NEI has undue influence over the process. This was ignored. Not only has the NRC ignored the public but also the advice of their own staff and consultants.

The NRC has ignored its own experience with the reactors owned by Commonwealth Edison, now Exelon, which displayed the need for an economic indicator. The NRC then spent an exorbitant sum of money to hire Arthur Andersen to look at the assessment process and has since ignored their recommendations. Arthur Andersen recommended more objective performance indicators. The NRC has added more subjectivity by splitting hairs over functionality verses operability. Arthur Andersen recommended an economic indicator because, "the threat exists that nuclear utilities, in their desire to cut costs and increase competitiveness, will be forced to impair their operational safety and increase risk." (Arthur Anderson, Study of NRC Senior Management Process, December 30, 1996, p. 23.) Six years after that recommendation was made NRC still has no such indicator and in fact no longer makes operation and maintenance (O&M) costs available to the public.

**(17) Has the NRC implemented the ROP as defined by program documents?**

No. See above.

**(18) Does the ROP reduce unnecessary regulatory burden on licensees?**

It is unfortunate that the Senate oversight committee has so cowed this agency into regulatory complacency, that the NRC feels it must ask this question. Reactor assessment has never been an unnecessary burden. It is the price nuclear utilities must pay for placing communities and states at risk of annihilation. The NRC should not even be asking this question.

**(19) Does the ROP result in unintended consequences?**

Most certainly, I doubt the NRC intended the ROP to result in licensee's ignoring the corrosion of reactor pressure vessel and being between 1/8 and 1/16$^{th}$ of an inch away from a major loss of coolant accident. The ROP, as redesigned by NEI and the NRC with its reliance on risk insights that may or may not be valid, has resulted in the most severe accident since Three Mile Island. Was this what the NRC intended?

**(20) Please provide any additional information or comments on other program areas related to the Reactor Oversight Process.**

The revised oversight process is a failure. The undue influence of NEI and the industry with NRC's senior management has continued to erode confidence in the agency's ability to meet its mandate of protecting the public health and safety. If there is any upside at all to the new process it is that it is like to speed the demise of the nuclear industry through benign neglect.

Sincerely,

James Riccio
Nuclear Policy Analyst
Greenpeace