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To: <nrcprep@nrc.gov>
Date: Thu, Dec 6, 2007 1:43 PM
Subject: Solicited comments on the NRC reactor oversight program

Good Day:

Attached are comments submitted by UCS in response to the NRC's public comment solicitation on its reactor oversight process.

Thanks,

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Union of Concerned Scientists

Citizens and Scientists for Environmental Solutions

December 6, 2007

Michael T. Leser, Chief
Rulemaking, Directives and Editing Branch
Office of Administration (Mail Stop T-6D59)
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

**SUBJECT: SUBMITTAL OF COMMENTS ON THE IMPLEMENTATION OF THE
REACTOR OVERSIGHT PROCESS**

Submitted electronically to nrcprep@nrc.gov

Dear Mr. Leser:

In response to Nuclear Regulatory Commission (NRC) press release No. 07-133 dated October 9, 2007, I am submitting the attached comments on the reactor oversight process on behalf of the Union of Concerned Scientists (UCS).

Sincerely,

David Lochbaum
Director, Nuclear Safety Project

Attachment: Yes



Union of Concerned Scientists

Citizens and Scientists for Environmental Solutions

Nuclear Regulatory Commission (NRC) press release No. 07-133 solicited comments from the public on the agency's reactor oversight process (ROP). UCS has a long history of engagement on the ROP, including having been appointed to and having served on the Federal Advisory Committee Act panel chartered by NRC to assess the ROP's pilot program. UCS devoted these resources because we firmly believe that the absolute best protection that members of the public can have from the inherent hazards of the nuclear power reactors operating in their communities is an effective ROP.

Sadly, the ROP is becoming less and less effective with each passing year since its inception. The ROP was a significant improvement over its predecessor, which relied almost heavily on the Systematic Assessment of Licensee Performance (SALP) reporting system. Whereas SALP was largely subjective, the new ROP was largely objective. Whereas SALP evaluated performance in broad categories, the new ROP assessed performance in discrete areas. Whereas SALP issued assessments every now and then, the new ROP issued assessments for each reactor each quarter. Whereas SALP defined few mandated NRC responses to declining performance signs, the new ROP clearly established the NRC reaction to each non-routine assessment outcome.

The new ROP, for the first time in the NRC's history, established both crisp, clear expectations and mandated regulatory responses when licensees fell short. For the first time, the NRC drew a line and had measures in place to ensure licensees stayed on the proper side of that line.

The nuclear industry apparently abhors such accountability, for they have expended considerable effort – and achieved success – in chipping away at the new ROP until the current scheme is ROP by name only. The original objectivity is largely gone. The discrete areas remain, but have been rendered nearly pointless by the “all green all the time” colorization. And after nearly every mandated NRC response to a performance decline, the industry coerces the NRC into changing the ROP such that the next performance decline won't trigger that response. The current ROP is a mockery of the program unveiled in 2000.

Answers to specific questions posed by the NRC:

1. Does the Performance Indicator Program provide useful insights to help ensure plant safety?

No. As the September 2006 report by the U.S. Government Accountability Office (GAO-06-1029, “Nuclear Regulatory Commission: Oversight of Nuclear Power Plant Safety Has Improved, but Refinements Are Needed”) documented, the numbers of greater-than-green performance indicators (PIs) in 2003, 2004, and 2005 were 41, 33, and 23 respectively. Yet the numbers of reactors receiving heightened NRC attention over those same years were 36, 37, and 32. Clearly, the performance improvement suggested by the significant reduction in greater-than-green PIs was bogus; otherwise, the number of reactors needed heightened NRC attention would also have declined. The “greenwashing” of the PIs reflects the efforts of the nuclear industry to pervert the system and render it incapable of detecting performance drops. They have been successful in their perversion. It's sad.

The above comments may or may not apply to the physical protection PIs. Since August 2004, the Commission has wrongfully and shortsightedly withheld this information from the American public and therefore no one, except the industry, can comment on the useful insights from the physical protection PIs.

2. Does appropriate overlap exist between the Performance Indicator Program and the Inspection Program to provide for a comprehensive indication of licensee performance?

No. As detailed in the response to Question 1, the PIs have been rendered as useless as an appendix in a mannequin as far as providing indications of licensee performance.

It is impossible to comment on the overlap between the Performance Indicator Program and the Inspection Program for physical protection since the Commission wrongfully and shortsightedly withheld this information from the American public since August 2004.

3. Does NEI 99-02, "Regulatory Assessment Performance Indicator Guideline" provide clear guidance regarding Performance Indicators?

Sure. How hard can "all green all the time" be?

4. Can the Performance Indicator Program effectively identify declining performance based on risk-informed, objective, and predictable measures?

It can. It did initially. It doesn't now. The original PIs had all those admirable attributes and served very well to distinguish between risk-informed performance differences. But those licensees identified as falling short objected in a predictable manner and undertook to blur the line. Through devices like the infamous FAQ [frequently asked question] process, the nuclear industry has been able to maintain the PI thresholds as-is but re-define being on either side of that line as "green." The PIs are now useless measures not worth the time or attention of kindergarten students.

The PIs for physical protection may or may not identify declining performance. It's impossible to tell since the Commission wrongfully and shortsightedly withheld such information from the American public since August 2004.

5. Does the Inspection Program adequately cover areas important to safety, and is it effective in identifying and ensuring prompt corrective of performance deficiencies?

The Inspection Program is pretty good at identifying problems. The inspection program applied at the Palo Verde plant identified a string of good catches that had been overlooked and/or mis-diagnosed by plant workers. NRC Region IV deserves recognition for its commendable efforts at Palo Verde.

The Inspection Program's largest front-end problem involves the problem identification and resolution (PI&R) aspects. Corrective action program deficiencies are common threads among serious performance declines at nuclear plants. Yet the PI&R inspections chronically fail to notice degradation until conditions make the situation obvious to all. UCS believes that the fundamental flaw with the NRC's approach to corrective action program assessments is in the agency's belief that PI&R inspections provide the necessary insights to evaluate program health. History repeatedly demonstrates it simply isn't true. UCS recommends that NRC re-direct all the resources wasted on the futile PI&R inspections into more fruitful applications. For example, instead of NRC inspectors examining a small handful of corrective action reports and trying to guess the overall health of a corrective action program handling more than 2,000 reports annually, better insights would be obtained by having those NRC inspectors instead followup on findings from the NRC's Inspection Program. After all, in theory NRC inspectors should find nothing – the licensees own programs should find and fix all safety problems. When NRC inspectors find broken widgets, leaking gaskets, and calculation errors, they have also implicitly identified failures of the corrective action programs. Far more insightful PI&R assessments would result from NRC inspectors pulling the strings on such NRC inspection findings to determine why the corrective action programs failed. Such NRC followup would answer vital questions like: *Were the scope and frequency of the licensees' testing and*

inspection programs adequate? Are the licensees' testing and inspection methodologies adequate? Were opportunities to identify the problems missed in the past? Were prior attempts to remedy the problems adequate? The key to success for a limited-scope audit is in the smart selection of the samples examined. Under the current PI&R process, the NRC inspectors select the samples almost randomly, almost like drawing names from a very large hat. By using NRC inspection findings to define the sample, the audit automatically begins with evidence of corrective action program problems. The NRC's PI&R task then condenses to determining whether those problems are isolated in nature or reflective of a broader performance deficiency.

6. Is the information contained in inspection reports relevant, useful, and written in plain English?

Yes.

7. Does the Significance Determination Process result in an objective and understandable regulatory response to performance issues?

No. The SDP remains too slow, too vague, and too subjective. It's the third-worst part of the ROP, behind PIs and the alleged enforcement program.

It is impossible to comment on the SDP for physical protection findings since the Commission wrongfully and shortsightedly withheld such information from the American public since August 2004.

8. Does the NRC take appropriate actions to address performance issues for those plants with identified performance deficiencies?

Yes, and no. Yes, when it comes to plants moving towards the right in the Action Matrix and therefore dropping away from the licensee response level. Yes, when it comes to responding to indications of safety culture problems and cross-cutting issues. No, when it comes to enforcement actions involving civil penalties.

It is impossible to comment on the appropriateness of NRC actions taken for security performance deficiencies since the Commission wrongfully and shortsightedly withheld such information from the American public since August 2004.

The NRC's alleged enforcement program is the second-worst part of the ROP, a close second to the totally useless PIs. The absurdity of the NRC's enforcement program was demonstrated – again – earlier this year at the Indian Point nuclear plant. To comply with federal law, the NRC ordered – not urged, not requested, but ordered – the Indian Point licensee to install backup power supplies for the emergency sirens around the facility by a specified date. The NRC relaxed the deadline, yet the licensee still failed to comply with the NRC's order. The NRC determined that the failure was within the licensee's control; in other words, the agency established that the violation involved an avoidable performance failure. NRC's regulations provide for a \$130,000 civil penalty to be levied for each day of a violation. NRC's enforcement policy clearly states that daily penalties are reserved for ongoing violations. Yet NRC imposed a one-time civil penalty of \$130,000 even though the licensee was still in non-compliance at the time of the sanction and remains so today. The NRC's enforcement program needs significant repair. It ain't bent, it's broken. The NRC's enforcement program is pitiful.

9. Is the information contained in assessment reports relevant, useful, and written in plain English?

Yes, in terms of being in plain English. No, in terms of being either relevant or useful. The NRC is far too enamored by assessment report boilerplates to the point that the major differences between the assessment report for the best performer and worst performer are the addresses of the plants and the names of the NRC individuals signing the letters. There may be an occasional "not" tossed into the

assessment letters for the poorer performers (e.g., “your performance is not acceptable” vice “your performance is acceptable”), but there’s really very little relevant or useful information among the plain English.

10. Are the ROP oversight activities predictable (i.e., controlled by the process) and reasonably objective (i.e., based on supported facts, rather than relying on subjective judgment)?

If ‘yes’ equals 10 and ‘no’ equal 1, I’d say 4 to 4½. In the past year, I attended more than one of the monthly ROP meetings between the nuclear industry and the NRC. I heard Jim Anderson report the results of secret meetings held at NRC on ROP decisions, such as FAQs for PIs and on SDPs. Since the NRC doesn’t bother to provide a public, written account for these decisions, it’s impossible to determine the reasons why Mr. Dyer keeps downgrading identified problems. I can see the problems and the outcomes, but the NRC fails to document how it weighed factors in obtaining those outcomes. Absent that public documentation, I assume that the decisions are arbitrary and capricious.

11. Is the ROP risk-informed, in that the NRC’s actions are appropriately graduated on the basis of increased significance?

As bizarre as it sounds, the ROP is actually overly risk-informed. “Risk-informed” has been redefined by the nuclear industry to something akin to “green” if the underlying problem was more than 30 seconds away from reactor meltdown and “dark green” otherwise. The nuclear industry’s cognitive dissonance is exposed. Industry representatives repeatedly proclaim that the number of OSHA reportable events provides telling insights about performance. OSHA reportable events have little or no direct nexus to reactor core damage frequency. But when NRC inspectors identify a totally deficient access control program or electrical engineering calculation control program or instrument setpoint calibration process, the nuclear industry rushes to point out that the reactor core damage frequency of the finding is less than one times ten to the minus five and magically transforms unacceptable to acceptable. And the NRC plays along.

The NRC cannot continue to downplay performance deficiencies simply because they didn’t carry us to the brink of nuclear disaster. The original ROP was far better in this regard. It focused NRC attention to areas of higher risk significance and had NRC actions graduated based on the depths of the identified performance shortfalls. Over years, the nuclear industry has compelled changes such that the current ROP risk-informs where NRC looks and how NRC grades its findings. The result nearly collapses the ROP gradations into two bins: meltdown bad, no meltdown good. An ROP isn’t needed for that coarse binning.

The NRC really needs to turn back the clock and recapture the ROP value lost over the years.

12. Is the ROP understandable and are the processes, procedures and products clear and written in plain English?

The fact that the Commission adopted the Mitigating Systems Performance Indicator (MSPI) strongly suggests that the agency no longer cares about this aspect. MSPI is an abomination that never should have been foisted on the American public and should be withdrawn as quickly as possible.

13. Does the ROP provide adequate assurance, when combined with other NRC regulatory processes, that plants are being operated and maintained safely?

Not even close. Until the NRC consistently enforces its regulations, nuclear plants will be operated at higher risk than necessary. The NRC can post on its ROP webpage a zillion green PIs and a bazillion green inspection findings for the Shearon Harris nuclear plant and that won’t change the fact this plant doesn’t not comply with the NRC’s fire protection regulations. Likewise, all the greens in the world won’t change the fact that pressurized water reactors have operated for decades with

containment sump screens that would likely clog with debris in event of an accident (e.g, the GSI-191 issue).

In order to provide adequate assurance, the NRC would have to consistently enforce its safety regulations, quickly resolve generic safety issues with appropriate compensatory measures in the interim, administer a non-greenwashed ROP, and acquire (perhaps through eBay) an enforcement program.

14. Is the ROP effective, efficient, realistic, and timely?

Nope, nope, nope, and nope.

15. Does the ROP ensure openness in the regulatory process?

Nope. As indicated in the response to Question 10, many key ROP decisions are made by Mr. Dyer in secret with no publicly available documentation of the factors considered in the decision-making. The outcomes alone are made public. There won't be openness in the ROP until the bases for NRC's decisions are made publicly available.

It is galling for the NRC to even pose this question after the Commission wrongfully and shortsightedly withheld information on the physical protection components of the ROP since August 2004.

16. Has the public been afforded adequate opportunity to participate in the ROP and to provide inputs and comments?

Nope. I have attended more than one ROP monthly meeting between the nuclear industry and the NRC this past year. Until recently, the agendas for the public meeting notices did not explain what was to be discussed during the meeting, although such details had clearly been determined in advance between the nuclear industry and the NRC. These meetings are conducted as Category 2 public meetings, meaning I and other members of the public cannot ask questions or make comments except during designated times during the meetings (usually coinciding with the lunch breaks and pre-adjourning). NRC staff typically arrives and departs these meetings for their specific issues. When an opportunity for public comment arrives (i.e., the lunch hour arrives), the NRC staff who discussed a topic between 9am and 10am earlier that meeting are often long gone. Thus, the public really doesn't have adequate opportunity to participate and provide inputs. The monthly ROP public meetings should be conducted as Category 3 meetings and have public meeting notices that provide non-vague agendas.

17. Has the NRC been responsive to public inputs and comments on the ROP?

No. The NRC has been responsive to the comments from UCS, but has largely ignored and discouraged comments from other public interest groups and individual members of the public. The responses to this public comment solicitation are evidence. Many public interest groups and individuals submitted comments in past years, but that number has declined to nearly none. In discussions I have had with public colleagues, the Number One answer I get to the question of why haven't you submitted ROP comments is, "it's a waste of time." The perception among the public is that the NRC does not want and will not consider input from the public.

UCS shares that belief – but we're going to submit comments any way even if we have to wrap them around a brick and throw them through windows out at NRC-land.

18. Has the NRC implemented the ROP as defined by program documents?

No. For example, the NRC's Office of the Inspector General documented in OIG-07-A-15, "Audit of NRC's License Renewal Program," dated September 6, 2007, that "*Although expected to, audit team members do not consistently review or independently verify licensee-supplied operating experience information because program managers have not established requirements and controls to standardize the conduct and depth of such reviews*" and also that "*Post-renewal inspections are considered vital to ensure that licensees adhered to commitments made ... However, the agency has only recently focused its attention on developing and overseeing details associated with these inspections.*" So, it appears that NRC inspectors are walking through the plants as governed by the ROP documents, but are not meeting basic expectations established for such inspections. Given that the NRC has been granting license renewals for years and two of the key lessons from the Davis-Besse debacle involved operating experience and commitment adherence, it's inexplicable that NRC inspectors in 2007 would essentially just be going through the motions in these areas. Very little credit should be given just for showing up.

19. Does the ROP result in unintended consequences?

Nope.

20. a) Do the ROP inspection and assessment safety culture enhancements help to focus licensee and NRC attention on performance issues associated with aspects of safety culture?

I don't know.

b) Do the baseline Identification and Resolution of Problems inspection procedure (71152) and the special inspection procedures (93800 and 93812 respectively) provide an appropriate level of guidance on safety culture aspects and on the consideration of causal factors related to safety culture?

What does 71152 mean? Is that the score for the phrase 'Identification and Resolution of Problems' in Scrabble?

c) Do the supplemental inspection procedures (Inspection for One or Two White Inputs in a Strategic Performance Area (95001), Inspection for One Degraded Cornerstone or any Three White Inputs in a Strategic Performance Area (95002) respectively provide an appropriate level of guidance to evaluate whether safety culture components have been adequately considered as part of the licensees' root cause, extent of condition, and extent of cause evaluations and to independently determine if safety culture components caused or significantly contributed to the risk significant performance issues?

Rather than answering this question, I'd like to rephrase Question 9 and ask "*Is the information contained in ROP solicitation questions relevant, useful, and written in plain English*"? The answer to that question for Question 20c would be NO!

d) Does the procedure for a Supplemental Inspection for Repetitive Degraded Cornerstones, Multiple Degraded Cornerstones, Multiple Yellow Inputs, or One Red Input (95003) provide an appropriate level of guidance to independently assess the licensee's safety culture and evaluate the licensee's assessment of their safety culture?

I don't know.

e) Do the ROP inspection reports clearly describe inspection finding cross-cutting aspects?

I don't know.

f) Do the Operating Reactor Assessment Program (0305) cross-cutting components and cross-cutting aspects provide an adequate coverage of the cross-cutting areas?

I don't know.

21. Please provide any additional information or comments related to the Reactor Oversight Process.

Nuclear Regulatory Commission (NRC) press release No. 07-133 solicited comments from the public on the agency's reactor oversight process (ROP). UCS has a long history of engagement on the ROP, including having been appointed to and having served on the Federal Advisory Committee Act panel chartered by NRC to assess the ROP's pilot program and commented every year in response to NRC's public comment solicitations (with many unsolicited comments between annual solicitations). UCS devoted these resources because we firmly believe that the absolute best protection that members of the public can have from the inherent hazards of the nuclear power reactors operating in their communities is an effective ROP.

Sadly, the ROP is becoming less and less effective with each passing year since its inception. The ROP was a significant improvement over its predecessor, which relied almost heavily on the Systematic Assessment of Licensee Performance (SALP) reporting system. Whereas SALP was largely subjective, the new ROP was largely objective. Whereas SALP evaluated performance in broad categories, the new ROP assessed performance in discrete areas. Whereas SALP issued assessments every now and then, the new ROP issued assessments for each reactor each quarter. Whereas SALP defined few mandated NRC responses to declining performance signs, the new ROP clearly established the NRC reaction to each non-routine assessment outcome.

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