

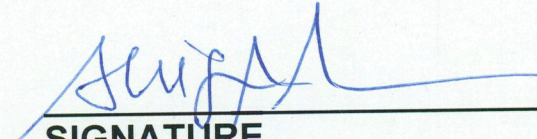
RESPONSE SHEET

TO: Annette Vietti-Cook, Secretary
FROM: Chairman Allison M. Macfarlane
SUBJECT: COMGA14-0002 – COMWDM14-0002 – IMPROVING
SAFETY AND REGULATORY EFFECTIVENESS BY
ENHANCING THE NRC'S FRAMEWORK FOR
RISK-INFORMED DECISION MAKING

Approved X Disapproved Abstain

Not Participating

COMMENTS: Below Attached X None



SIGNATURE

6/30/14

DATE

Entered on "STARS" Yes X No

Chairman Macfarlane's Comments

COMGA-14-002/COMWDM-14-002, "Improving Safety and Regulatory Effectiveness by Enhancing the NRC's Framework for Risk-Informed Decision Making"

I agree with proposed direction to the staff to develop for Commission review a rule that would require operating reactor licensees to be subject to the same PRA requirements that the Commission has established for new reactor applicants. Additionally, I think this proposed requirement should be put in place in less than the 10 years proposed by Commissioners Apostolakis and Magwood. Given the already good state of licensee PRAs, as reported by industry, and ongoing work in seismic PRAs, upgraded PRAs should be available for use in less than 10 years. Although I propose a shorter implementation period than what is suggested in the COMGA 14-002/COMWDM-14-002, this new requirement should not detract from the current schedules for safety improvements recommended by the post-Fukushima Near Term Task Force Report and directed by previous Commission decisions. The staff should review the ongoing regulatory activities for operating reactors and propose the appropriate schedule to the Commission.

I have had the benefit of a number of discussions regarding the use of PRA for operating reactors and the state of development of the existing tools and data. For internal events, there is clearly significant benefit to having and maintaining a PRA that meets the quality standards and is routinely updated. For external event PRA, I remain skeptical of some reported quantitative results, particularly for seismic and external flooding events. However, the risk insights for both external and internal events that can be developed regarding relative risks and plant response to the initiating event challenges are extremely valuable.

As technical and regulatory issues emerge, one of the first questions asked is, "What is the risk significance?" Risk information is being used by industry and regulators to understand the scope, significance, and potential resolution of important issues for operating reactors. The use of PRA risk insights has substantially increased since the Commission's 1995 Commission PRA Policy Statement. Probabilistic Risk Assessment is now so widely used in the discussion of safety issues and regulatory matters, that there is no longer a good reason that these assessments should not meet, by regulation, the quality standards that have been developed. In addition, they should be routinely updated and expanded as the methods and data are further developed. Probabilistic risk analysis insights no longer represent additional "good to have" information that supplements traditional safety analysis results. The PRA insights have become a routinely expected input to the discussion of the majority of operating technical issues. It is in this context that I find it necessary to ensure that operating reactor licensees are developing and maintaining quality PRAs and the proposed approach is the best path forward.

Another compelling argument for a PRA requirement for operating reactors was presented in the discussions surrounding Subsequent License Renewal (SLR), both in COMGA-14-002/COMWDG-14-002 and in a non-concurrence that was submitted on SECY 14-0016, "Ongoing Staff Activities to Assess Regulatory Considerations for Power Reactor Subsequent License Renewal." The future inconsistency that would exist between the current operating fleet of reactors and those that will be licensed under Part 52 is something that the Commission should take action now to fix now rather than later.

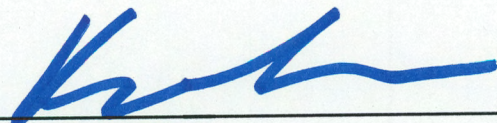
RESPONSE SHEET

TO: Annette Vietti-Cook, Secretary
FROM: COMMISSIONER SVINICKI
SUBJECT: COMWDM-14-0002 – IMPROVING SAFETY AND REGULATORY EFFECTIVENESS BY ENHANCING THE NRC’S FRAMEWORK FOR RISK-INFORMED DECISION MAKING

Approved _____ Disapproved XX Abstain _____

Not Participating _____

COMMENTS: Below _____ Attached XX None _____



SIGNATURE

07/ 3 /14

DATE

Entered on “STARS” Yes No _____

**Commissioner Svinicki's Comments on COMWDM-14-0002
Improving Safety and Regulatory Effectiveness by Enhancing the NRC's Framework
for Risk-Informed Decision-Making**

I disapprove the proposal advanced by Commissioners Magwood and Apostolakis in COMWDM-14-0002 to direct the staff to develop a proposed rule to require operating reactor licensees to submit probabilistic risk assessment (PRA) information to the NRC and requiring those licensees to maintain and update these PRAs as is required for new reactor applications under 10 CFR 52.79(a)(46) and 10 CFR 50.71(h). In a related vein, neither do I support taking up a revision of the Commission's PRA Policy Statement at this time.

Because this proposal was not made publicly available, stakeholder input and public comment did not inform my review of the matter. Because it was a proposal advanced by one or more members of the Commission, it was not accompanied by a staff analysis. The NRC staff has, however, carried out previous and more recent evaluations of this and similar regulatory concepts. Those analyses have informed my view.

As part of its evaluation in support of SECY-13-0132, "U.S. Nuclear Regulatory Commission Staff Recommendation for the Disposition of Recommendation 1 of the Near Term Task Force Report" (specifically, in Enclosure 1 to that document), the staff developed an estimate of the safety benefits and costs of upgrading existing plant PRAs and concluded:

The staff does not believe that a regulation requiring current licensees to develop and maintain a PRA can be justified at this time. . . . A regulation requiring current licensees to perform a PRA would constitute backfitting under the Backfit Rule, 10 CFR 50.109, and be inconsistent with the comparable issue finality provisions in 10 CFR Part 52. Accordingly, such backfitting or inconsistency with issue finality provisions may not be imposed on licensees unless they demonstrate a substantial safety benefit . . . and the burden associated with the backfitting is justified by the safety improvement. . . . [T]he NRC staff believes that a PRA regulation would be unlikely to identify substantial safety improvements beyond those that the current regulatory processes are capable of identifying.

Regarding safety benefits in particular, the staff concluded in the same evaluation that:

The capability of PRAs to identify unforeseen safety issues is limited because PRAs cannot identify unknown phenomena or scenarios not already incorporated into the PRA models.

In addition, the staff found that:

[T]he safety benefits attributable to development and application of plant-specific PRAs have diminished due to:

- Safety improvement actions taken as a result of previous PRA activities, generic issue resolution, industry and/or Owners Group initiatives;
- Actions taken (or anticipated to be taken) in response to Fukushima lessons learned; and
- Other industry and regulatory actions for prevention and mitigation of severe accidents.

In light of this contemporary re-look by the staff (undertaken only last year) and in the absence of substantial factors weighing to the contrary, I support the staff's conclusions contained in this existing evaluation and disapprove my colleague's proposal. I appreciate the attention members of the Commission have drawn to this important matter, but I draw a different conclusion.

One other matter bears mention. My colleague's proposal would direct the construction of any cost-benefit evaluation in the following fashion:

[I]n analyzing the costs and benefits of requiring PRAs for operating reactors, the staff should consider only the appropriate additional costs to meet the proposed requirement and all of the benefits associated with having high-quality, living PRAs.

I find such direction to be irregular, contrary to my experience with guidance and best practice for such analyses, and inconsistent with NRC's process for doing such calculations. Far from being a matter of policy, analytical preference, or disciplined practice, moreover, the courts themselves have looked with disfavor on such antics, rejecting them under the dictate that "[a] cost-benefit analysis should compare the costs and benefits of the *same* proposal" (emphasis in the original), calling out attempts to do otherwise as "compar[ing] apples on the one hand with apples and oranges on the other."¹ Given the complexity and significance of the regulatory revisions that the NRC has under development, now is not the time to change our disciplined practices in this regard or to make ourselves subject to criticism over this or other chicanery in agency cost-benefit analyses.

Finally, I agree also with Commissioner Ostendorff's admonition that the Commission, in its leadership role in setting agency policy and priorities, needs to exercise restraint, if possible, in adding more to the staff's plate when it comes to discretionary proposals such as this one. I have commented previously that our staff now has many complex regulatory actions in the implementation phase as a result of the post-Fukushima direction the Commission has already issued. We have prioritized these matters based on addressing first those with the greatest potential for safety enhancement. Our staff is committed to carrying out those actions to the standards of care and excellence that this and previous Commissions have expected of them. Our decision-making should continue to create an environment in which they will be able to succeed in doing so.



 Kristine L. Svinicki 07/ 3 /14

¹ *Process Gas Consumers Group v. Fed. Energy Regulatory Comm'n*, 930 F.2d 926, 931 (D.C. Cir. 1991) (remanding order funding end-use research program because underlying cost benefit analysis supporting the order unreasonably compared the costs of the end-use research program with the benefits of the end-use research program and a related supply research program).

RESPONSE SHEET

TO: Annette Vietti-Cook, Secretary
FROM: COMMISSIONER OSTENDORFF
SUBJECT: COMWDM14-0002 – IMPROVING SAFETY AND REGULATORY EFFECTIVENESS BY ENHANCING THE NRC’S FRAMEWORK FOR RISK-INFORMED DECISION MAKING

Approved _____ Disapproved XX Abstain _____

Not Participating _____

COMMENTS: Below ___ Attached XX None ___

W. Ostendorff
SIGNATURE

7/2/14
DATE

Entered on “STARS” Yes X No ___

Commissioner Ostendorff's Comments on COMWDM14-0002, "Improving Safety and Regulatory Effectiveness by Enhancing the NNR's Framework for Risk-Informed Decision Making"

I appreciate the time and effort that Commissioners Apostolakis and Magwood have spent on the topic of Probabilistic Risk Assessment (PRA). On November 5, 2012, Commissioners Apostolakis and Magwood authored COMGEA 12-0001 – COMWDM 12-0002, "Proposed Initiative to Improve Nuclear Safety and Regulatory Efficiency." This COM proposed a Risk Prioritization Initiative to incentivize licensees to develop high-quality PRAs on a voluntary basis. I voted in support of this proposed initiative. On May 27, 2014, I also voted to approve the staff's recommendation in COMSECY-14-0014, "Cumulative Effects of Regulation and Risk Prioritization Initiative: Update on Recent Activities and Recommendations for Path Forward," to merge staff's efforts to develop a proposed Risk Prioritization Initiative with ongoing efforts to address the Cumulative Effects of Regulation. In that vote, I joined my fellow Commissioners in reaffirming the objectives of the Risk Prioritization Initiative and providing guidance to the staff to inform its development.

Just seven months ago, in enclosure 1 to SECY-13-0132, "U.S. Nuclear Regulatory Commission Staff Recommendation for the Disposition of Recommendation 1 of the Near Term Task Force Report [NTTF]," the staff provided an estimate of the Safety Benefits and Costs of Upgrading Existing PRAs to Meet Phase 4 of the Commission's Phased Approach to PRA Quality for Use in Support of Improvement Activities 1 and 2. The staff concluded that a rule requiring Part 50 licensees to upgrade plant-specific PRAs was not justified due to (1) the high cost of such a requirement and (2) the low anticipated level of safety benefits. While some have argued that the staff too narrowly focused its assessment of the benefits in this evaluation, in my opinion, the staff focused its attention appropriately on the potential for PRAs to identify previously unknown safety issues. It is in this context that the quantifiable benefits of the proposed requirement would be most apparent.

In its analysis the staff also concluded that:

A regulation requiring current licensees to perform a PRA would constitute backfitting under the Backfit Rule, 10 CFR 50.109 . . . Accordingly, such backfitting . . . may not be imposed on licensees unless they demonstrate a substantial safety benefit (current guidance specifies a decrease of at least $1E-5$ /yr in CDF or a decrease of at least $1E-6$ /yr of LERF) and the burden associated with the backfitting is justified by the safety improvement (currently \$2000 per person-REM averted). Based on currently available information, the NRC staff believes that a PRA regulation would be unlikely to identify substantial safety improvements beyond those that the current regulatory processes are capable of identifying.

The Commission did not approve NTTF Recommendation 1 Improvement Activities 1 and 2, as proposed by the staff. Rather the Commission closed Recommendation 1, and directed the staff to reevaluate the objectives of Improvement Activities 1 and 2 in the context of the Commission direction on a long-term Risk Management Regulatory Framework (RMRF).

In COMWDM14-0002, Commissioners Apostolakis and Magwood developed a proposal to improve safety and regulatory effectiveness by enhancing the NRC's framework for risk-informed decision making. COMWDM14-0002 would require operating reactor licensees to

submit summary PRA information delineating the dominant risk contributors and to maintain and update their PRAs.

I agree that regulatory effectiveness will be enhanced as PRAs become more complete and consistent with consensus standards. However, I am concerned with the number of ongoing risk-informed activities, including the risk-prioritization initiative, NFPA-805 license amendments, post-Fukushima probabilistic seismic evaluations, efforts to develop probabilistic flood analysis techniques, the staff's level 3 PRA project, RMRF activities, and other risk-informed licensing activities. In addition, no new information has come to light since the staff's estimate of the "Safety Benefits and Costs of Upgrading Existing PRAs" was provided to the Commission in December 2013 that would alter the staff's conclusions regarding PRAs. In this context, we must maintain sight of the principles of good regulation which state that "regulation should be perceived to be reliable and not unjustifiably in a state of transition." We must focus our attention on implementing the risk-informed activities that are already on the plate of the NRC staff and the industry, and absent significant new information we should not expend resources to revisit prior decisions.

Some have identified a concern that an inconsistency would exist between the current operating fleet of reactors and those that will be licensed under Part 52 if the Commission does not require PRAs for existing reactors. There are and will continue to be inconsistencies between operating plants that were licensed under 10 CFR Part 50 and those licensed under the 10 CFR Part 52 licensing framework. This does not relieve the Commission of the obligation to ensure that new requirements are appropriately justified.

After experience is gained bringing the NFPA-805 transitions and the post-Fukushima seismic and flooding hazard re-analyses to closure, and we gain experience implementing the proposed risk prioritization initiative, then it may be time to reconsider the need to require PRAs for all operating reactors. However, at this time we need to stay the course and complete what we have started before considering additional requirements. Failure to stay the course could cause an unnecessary diversion of NRC resources from other ongoing initiatives. Therefore, I disapprove the proposal to require plant-specific PRAs for operating reactors.