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From: Ray Van De Walker [rgvandewalker@yahoo.com]
Sent: Saturday, July 12, 2008 7:51 PM
To: Rulemaking Comments
Subject: In re: NRC-2008-0237

From: Ray G. Van De Walker, rgvandewalker@yahoo.com
Sent July 12, 2008
To: Rulemaking comments
Subject: Comments on: Regulation of Advanced Nuclear Power Plants; Draft Statement of Policy, Docket ID NRC-2008-0237

Addressing the commission, via its Secretary;

Madam, I hope you might be able to consider this late submission. I have only myself to perform research, and did not discover the request for comments until today.

I am a software engineer specializing in reliable software. I have more than thirty years of professional experience, with successful projects in commercial avionics and medical systems.

Since these systems have been sold outside the U.S., I also have practical experience with safety-critical regulatory procedures in foreign jurisdictions and non-nuclear application areas.

I believe that nuclear safety should be as stringent as possible. Advanced reactor designs clearly fall in the critical mass-safety area, in which risks should be kept as low as reasonably practical.

At the same time, there is some urgency about advanced reactor designs, because nonnuclear sources of energy are either intermittent or dangerously polluting, and common light-water reactor designs and fueling regimes use a once-through fuel cycle that is rapidly depleting economical fuel supplies.

Public safety can only be harmed by increasing or continuing fossil fuel pollution. New types of reactors are essential to replacing fossil fuels. I have in mind the liquid fluorine thorium reactor, which promises inherent safety, low cost, and perhaps much less nuclear waste, or small pebble bed turbines that might

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economically power commercial ships. Both items could help replace high sulfur coal and bunker oil. No doubt there are other worthy projects.

The NRC licensing review is a famously difficult hurdle for advanced reactors. I think in large part this is due to its high expense, not its thoroughness.

So, I respectfully ask the committee to consider a pilot program or two that would use a more thorough, but more economical regulatory regime, widely used for mass-safety-critical licensing both in the U.S. and Europe. There are two such improvements.

1. The NRC might license reactors by regulating commercial bureaus that would use NRC policies to inspect and certify sites, designs, plans and quality-assurance organizations using NRC criteria. Such vendors already exist to provide regulation in other areas, and undoubtedly some of them would provide these services.

A critical part of this process is that the NRC must provide applicable standards, and then select, train, appoint, support and utilize "designated engineering representatives" in appropriate commercial organizations.

The DERs would be directly and personally responsible to the NRC for safety issues. Since they are continually present in first resort regulators, who have commercial incentives to be easily available, regulation is more thorough, and therefore should better protect public safety.

At the same time, these regulators reduce commercial risks by providing inexpensive, reliable safety guidance at every stage of a project, from the earliest concepts to project retirement.

By accepting personal responsibility, DERs are as reliable as direct employees of the commission. Whether they can be directly employed by vendors is a policy issue I can't address. While this works well for airworthiness regulation in the U.S., it is not

widely used or trusted outside the U.S.

Variations of this regime are or have been common practice in: The U.L., FAA, and (my reading seems to indicate) U.S. naval nuclear organizations, all of which enforce mass-fatality safety standards. It is also used by the C.E. Mark maintained for medical equipment, drugs and services in the E.U.

As the most widely accepted method for safety regulation, it appears to be very good practice. None of these regimes have notable, continuing failures of public safety.

2. The second improvement would be to encourage type-licensing of reactor systems, and fast-track combined operating licenses. I believe your comission may be carrying out these improvements, and I'd like to register my support and approval.

If the commission should find that these exceed the powers provided by the legislature, I respectfully request that the commission consider asking for a change of the regulatory regime.

Thank-you for your attention.
A concerned and impartial citizen
(not employed by a nuclear or safety vendor)

Ray Van De Walker

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