

**Burkhardt, Janet**

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**From:** Dave Lochbaum <DLochbaum@ucsusa.org>  
**Sent:** Tuesday, August 02, 2016 9:08 AM  
**To:** Watford, Margaret  
**Cc:** Singal, Balwant  
**Subject:** [External\_Sender] Supplemental information for Diablo Canyon pre-PRB meeting  
**Attachments:** 20130300-ucs-tolerating-the-intolerable-excerpts.pdf

Hello Ms. Watford:

Attached are excerpts from a report issued by UCS in March 2013. The excerpts are primarily the section of the report where we point out that Requests for Additional Information (RAIs) represent prima facie evidence of 10 CFR 50.9 violations, yet the NRC's RAI process does not even include a checklist or screening to determine whether a violation of this federal regulation may be involved.

Following issuance of our report in March 2013, I discussed this point with several NRC staffers and managers. The general response was interest in the point, but little interest in doing anything about it.

This material helps explain why we submitted the Diablo Canyon request under 2.206 -- we're seeking to have the NRC enforce federal regulations it has on the books but apparently overlooks.

Our concern is heightened by the downsizing being undertaken via Project AIM. If the NRC staff continues to inefficiently apply FTEs to reviews and re-reviews and re-re-reviews of licensee submittals until they finally obtain complete and accurate information, those will be FTEs unavailable for more productive safety work.

Thus, UCS's petition seeks to right a wrong before it becomes even wronger.

I intend to refer to this report and specifically these excerpts during this afternoon's pre-PRB meeting and respectfully request that this material be included with the transcript and other records for the meeting.

Thanks,  
Dave Lochbaum  
UCS

# The NRC and Nuclear Power Plant Safety in 2012

TOLERATING THE INTOLERABLE



Union of Concerned Scientists  
Citizens and Scientists for Environmental Solutions

# The NRC and Nuclear Power Plant Safety in 2012: Tolerating the Intolerable

DAVID LOCHBAUM



Union of Concerned Scientists

Citizens and Scientists for Environmental Solutions

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The Global Security Program works to reduce some of the biggest security threats facing the world today, including the risks posed by nuclear weapons, nuclear terrorism, space weapons, and nuclear power. We work with scientists around the globe to increase international understanding of these issues and to foster and strengthen efforts to increase international security.

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## CHAPTER 5. NEGATIVE OUTCOMES FROM NRC OVERSIGHT

This chapter describes situations where lack of effective oversight by the NRC led to negative outcomes. These outcomes are not necessarily the worst the NRC achieved last year. Rather, they shed light on practices and patterns that prevent the NRC from achieving the return it should from its oversight investment.

### Safety Culture

In 2011, the NRC issued a policy statement on safety culture that stated “The Commission expects the members of the regulated community to take the necessary steps to promote a positive safety culture by fostering the nine traits outlined in the policy statement as those traits apply to their specific activities” (NRC 2012w). The NRC stated:

*“Safety culture” refers to the core values and behaviors resulting from a collective commitment, by leaders and individuals, to emphasize safety over competing goals to ensure protection of people and the environment.*

The NRC identified nine traits—a trait being “a pattern of thinking, feeling, and behaving”—associated with a positive nuclear safety culture:

- **Leadership Safety Values and Actions**—Leaders demonstrate a commitment to safety in their decisions and behaviors.
- **Problem Identification and Resolution**—Issues potentially impacting safety are promptly identified, fully evaluated, and promptly addressed and corrected commensurate with their significance.

NRC documents about the hazard at Oconee and other nuclear plants were also inappropriately withheld from the public. And Senator Boxer certainly did not receive honest answers to her question during that Senate hearing on March 15, 2012, with the triple meltdown risk at Oconee known by the NRC but not yet resolved.

The NRC's creditability is jeopardized when it improperly withholds information<sup>11</sup> from the public and Congressional oversight committees. If explicit details about the Jocassee Dam's failure modes and associated vulnerabilities at Oconee warrant being withheld for national security considerations (i.e., not providing those who wish us harm the blueprints for conducting successful attacks), by all means do so. But a detail-lite version of the hazard could be made public to balance the public's right to know with the need to guard some information.

The NRC demonstrated achieving this balance in one area after 9/11. The NRC did not withhold all security information. Instead, it informed the public that it was taking steps to improve controls over access to nuclear plants and better protect against insiders and outsiders seeking to sabotage the plants. It quite properly withheld explicit information such as the height of security fences, locations of security cameras, and number of security force personnel at individual plants. But it publicly discussed the security threat and the general steps being taken to protect against it. And as described in Chapter 4, the NRC conducted an international conference on security that was open to the public, clearly demonstrating that it can discuss sensitive topics publicly while maintaining the proper balance of confidentiality.

Americans deserve comparable notification about flooding risks facing the nuclear plants.

## Incomplete and Inaccurate Statements

An NRC regulation, specifically §50.9 in Title 10 of the Code of Federal Regulations, requires that information submitted to the NRC by plant owners "be complete and accurate in all material respects" (NRC 1987).

When the NRC staff reviewing applications for licensing action (e.g., permission to operate reactors at higher power levels and requests to reduce the frequency and scope of safety tests) by plant owners identifies additional information it needs to complete its evaluations, the NRC sends a request for additional information (RAI). Each RAI contains one or more questions that the NRC staff needs answered.

A search of the NRC's record-keeping system (called ADAMS for Agencywide Documents Access and Management System) for documents containing the phrase "request for additional information" authored by the NRC and sent to nuclear plant owners returned over 1,000 records just in 2012 alone.

The huge volume of RAIs during 2012—a number typical of prior years—clearly shows that the NRC staff has a questioning attitude. They literally asked thousands of questions of plant owners last year.

<sup>11</sup> The NRC classified the Jocassee Dam materials as Official Use Only, a classification with no legal basis and employed only to keep documents from the public.

But they are apparently not asking one key question—did the owner violate §50.9 by failing in the first place to submit information that was complete and accurate in all material respects?

The large number of RAIs submitted by the NRC staff constitutes *prima facie* evidence that violations may have occurred. But the NRC’s RAI process does not include even a screening to evaluate formally whether a §50.9 violation is the reason for (or contributed to) the incomplete and/or inaccurate submittal prompting the need for the RAI.

Not every RAI represents absolute evidence of a §50.9 violation. Yet it is foolhardy to assume that no RAI could ever be the result of a §50.9 violation. But that seems to be the basic assumption behind the NRC’s RAI process.

I know from personal experience that assumption is flawed. I worked as a consultant in the licensing departments at the Grand Gulf Nuclear Station (in Port Gibson, MS) and Hope Creek Generating Station (Hancocks Bridge, NJ). At Grand Gulf, the process for preparing documents being submitted to the NRC included speculating about any questions the NRC’s reviewers might raise. This exercise was conducted so as to revise the draft to answer those potential questions. The objective was to submit material to the NRC that yielded no, or very few, questions from the agency.

The process at Hope Creek was fundamentally different. There, the process was not to volunteer any information in material being submitted to the NRC. “Make them ask,” was the phrase I heard over and over from licensing supervisors in explaining why they had lined through statements and paragraphs in draft documents.

Consequently, an RAI to Grand Gulf was less likely to be a §50.9 violation and more likely to a question that honestly was not anticipated. Conversely, an RAI to Hope Creek might very well address material information that the owner had anticipated would be required but forced the agency to request.<sup>12</sup>

The NRC must take §50.9 seriously. When it issues RAIs to plant owners, the NRC must formally determine whether the reason for the RAIs might be §50.9 violations. That over 1,000 sets of RAIs were sent to plant owners during 2012 strongly suggests that some §50.9 violations were overlooked.

The NRC sanction plant owners that deliberately seek to avoid compliance. Such behavior is part and parcel of a regulator’s job.

## Observations on Ineffective NRC Oversight

It is laudable that the NRC wants plant owners to establish and maintain positive safety cultures at their nuclear plants. It is laughable that the NRC’s own safety culture is so wanting.

The U.S. Congress played a key role in compelling the NRC to improve safety cultures at nuclear power plants. The 2002 discovery of severe reactor vessel head degradation at Davis-Besse was attributed to its owner placing production ahead of safety. The NRC appeared before an oversight subcommittee of the Senate’s Environment and Public Works Committee

<sup>12</sup> I hasten to point out that I worked at Grand Gulf and Hope Creek years ago. Policies and practices could easily have changed at these plants since then. However, my more recent communications with colleagues working in licensing departments at U.S. reactors suggests that the “make them ask” approach is not yet extinct.

outlining the many steps it was taking in response to the Davis-Besse debacle. It did not propose doing anything directly about the stated root cause—namely, the owner having lost the proper safety focus. Senator George Voinovich, chair of the subcommittee and representing Ohio where Davis-Besse is located, gave the NRC an option: either address safety culture issues itself or the Senate would do so by legislation. It was an option having only one choice and the NRC made the right choice. The NRC revised its reactor oversight process to include safety culture elements.

It is imperative that the U.S. Congress compel the NRC to take steps to correct its safety culture problems and show marked improvement during the next work force survey in 2015.

The common thread among the remaining negative outcomes involves inadequate enforcement of federal regulations. In the Waste Confidence Decision example, the court vacated the NRC's 2010 Waste Confidence Decision after determining that the NRC failed to comply with provisions of the National Environmental Protection Act. The court's action provides assurance that the agency will comply. In the future, the NRC should comply on its own.

The NRC should emulate the court by making nuclear plant owners comply with federal regulations, too. Safety requirements prohibit reactors from operating for more than six hours with reactor coolant pressure boundary leaks; yet they do so again and again with NRC's tolerance. Federal regulations require plant owners to provide information to the NRC that is complete and accurate in all material respects. The NRC asked more than 1,000 sets of questions to plant owners just last year, strongly suggesting that the NRC is not getting complete and accurate information. Yet the NRC does not formally evaluate whether owners violated this federal regulation—and by not doing so, tolerates inadequate performance by plant owners.

The NRC's job is more than just establishing safety standards at appropriate levels. It also involves consistently enforcing them. From a public health perspective, the only thing worse than having safety standards set improperly is having them set properly but not followed. Setting safety standards properly means one knows what it takes to protect public health. Failing to enforce them means one really doesn't care if the public is protected or not. That is unacceptable.