



# Union of Concerned Scientists

Citizens and Scientists for Environmental Solutions

August 9, 2004

Roy Zimmerman, Director  
Office of Nuclear Security and Incident Response  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

## **SUBJECT: PUBLIC PERCEPTION OF NUCLEAR PLANT SECURITY**

Dear Mr. Zimmerman:

Everyone still in the auditorium at the late hour last week was probably as surprised as you by the visceral reaction of public stakeholders to your characterization of the June emergency exercise at Indian Point. I assure you that the reaction was neither contrived nor pre-planned (if so, it would have occurred before the reporters left). I also assure you that the public stakeholders will not be placated by the NRC's placing this issue into the "agree to disagree" category.

My understanding of your remarks about the recent Indian Point exercise is that it postulated an aircraft crash at the site damaging various components like the main transformer and emergency diesel generators. If I understood correctly, this scenario relied on vulnerability assessments performed by the national laboratories since 09/11 under the NRC's auspices that reasonably bound the threat from aircraft crashes at other locations at the site. Finally, it's my understanding that the exercise "demonstrated" that ample time is available post-crash for workers to implement actions to either prevent fuel damage or, failing that, the large release of radiation. Your bottom line was that an aircraft impact causes a significant dilemma at the site but poses little or no threat to the people living and working outside its fences.

You presented this information as "good news" that should reassure the public. Your message assured the public – not that nuclear plants are secure, but that our government is hiding the truth. The data point you provided cannot be reconciled with a voluminous fact set to the contrary. Stripped of any supporting information attesting to the veracity of your message, it appears to us as an outlier. As such, we reject this bad data point and form our conclusions using the considerable fact set. That fact set includes the following:

- Numerous studies by the national laboratories under NRC's auspices spanning decades prior to 09/11 consistently reported that nuclear plants were vulnerable to aircraft assault, but the likelihood of an errant crash was low enough to render the risk acceptable.
- At a handful of sites, like Three Mile Island and Seabrook, the proximity of the site to flight paths for nearby airports raised the likelihood of an errant crash, prompting the NRC to require these facilities to incorporate more robust design features.

- Shortly before 09/11, the NRC reaffirmed its longstanding positions on aircraft vulnerability when concluding that the revamped use of the former Homestead Air Force Base did not alter the risk profile for the Turkey Point nuclear plant.
- Shortly before 09/11, the NRC issued NUREG-1738 on spent fuel risk. This report, produced following years of public meetings and protracted public debates about conservative assumptions and modeling biases, concluded that BWR spent fuel pools were vulnerable to aircraft. But once again, the likelihood of an errant plane striking the spent fuel pool was deemed low enough for the NRC to accept the existing vulnerability.

NOTE: After release of the Princeton study on spent fuel pool risk (also known as the Alvarez report), Commissioner McGaffigan urged Mr. Ashok Thadani of the NRC's Office of Nuclear Regulatory Research during a public meeting to refute the study, revealing a clear bias and sending a very clear message to those NRC staffers and contractors engaged in post-09/11 studies about the "right" answer sought by the Commission.

- After 09/11, studies conducted in the United Kingdom and Germany reported that their nuclear plants were vulnerable to aircraft assault.

Thus, we read in report after report, year after year of national laboratory studies – which universally disregarded any chance of sabotage or terrorist act – concluding that U.S. nuclear power plants are vulnerable to aircraft crashes, but that the accidental crashing of an aircraft into a plant is so unlikely as to make the risk negligible. In other words, the consequences can be quite high but the probability is rather low.

**How is it possible, then, that when the probability of an aircraft crash is assumed to go to 1 (i.e., 100 percent), the consequences go to 0? How can nuclear power plants be invulnerable to deliberate crashes and yet vulnerable to accidental crashes?**

Twenty-five years of publicly available reports from the national laboratories consistently state that an aircraft crash at a U.S. nuclear power plant could have very serious offsite consequences. One secret study conducted after 09/11 allegedly demonstrates otherwise. That's a hard sell, at best. We aren't buying it.

**Why should we believe your message when neither the government nor the industry believes it?**

Your message was that the Indian Point exercise "demonstrated" that a suicide crash of a large civilian jet aircraft would yield extensive damage to the site, but pose no threat to the public living outside its fences. If that were true, no nuclear plant in the United States would require federal liability protection under the Price-Anderson Act. After all, what accidental sequence of events could not be duplicated, or even exceeded, by the impact damage and resulting fire from an aircraft attack? The intentional crash of a large, fuel-laden, high-speed aircraft is an extremely severe challenge at today's nuclear plants. Yet your message is that the secret study shows no real offsite threat.

Since 09/11, both the NRC and the nuclear industry have asked the Congress to renew Price-Anderson for existing nuclear plants and to extend its coverage to new nuclear plants. In other words, existing plants are indeed vulnerable and require federal liability protection and the NRC isn't going to do anything to ensure that new reactors are invulnerable. This simple fact reveals your message to be part of a gimmicky public relations campaign rather than a truth campaign.

So, the available facts make it impossible for public stakeholders to accept your message. And circumstantial evidence is also against you. During the meeting, you repeated an industry assertion that it had spent over \$1 billion since 09/11 on security upgrades. Public stakeholder, rightfully so, see the logical disconnect between the NRC's proclamations immediately after 09/11 that U.S. nuclear plants were secure, hardened targets and the subsequent expenditure of over \$1 billion on security upgrades. Again, if U.S. nuclear power plants were truly safe and secure, before or after the billion dollar upgrades, then the industry would not need Price-Anderson. That the NRC and the industry still cling to Price-Anderson shows beyond any reasonable doubt that U.S. nuclear plants were and remain vulnerable.

I provide you this perspective to hopefully offset the impression we probably left last week. We clearly rejected the message. But we did not reject the messenger. We know that NSIR has taken as many security upgrade steps as the Commission will authorize.

I challenge you to take publicly available information and construct any reason for believing that U.S. nuclear power plants are adequately secure. If you were able to do so, you should be able to present that construct during a public meeting that could far more productive than last week's meeting. If you are unable to do so but still believe that the plants are secure, the exercise might enable you to identify the "missing" information that the public needs to arrive at that same conclusion. This could aid you in figuring out ways to sanitize that information so it could be presented to the public. If conditions prevent you from providing appropriate context for assertions, I'd suggest not making the assertions. That only increases public ire, not public confidence.

Sincerely,

<ORIGINAL SIGNED BY>

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