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Via First Class Mail and E-Mail

John A. Zwolinski, Director
Division of Licensing Project Management
Office of Nuclear Reactor Regulation
United States Nuclear Regulatory Commission
Washington, D.C. 20555-001

Re: Response to Proposed Director's Decision

Dear Mr. Zwolinski:

As directed, Petitioners hereby submit their response to the May 16, 2002 Proposed Director's Decision ("PDD"). We begin by noting that the Nuclear Regulatory Commission ("NRC") and the nuclear industry responded to the events of September 11 in a less than honest fashion. Both disseminated false information to the media claiming that our nation's nuclear power plants had been designed to withstand the type of airborne assault that brought down the Twin Towers. Petitioners exposed this falsehood and asked NRC Staff to evaluate its risk analysis theory in light of the fact that NRC current probabilistic risk assessment cannot account for increased risks flowing from intentional airborne assault.

Petitioners are troubled by the cavalier attitude displayed in the PDD. Where much of the PDD appears to rest on NRC Staff's unsupported "belief," the issues presented clearly required a technical analysis and rethinking of how to evaluate the increased risk posed by airborne assault.

The reality of the situation is that current plant design is incapable of meeting existing NRC safety guidelines. Instead of addressing this failure NRC chooses to shift its own responsibility for nuclear safety to the Federal Aviation Administrations ("FAA") and to Congress. This shift of responsibility is improper and inconsistent with NRC's mandated responsibility to protect this nation from radiological disaster.

Overall, the PDD fails to establish the outer bounds of acceptable risk and fails to consider how the existing design basis of individual nuclear plants can be increased to withstand airborne assault. Such an analysis is essential to plant locations that place large populations at risk.

Specific shortcomings of the PDD follow.

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1. Inadequate referral to the Office of the Inspector General.

The PDD at page 11 states:

Regarding the assertion that the NRC intentionally misled the public about its failure to adequately consider risks associated with an air assault on a nuclear facility, we have referred your concern to our Office of the Inspector General for resolution.

While the PDD identifies the concern that NRC failed to adequately consider the risks associated with an air assault following the 1999 disclosures that terrorist groups were contemplating flying large commercial jet aircraft into nuclear plants, the PDD ignores the explicit concern that NRC spokespersons appear to have intentionally misled the public about the ability of the nation's nuclear plants to withstand an airborne assault. On the second page of the Petition identifies the fact that NRC made false statements to nationally syndicated new outlets to the effect that nuclear plants were designed to withstand an air assault by large commercial jet aircraft. While the PDD appears to acknowledge that the nation's nuclear plants were not designed to withstand a commercial jet air crash,¹ it nonetheless fails to direct the Office of the Inspector General to determine whether NRC spokespersons and intentionally misled the public about the design basis of the nation's nuclear plants. This concern should be forwarded to NRC's Office of the Inspector General for resolution as well.

2. Substituting belief for technical analysis.

The PDD at page 10 states: "The Commission believes that the nation's efforts associated with protecting against terrorist attacks by air should be directed toward enhancing security at airports and on airplanes." (Emphasis added). At page 17 the PDD reiterates: "The staff believes that this generic concern has reasonably been addressed by action of Congress and the FAA . . ." (Emphasis added). These statements reflect the overall failure of NRC Staff to present Petitioners with a valid technical basis to assure the public that the risk analysis in place provides the public with sufficient protection. Petitioners conclude that NRC Staff should not be permitted to function in the realm of "beliefs" when only a valid technical analysis could

¹ The PDD at page 9 states: "No existing nuclear facilities were specifically designed to withstand the deliberate high-velocity direct impact of a large commercial airliner such as a Boeing 757 or 767." Petitioner is concerned in that this statement is itself inaccurate. In order to be accurate, the statement should have identified that nuclear plants were never designed to withstand either an accidental or deliberate impact of a large or small commercial jet aircraft traveling at high or low velocity. Upon information and belief, the outer limit of the design basis of a nuclear power plant is the ability is to withstand a utility pole striking the outer containment at speeds up to 144 m.p.h. By comparison, a Boeing 747 weighs up to 875,000 pounds at takeoff, can easily attain speeds in excess of 500 m.p.h., and will also deliver an additional force associated with the explosion of up to 57,000 gallons of jet fuel.

possibly answer the issues presented. Petitioners contend that a technical analysis is required by law.² The fact remains that the NRC has a long history of avoiding a requirement that nuclear plants be designed to withstand plane crashes as long as it can be shown that the chances of a random air crash is sufficiently low. This ignores intentional acts of sabotage. In order to meet the design basis threat analysis NRC Staff required licensees to be able to demonstrate the ability to successfully repelling any "credible" terrorist attack. Airborne assault does represent a credible terrorist threat scenario. But, instead of requiring a licensee to demonstrate how it can prevent a radiological accident in response to an airborne attack, NRC now shifts that responsibility to Congress and the FAA. The question that begs to be answered is whether either the FAA or Congress is aware that they are responsible for ensuring that the threat of a credible airborne attack at a nuclear plant on any given day is less than one in ten million. Has NRC advised Congress or the FAA that they are responsible for ensuring the safety of the nation's nuclear plants? Petitioners contend that there is no reliable basis to conclude that the FAA is capable of reducing the risk to one in ten million that terrorists will not be able to commandeer a large jet aircraft. Indeed, the risk of an accidental plane crash alone may in and of itself exceed this safety limit.

The PDD at page 10 states: "The capability of a plant to successfully cope with an aircraft impact will depend upon the plant's design features and the ability of the licensee's staff to utilize backup systems." This assertion is based on a false premiss and is therefore inherently misleading. Essentially the PDD seeks to presuppose that a plant can "successfully cope" with the impact from a large commercial jet. Yet, there exists no technical analysis to make such a claim. By way of analogy, this assertion is the equivalent of claiming that the ability to successfully cope with a head-on collision between a car and train traveling at maximum velocity is the skill of the driver and the design of the car. Just as no car is designed to withstand such a crash, nuclear plants are not designed to withstand the impact of a large commercial jet. There is no technical support for the assertion that the current design basis of a nuclear plant containment structure can adequately cope with the direct impact of a large commercial jet.

3. The PDD contradicts prior NRC Technical Analysis.

The PDD at page 11 states: "[T]he staff concludes that the probability of terrorists using a large airliner to damage a nuclear power plant remains acceptably low." Petitioners are presented with no technical analysis to evaluate this assertion. In fact, past assertions made by NRC Staff rather indicate that this conclusion is baseless as NRC Staff previously asserted that "there is currently not an acceptable methodology available to assess the probability of terrorist activity." See Petition at p. 7 (quoting October 2000 Technical Study of Spent Fuel Pool Accident Risk at

² The NRC's longstanding rule is that the design basis of a nuclear plant must be sufficient to reduce the likelihood of an offsite release of radiation when a defined threat exceeds a one-in-ten-million (1×10^{-7}) chance of occurring during the operational life of a nuclear plant. See, e.g., *Private Fuel Storage LLC*, CLI-01-22 (2001). NRC has failed to establish how a nuclear plant can come close to meeting this design parameter.

Decommissioning Nuclear Power Plants). Thus, NRC's own past technical analysis of this issue demonstrates that NRC Staff's conclusion is based on belief as opposed to a valid technical analysis. The fact remains that the NRC owes the public a technical analysis weighing the costs of hardening nuclear structures to withstand airborne assaults against the risk of an airborne assault. Until such a technical analysis is completed – particularly with respect to nuclear plants near major metropolitan areas – NRC is not living up to its responsibility.

4. Failure to evaluate inadequacies associated with NRC's probabilistic risk assessment.

NRC fails to address Petitioners' concern that the "probabilistic risk assessment" ("PRA") analysis currently utilized by NRC to evaluate the adequacy of a nuclear plant design is no longer valid because it intentionally excludes sabotage and terrorist attack as a calculated risk factor. See Petition at p. 7. Inasmuch as the risk from an airborne terrorist attack has never been factored into the design basis of a nuclear plant, the time is ripe for NRC to address this glaring inadequacy.

5. Failure to address Prior Inaccurate Assertions.

The Petition on Page 8 asks NRC to address whether NRC's October 2000 Technical Study of Spent Fuel Pool Accident Risk at Decommissioning Nuclear Power Plants falsely asserts that factoring in terrorist attacks would reduce the overall risk of an offsite release of radiation. Making such a statement in a technical report only underlines NRC Staff's inability to comprehend the increase risk associated with terrorism. The PDD fails to address how such a flawed analysis was made in the first place and what steps should be taken to ensure that such obviously false assumptions are not included in future technical analysis.

6. Inadequate analysis of the risk of airborne assault on a spent fuel pool.

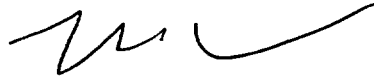
The PDD at page 12 states: "The robust design and small size of the [spent fuel] pools minimize the likelihood that a terrorist attack would cause damage of a magnitude sufficient to result in an offsite release of radioactive material." The assertion that the pools have a "robust design" is clearly erroneous as NRC has already determined that more than 50% of the aircraft flying over United States air space can penetrate a spent-fuel pool's containment vessel. See Petition at p. 9, fn. 16. How can a structure be robust if 50% of flying aircraft (which includes small private aircraft) can deliver a fate blow? Moreover, smaller aircraft offer greater pinpoint accuracy of where the impact will occur. Thus, the assertion that the "small size" of a pool reduces the likelihood of a successful terrorist attack represents an overall flawed evaluation. The PDD fails to present a valid basis to conclude that the likelihood an air crash into a spent fuel pool presents a de minimus risk.

In sum, no technical basis exists to conclude that the nation's nuclear facilities can come close to being able to withstand an airborne terrorist attack. The public has a right to know whether it is feasible to require licensees to harden existing nuclear facilities. Under current NRC requirements, there is no requirement that newly designed plants be hardened to protect

against airborne assault. This represents backwards thinking that needs to be reexamined in light of a long-term worldwide terrorist threat.

For the foregoing reasons Petitioners ask that the PDD be withdrawn and that NRC Staff prepare for public disclosure a meaningful technical analysis of the costs associated with hardening nuclear facilities; and that NRC set forth the means and methods to determine whether the current threat design basis can be met given the likelihood of an intentional air crash.

Respectfully Submitted:



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