

As Presented

POST 9/11 SECURITY AT NUCLEAR POWER PLANTS

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**[Viewgraph of NCI's website "Nuclear Terrorism---How to Prevent It"
www.nci.org/nuketerror.htm]**

**[Viewgraphs of NCI / SUNY International Task Force on Prevention of Nuclear
Terrorism: membership & recommendations on plant security]**

The "one & only" question:

- Are nuclear power plants today capable of defeating a 9/11 scale attack---or even the smaller attacks anticipated before 9/11?

Keys to finding the answer:

- OSRE results (NRC Operational Safeguards Response Evaluations)
- design-basis threat
- containment design
- spent fuel vulnerability
- extent of post-9/11 security upgrades

OSREs

- Suspended after 9/11.
- Before 9/11:
 - nearly half the plants tested (37 of 81, or 46%) had failed to repel mock terrorist attacks or prevent destruction of a target set that in real attack could cause severe core damage & meltdown.
 - Beginning in 2000 & until suspension of OSREs after 9/11/01, 7 out of 11 plants tested (64%) had failed these exercises, 2

plants had vulnerabilities but no loss of whole target set, and only 2 passed the exercises.

[Viewgraph comparing Orrik & Beedle quotes on consequences of failed OSREs.]

- But the “SPA”[Safeguards Performance Assessment] process, to eventually replace NRC-supervised OSRE exercises with industry self-assessment program, has not been terminated. [Originally "SAP" ---more appropriate acronym.]
- Defenses of spent fuel pools at operating & closed sites never tested.
- Operators' claimed ability to recover from a destroyed target set never tested on simulators.
- OSREs should be promptly resumed & frequently run, with proper logistical precautions in the new threat environment.

[Quote NY Public Security Director James Kallstrom re. terrorists' inability to defeat Indian Point's security: "Let 'em try!": At best, false bravado; at worst, taunting terrorists. How about "Let OSREs try?"]

- SPA should be terminated.

Design Basis Threat

- Assumes smaller number of attackers than seen on 9/11 (either overall or in individual attacks).
- Apparently assumes smaller bomb than ones used since 1993 truck-bomb attack on World Trade Center.
- Does not include assaults from water.
- Does not include attacks from the air.
- Assumes one passive or active insider, but OSREs test only for passive insider.
- Post-9/11 DBT should include
 - at least 19 terrorists attacking from 4 different directions;
 - vehicle bomb bigger than Khobar Towers bomb;
 - active as well as passive insiders;
 - ground, air and water attacks.

Continuing Vulnerabilities of Nuclear Power Plants

- NRC's post-9/11 order appears to leave the DBT unchanged and to make mostly marginal security refinements. Most significant reported improvements are:
 - raising minimum number of guards;
 - increasing setback distances for searches of trucks (an improvement that took years to approve after NRC inspector filed an official demand for it).

- Operators not required by NRC regulations to protect against an “enemy of the United States, whether a foreign government or other person.”

- But “enemy” is not further defined, and it is arguable whether the 9/11 attacks were by an enemy of the U.S. as originally conceived by the Commission and in administrative rulings.
 - Commission assumed it was impractical to assume reactor designs could protect against “full range of the modern arsenal of weapons” and that U.S. defense capabilities would have to provide “basic safeguards” against an enemy---or as an appeals decision put it, rely on “the settled tradition of looking to the military to deal with this problem.”
 - But both NRC & industry refuse to acknowledge overall plant security vulnerabilities that, if understood, would make full military protection imperative.
 - Nuclear industry hints that military assistance might be needed for air protection but not for ground protection.

[Scott Peterson of NEI on "Moneyline" 2/14/02: "We believe we can defend our plants against any kind of attack that's ground-based, and if there is a need for upgraded security to take care of any kind of assault from the air, then that's obviously something we will have to coordinate with the military on."]

- If Price-Anderson Act did not limit liability for radiological sabotage, would industry be making these claims, or even be willing to operate plants in the present threat environment? Talk is cheap when liability is capped. Industry is not willing to risk its assets, but seems quite willing to put the public's lives & property at risk for the sake of bottom-line profitability.

- Beyond perhaps lacking the responsibility, operators certainly lack the capability to repel a 9/11-scale attack;
 - despite NEI propaganda, guards at many plants are understaffed, underpaid, undertrained, overweight, demoralized and scared;

[Viewgraph of guard's letter.]

- NRC should develop its own guard-force data base and not rely on NEI's advertisements & guard-force claims;

[Hold up NEI's full page ad; Viewgraph of text.]

[Viewgraph: Meserve's statement at National Press Club uses similar language "... as I understand it ..."]

- NRC should determine whether rent-a-cops, which make up 60% of the guard forces (Pinkerton estimate) , should be replaced by staff guards receiving pay & benefits in line with comparable plant personnel;
 - TVA replaced own guard force with Pinkerton guards at reduced pay & benefits (starting pay is less than TVA's janitors & unarmed watchmen receive).
 - But Duke Power replaced outside-contractor guards with own guard force.
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- A definitive NRC design analysis of containment vulnerability to air attack is long overdue.
 - Despite NEI propaganda, there is no design basis for industry's declaration of confidence that containments could withstand a jumbo-jet hit;
 - Certain less robust containments are of special concern;
 - Early Argonne study of BWR containments warned they could be vulnerable to penetration by commercial aircraft;
 - NCI calculation shows penetration of up to 6 feet of reinforced concrete by jumbo jet engine is plausible;
 - NRC should disown NEI's fraudulent claim that the Sandia video of the F-4 crash test into a concrete wall "speaks for itself";

[Video clearly showing 6-foot displacement of wall on cushion of air can be viewed on NCI website

(<http://www.nci.org/media/crashtest.rm>)

- Spent fuel pools are the Achilles Heel of nuclear power plants.
 - NRC study in 2000 on decommissioning plants warned of severe consequences from accidents involving spent fuel pools;
 - Study also warned that half of today's jumbo jets could penetrate a 5-foot thick concrete wall;
 - Spent-fuel pools contain many times the long-lived radioactive content of reactor cores.

Military protection is needed to repel 9/11-scale attack

- At each of the 63 operating sites and 9 de-commissioned sites with spent fuel on site, there should be
 - 30 to 40 specially trained infantry troops on duty at all times, plus
 - radar-directed anti-aircraft battery (such as Ration Phalanx 1B Surface system).
- Military protection of nuclear plants could be integrated into the new, integrated North American command structure now being planned by the Pentagon.
 - Costs surely would not be out of line with those now being budgeted for homeland defense.

[Viewgraph of budget items in Deputy Secretary of Defense Paul Wolfowitz' testimony before House Budget Committee, 2/12/02]

- Use of troops would not violate Posse Comitatus Act prohibitions on use of DoD personnel in law enforcement (search, seizure & arrests); Coast Guard vessels already guarding several nuclear plants.
- Federal nuclear guard force, especially one run by the NRC, is not the way to go during the present emergency.
- Homeland Security Director Tom Ridge appears to have ruled out military protection as well as national nuclear guard force. In fact, he seems to be a stronger advocate of industry self-regulation than the NRC.

[Ridge's 2/3/01 "Meet the Press" quote: "There's a role here for the federal government working with the private sector to raise the level of the standards of security....What is the standard of security? The Federal government can provide it. In this instance, I think those who own the nuclear power plants have to provide it."]

- Ft. Bragg Special Operations Command, not FBI, should be lead agency in evaluating, prescribing and testing protection of nuclear power plants.

[If Special Forces officers now advising the White House believe they could knock off a nuclear power plant, maybe they should be recommending that Special Forces-trained & tested troops are needed to protect these plants.]

- Indian Point, with 20 million people within 50 mile radius, should be used as baseline plant for nation:
 - shut it down until defenses are upgraded and successfully tested against 9/11-scale attack;
 - if successful, re-start it and apply lessons learned to other plants;
 - if unsuccessful, shut down all plants close to large population centers and don't restart them until defenses are successfully tested against 9/11-scale attack.
- In 1975, the then-new NRC managed to order the shut down of all 23 boiling water reactors in the country for a few weeks to eliminate hairline cracks that appeared in some 4-inch bypass lines.
 - Is it even conceivable that today's NRC is capable of issuing such an order for plants near large cities to eliminate vulnerabilities to large-scale terrorist attack?
 - The Federal government would be quick to respond with military protection if the NRC did.

[Viewgraph of 1975 hearing on NRC shutdown of 23 boiling water reactors.]

Role of NRC and Industry

- NRC's "top to bottom" review could be "topless to bottomless"---infinite in duration, indefinite in scope.
- NRC issued first "orders" to industry nearly 6 months after 9/11, and apparently only after strong White House urging
- NRC is not supposed to rely on prior warning (i.e."accuracy and timely availability of intelligence information") in designing plant defenses.
 - its own official, internal guidance directs it not to do so (Gossick Memorandum of 1978).

- But the NRC and industry act as if they have all the time in the world and seem to be waiting for an “Osamagram” before taking decisive action.

[Viewgraph of Gossick Memo excerpts]

[Viewgraph of NRC quote on Sept. 11: "no credible general or specific threats"]

- NRC is now perceived as a captured agency: its financing, budgeting, decisionmaking and commissioner nominations all controlled by industry;
- Meanwhile, nuclear power plants remain vulnerable today.

Recommendations:

- Effective immediately, upgrade design-basis threat to 9/11-scale attack, including attack from water and air.
- Military protection of nuclear power plants---infantry & anti-aircraft batteries.
- Upgrade truck-bomb rule to defend against larger than largest bomb used since 1993 World Trade Center attack.
- Prompt resumption of OSRE exercises and termination of SPA process.
- Shut down Indian Point plant to develop & test military protection, and shut down other plants close to population centers if Indian Point defenses not successfully tested.
- Restart shut-down plants only after post-9/11 defenses are demonstrated to be effective.
- Enact National Nuclear Security Act provisions mandating an upgrade of NRC's Design Basis Threat and making OSRE a statutory office.

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