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USNRC

From: <rubygrad@sbcglobal.net>  
To: <SECY@nrc.gov>  
Date: Wed, Jan 19, 2005 2:15 PM  
Subject: We need stricter nuclear safety standards

January 21, 2005 (10:35 am)

OFFICE OF SECRETARY  
RULEMAKINGS AND  
ADJUDICATIONS STAFF

Dear Secretary,

If a nuclear plant's containment shell and reactor core, or spent fuel pools, are ever breached, a terrible explosion of radioactivity, on a par with the Chernobyl accident, will ensue. Millions of Americans would be placed in harm's way. Unfortunately, our nuclear plants are highly vulnerable to attack. Fortunately, such a cataclysm is preventable.

Harvard professor and Clinton Administration arms control expert, Graham Allison, soberly discusses the problem of nuclear power plant vulnerabilities:

The American Airlines flight that struck the North Tower of the World Trade Center could just as readily have hit the Indian Point nuclear power plant, forty miles north of Times Square . . . The consequences of an attack on a nuclear plant would depend largely on where the plane hit. If the aircraft penetrated the containment dome, the attack could cause the reactor to melt down, releasing hundreds of millions of curies of radioactivity into the surrounding environment, hundreds of times that released by the Hiroshima and Nagasaki bombs. We already know what such an incident would look like. In April 1986, an accident explosion inside the Soviet nuclear reactor at Chernobyl ignited a powerful fire that raged for ten days. The resulting radiation forced the evacuation and resettlement of over 350,000 people and caused an estimated \$300 billion of economic damage, and is likely to lead ultimately to tens of thousands of excess cancer deaths among those exposed to the fallout.

An even more vulnerable target at a nuclear plant is the building that houses the spent fuel rods, which are stored in pools of water to prevent the heat from their residual radioactivity from melting them. Designed to remain intact in case of an earthquake, these structures are open to the air in some instances and housed in only light-duty buildings in others, which means that a plane attacking from above might drain the pool, destroy backup safety systems, and ignite the fuel. The resulting fire would spew radioactivity into the environment in amounts that could reach three or four Chernobyls.

Such threats are real possibilities. In November 1972, three Americans with pistols and hand grenades commandeered a Southern Airlines Flight 49, and ordered the plane to fly to Oak Ridge, Tennessee, and threatened to plow the plane into a reactor unless their ransom was met. And on February 7, 1993, a distraught intruder drove his station wagon onto Three Mile Island nuclear power station property, crashing through gates in the "protected" area of the nuclear facility before wrecking the vehicle into the turbine building. He evaded security for several hours before being arrested. Fortunately, he carried no explosives.

Please register my concerns about vulnerabilities at our nuclear power plants as public comment to the petition for rulemaking.

Please upgrade the Design Basis Threat (DBT) for U.S. nuclear power stations revising DBT regulations to require NRC and the nuclear power industry to contemplate and prepare for an attack of nuclear power stations by air by constructing shields consisting of (inexpensive and quick-to-assemble) steel I-beams and steel cabling to obstruct the angle of air attack at stand-off distances from the reactor building, fuel pool and other safety-related assets so that hijacked, rented or private aircraft (potentially carrying explosives) attempting to deliberately crash into a reactor site would be torn up in the "Beamhenge" shield effectively reducing the impact and penetration force on safety-related structures. The shield effort is focused on reasonably reducing the public's risk of terrorists successfully using nuclear power stations for radiological-enhanced sabotage.

Please ensure the viability of the budget for the OSRE program and resist any attempts to formulate policy to turn over security testing to an industry self assessment program. Please continue and enhance

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SECY-02

reforms you instituted in the aftermath of the September 11 attack.

Sincerely,

Ruby Grad

SECY-02

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