

Newly nuclear neighbor

The Washington Times, Final Edition, Part A; Commentary; Pg. A19

Wednesday, June 3, 1998

By Richard Miniter

While the world is transfixed by the series of multi-megaton explosions in India and Pakistan, an equally great nuclear risk lies unnoticed and nearby.

Less than 180 miles south of Florida's Key West, Cuban dictator Fidel Castro has recently resumed construction of two large Soviet-designed VVER 440 model V230 nuclear reactors at Juragua in Cuba's Cienfuegos Province. The reactors pose a genuine threat to Americans as far north as Washington, D.C. and as far west as Texas, according to an array of federal government reports from the General Accounting Office (GAO), the State Department, the Energy Department, the Nuclear Regulatory Commission (NRC), and the National Oceanic and Atmospheric Administration (NOAA). As many as 80 million Americans could be exposed to a potentially deadly radioactive cloud if the Cuban reactors were to malfunction, according to government reports and congressional testimony.

The threat is real. Congress recently approved more than \$3 million to build and maintain a Caribbean Radiation Early Warning System, a battery of sensors on the Florida, Alabama, Louisiana and Texas coasts to provide timely data for emergency preparedness in the event of a catastrophic radioactive release, according to congressional testimony by Gene Aloise, assistant director of energy resources at GAO. If the worst happens, the entire United States could be covered with some of the radioactivity, Mr. Aloise said.

While most of the world's nuclear reactors are extremely safe and meet stringent government standards, the twin Juragua reactors are different - they are a Greenpeace nightmare.

From the drawing board (The design is very different and does not meet western safety standards, finds the Nuclear Energy Institute, a pro nuclear industry trade group) to the final construction, the Juragua reactors are a case study in how not to build a power plant. The Russians have sworn never to build another VVER 440 reactor in their own country. The German government, which inherited four VVER 440 reactors from the former East Germany, considered them so unsafe that they immediately shut them down.

Among the design defects is the containment dome. The protective dome of the almost complete reactor (the second reactor is only one-third complete) is designed to withstand only 7 pounds per square inch of pressure. U.S. standards require at least 50 pounds per square inch. Other defects: The reactor design has a weak emergency core cooling mechanism, which is used to prevent a meltdown. The emergency cooling system has no back-up.

The construction is even worse than the design. Perhaps as many as 60 percent of the Soviet-made parts in the Juragua reactors are defective, according to GAO estimates. Soviet technicians purportedly warned Cuban officials that the emergency cooling system wouldn't work. In an extraordinary Miami Herald interview, Pelayo Calante, who was responsible for quality control in Juragua before he defected, reveals

the reactor will probably fail if activated. Mr. Calante described how Cuban officials ordered workers to cannibalize equipment to use in other places in the reactor. Vladimir Gervera, who was a Senior engineer at Juragua, led the team that x-rayed the more than 5,000 welds on the twin reactors' vast gaggle of fuel cooling and plumbing systems. Mr. Gervera, who also defected, told U.S. officials that at least 15 percent of the welds are dangerously flawed. U.S. standards do not permit a single defective weld. That means that once the system is pressurized, the pipes could burst and release toxic radioactive clouds.

However poorly designed and built, the machinery of the twin reactors has only gotten worse. When construction halted in 1992, the internal guts of the nuclear reactors - including the reactor vessel, six steam generators, five main coolant pumps, 12 isolation valves and other essential equipment - was left exposed to wind and the rain for more than five years. Now they are being put into service.

Even the site is cursed. The Juragua reactors rests on an active earthquake fault line, federal officials believe. A relatively small tremor could have large consequences.

Should the Juragua reactor be completed and become operational, these issues would increase the threat to public health and safety of Cuba and the Americas, Paul Gurtey, director of reactor watchdog project for the Nuclear Information and Resource Services, told the American Sentinel, a newsletter based in Charlotte, N.C.

The Cubans, who have already spent an estimated \$1 billion on the reactors, need another \$750 million to complete the project. They are about to get the money they need - partly from U.S. taxpayers. Sergev Shoygu, an official of the Ministry of the Russian Federation for Atomic Energy, told GAO in 1996 that the Russians plan to extend a \$350 million line of credit - to finance the supply of Russian materials to Cuba. Canadian and European governments are expected fund the balance. Part of the funds will indirectly come from U.S. taxpayers. The International Atomic Energy Agency, which receives almost 30 percent of its \$53 million annual budget from the United States, plans to provide almost \$2 million worth of equipment and technical support to the Cubans over the next two years. Sen. Bob Graham, Florida Democrat, and Sen. Connie Mack, Florida Republican, are offering legislation to prevent U.S. funds from being used to help the Cubans become a nuclear power - but that's not enough.

The Clinton administration has the tools to halt construction of the reactors. Stepped up enforcement of the Helms-Burton Act could choke off the parts and funds needed to activate the 97 percent complete reactor. If international law fails, then the president must consider an air strike - similar to the Israeli attack on Iraq's reactor in 1981.

While the atomic detentions in India and Pakistan consume the president, he ought to consider the nuclear threat from Cuba. He needs to act now.

Richard Minter writes for Reader's Digest, the American Enterprise and other national publications. He lives in Alexandria.