Pantex: A Plutonium Dump for the Nation?

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WASHINGTON -- Not since 1951, when the federal government converted the sprawling Pantex site near Amarillo from a deserted World War II munitions depot into the nation's premier nuclear weapons assembly plant, has its mission been so drastically changed. Texans should now be asking tough questions to make sure Pantex does not become the nation's plutonium dump.

The Cold War is over, and Pantex's highly skilled workers are disassembling the nuclear weapons they once assembled. They are storing the recovered plutonium cores -- baseball-size spheres called "pits" -- in modified World War II bunkers that look like and were once called "igloos."

Long-term storage of plutonium is new to Pantex, as is the uncertainty over what is to become of it all. Until recently, pits were put only in temporary storage, awaiting assembly into new or refurbished weapons. Now the Department of Energy is about to authorize Pantex to store 20,000 discarded pits, including pits transferred from the shut down Rocky Flats plutonium plant outside of Denver, where the pits were manufactured. This action could convert Pantex into the nation's plutonium dump.

There are three possible outcomes. The first is to store the pits indefinitely. This solution runs afoul of U.S. disarmament commitments under the Nuclear Non-Proliferation Treaty. It also guarantees Russian storage of plutonium in pit form. This will only lead to a more insecure world in which superpowers can rearm on a hair-trigger basis and other nations have a built-in incentive to maintain declared or undeclared nuclear arsenals.

The second option is to convert the pits into plutonium fuel for use in civilian reactors that produce electricity. This so-called "swords to plowshares" approach is now being pushed by the Amarillo National Resource Center for Plutonium, with a strong assist by British and French government-owned companies.

These overseas companies have defied U.S. non-proliferation policy by promoting civilian commerce in weapons-usable plutonium. Now they want to build a plant at Pantex for combining plutonium from pits with uranium into a "mixed-oxide" (MOX) fuel for reactors. They are also lobbying Congress for authority to extract plutonium from American utilities' spent fuel. With the help of British and French technology, a soon-to-be-idled military reprocessing plant at Savannah River, S.C., would be refitted to handle civilian spent fuel. Westinghouse, which runs Savannah River for the Energy Department, is promoting such a scheme.

Most important for Texans, if a MOX plant were built at Pantex to process the 20-plus tons of surplus pit plutonium, the Texas Panhandle could become a "plutonium magnet" for the nation. Some 300 tons of plutonium could be extracted from power-reactor spent fuel at Savannah River, shipped in to Pantex for fabrication into MOX fuel and shipped out to MOX reactor sites.

Plutonium is the most toxic man-made substance. Pantex personnel would have to get used to handling plutonium, not in the form of hermetically sealed pits but as powder or dust that easily sticks to surfaces. A speck of it in the lungs is a cancer dose.

The United States abandoned domestic reprocessing and MOX industries more than a decade ago for economic, safety and non-proliferation reasons. Today, MOX fuel in Europe and Japan is four to eight times more expensive than the low-enriched, non-weapons-usable uranium that nuclear power reactors normally use. MOX plants also are difficult to protect against schemes to divert plutonium -- a major consideration in Russia and other unstable countries.

The best course is the third option: to dispose of plutonium from pits directly as waste. Plutonium pits would be shipped from Pantex in military transport vehicles to Savannah River. There the pits would be converted into a form suitable for dissolving plutonium in a molten glass mixture of highly radioactive waste, or for placing plutonium in cans that would be inserted in canisters before the molten waste solution is poured. These waste canisters could be disposed of along with commercial spent fuel.
Disposal of warhead plutonium should not be used as an excuse to revive a misguided civilian plutonium industry in the United States. MOX fuel is no less dangerous under the swords-to-plowshares label. It still contains tom bomb material, and it sets a terrible example for the world. The most secure route to military plutonium disposal is to treat it as waste not fuel. Texas and the world will be safer if Pantex is protected from becoming a plutonium magnet, or dump.

Paul Leventhal, president of the Nuclear Control Institute, recently visited the Pantex Plant before speaking at a meeting of the Pantex Citizens Advisory Board. Jim Adams of the Safe Energy Communication Council directs a national educational campaign concerning reprocessing and plutonium use.