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# U.S. Cold War gift: Iran nuclear plant

Now cited as evidence of weapons activity,  
facility was provided to shah's government

**By Sam Roe**

Tribune staff reporter

In the heart of Tehran sits one of Iran's most important nuclear facilities, a dome-shaped building where scientists have conducted secret experiments that could help the country build atomic bombs. It was provided to the Iranians by the United States.

The Tehran Research Reactor represents a little-known aspect of the international uproar over the country's alleged weapons program. Not only did the U.S. provide the reactor in the 1960s as part of a Cold War strategy, America also supplied the weapons-grade uranium needed to power the facility—fuel that remains in Iran and could be used to help make nuclear arms.

As the U.S. and other countries wrestle with Iran's refusal this week to curb its nuclear capabilities, an examination of

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the Tehran facility sheds light on the degree to which the United States has been complicit in Iran developing those capabilities.

Though the International Atomic Energy Agency, the United Nations nuclear watchdog, has found no proof Iran is building a bomb, the agency says the country has repeatedly concealed its nuclear activities from inspectors. And some of these activities have taken place in the U.S.-supplied reactor, IAEA records show, including experiments with uranium, a key material in the production of nuclear weapons.

U.S. officials point to these activities as evidence Iran is try-

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## IRAN: Other nations also helped nuclear work

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ing to construct nuclear arms, but they do not publicly mention that the work has taken place in a U.S.-supplied facility.

The U.S. provided the reactor when America was eager to prop up the shah, who also was aligned against the Soviet Union at the time. After the Islamic revolution toppled the shah in 1979, the reactor became a reminder that in geopolitics, today's ally can become tomorrow's threat.

Also missing from the current debate over Iran's nuclear intentions is emerging evidence that its research program may be more troubled than previously known.

The Bush administration has portrayed the program as a sophisticated operation that has skillfully hid its true mission of making the bomb. But in the case of the Tehran Research Reactor, a study by a top Iranian scientist suggests otherwise.

After a serious accident in 2001 at the U.S.-supplied reactor, the scientist concluded that poor quality control at the facility was a "chronic disease." Problems included carelessness, sloppy bookkeeping and a staff so poorly trained that workers had a weak understanding of "the most basic and simple principles of physics and mathematics," according to the study presented at an international nuclear conference in 2004 in France.

The Iranian scientist, Morteza Gharib, told the Tribune that management of the facility had improved in the past three years. When asked whether sloppiness at the reactor might have contributed to some of Iran's troubles with the IAEA, Gharib wrote in an e-mail: "It is always possible, for any system, to commit infractions inadvertently due to lack of proper bookkeeping."

### 'This was not an oversight'

Jeffrey Lewis, an arms control expert at Harvard University, said bungling might be to blame for some infractions, but the Iranians clearly concealed major nuclear activities, such as building a facility to enrich uranium. "This was not an oversight," he said.

Another overlooked concern about the Tehran reactor is the weapons-grade fuel the U.S. provided Iran in the 1960s—about 10 pounds of highly enriched uranium, the most valuable material to bombmakers. It is still at the reactor and susceptible to theft, U.S. scientists familiar with the situation said.

This uranium has already been burned in the reactor, but the "spent fuel" is still highly enriched and could be used in a bomb. Normally, spent fuel is so radioactive that terrorists could not handle it without causing themselves great harm. But the spent fuel in Iran has sat in storage for so long that it is probably no longer highly radioactive and could be handled easily, the U.S. scientists say.

The fuel is about one-fifth the amount needed to make a nuclear weapon, but experts said it could be combined with other material to construct a bomb.

In an interview, Linton Brooks, head of the National Nuclear Security Administration, an arm of the U.S. Energy Department, said the U.S. would like to retrieve the U.S.-supplied fuel, but the top priority has been to get Iran to suspend its enrichment efforts.

Under the international nuclear non-proliferation treaty, Iran has the right to enrich uranium for peaceful purposes. But the UN Security Council, saying Iran has failed to prove it is not building weapons, has demanded Iran stop enrichment by Aug. 31 or face economic sanctions. This week, Iran offered "serious talks" on its nuclear activities but did not promise to stop enriching uranium.

While Brooks downplayed the proliferation risk of the Tehran Research Reactor, some experts believe the facility is so important to Iran's nuclear program that it would be targeted in the event of a U.S. military strike on Iran.

"Its purpose is mainly advanced training and producing a cadre of nuclear engineers," said Paul Rogers, an arms control expert at the University of Bradford in England. "So it's one of the facilities that is really quite significant."

Exactly how significant is unclear. The Tehran reactor provided the foundation for Iran's nuclear program, but that program now consists of numerous other facilities as well. And over the years, Iran has obtained nuclear aid from various sources,



AP photo by Vahid Salami

The U.S. provided about 10 pounds of highly enriched uranium for the Tehran Research Reactor.

including Russia and the black market network of Pakistani scientist A.Q. Khan. China also has supplied research reactors.

Most of the world's nuclear research reactors, which train students or produce radioisotopes for medicine, fall under IAEA restrictions. Agency inspectors have visited the Tehran facility several times in recent years. Iran says its nuclear program, including the U.S.-supplied reactor, is solely for peaceful purposes.

When arguing for tough penalties on Iran, U.S. officials have pointed to activities in the U.S.-supplied reactor.

In 2004, John Bolton, the State Department's senior arms control official at the time, told a congressional panel that Iran's covert nuclear weapons program was marked by a "two-decades-long record of obfuscation and deceit." He cited experiments in the reactor as part of the evidence.

Several months later, Bolton told another congressional panel that Iran had received technological assistance from companies in Russia, China and North Korea in an attempt to develop missiles capable of delivering nuclear weapons.

Countries that provide Iran such technology "ought to know better," said Bolton, now the American ambassador to the United Nations. If foreign companies aid Iran, the U.S. "will impose economic burdens and brand them as proliferators."

What Bolton didn't note: America's role in Iran's nuclear program.

That role has complicated U.S. efforts to gain support for greater restrictions on Iran. For instance, the U.S. wants Russia to take a firmer stance on Iran's nuclear program and has been critical of Russian efforts to help Iran build a nuclear power plant.

But Russia has noted the U.S. had no problem providing Iran a research reactor and highly enriched uranium when it was politically expedient.

### CIA helped restore shah

Those who defend the U.S. say it should not be faulted for aiding Iran in the past. "It is not the international community's fault for helping Iran exercise its rights in the past" to develop nuclear energy for peaceful uses, said Lewis, the Harvard expert. "It's Iran's fault for not living up to its safeguards obligation."

Iran's nuclear program can be traced to the Cold War era, when the U.S. provided nuclear technology to its allies, including Iran. In 1953, the CIA secretly helped overthrow Iran's democratically elected prime minister and restore the shah of Iran to power.

In the 1960s, the U.S. provided Iran its first nuclear research reactor. Despite Iran's enormous oil reserves, the shah wanted to build numerous nuclear power reactors, which American and other Western companies planned to supply.

Yet today, the U.S. argues that Iran does not need to develop nuclear power because of those same petroleum resources.

In 1979, when the shah was overthrown and U.S. hostages taken, America and Iran became enemies; Iran's nuclear power program stalled.

The U.S. refused to give Iran any more highly enriched uranium for its reactor, and Iran eventually obtained new fuel from Argentina. This fuel is too low in enrichment to be used in weapons but powerful enough to run the facility. To this day, the reactor runs on this kind of fuel from Argentina.

In 2003, shortly after IAEA officials inspected the U.S.-supplied reactor, Iran acknowledged it had conducted experiments on uranium in the reactor between 1988 and 1993—activities that had not been previously reported to the agency.

The IAEA rebuked Iran for failing to report these experiments and expressed concern about other activities at the reactor. These included tests involving the production of polonium 210, a radioisotope useful in nuclear batteries but also in nuclear weapons.

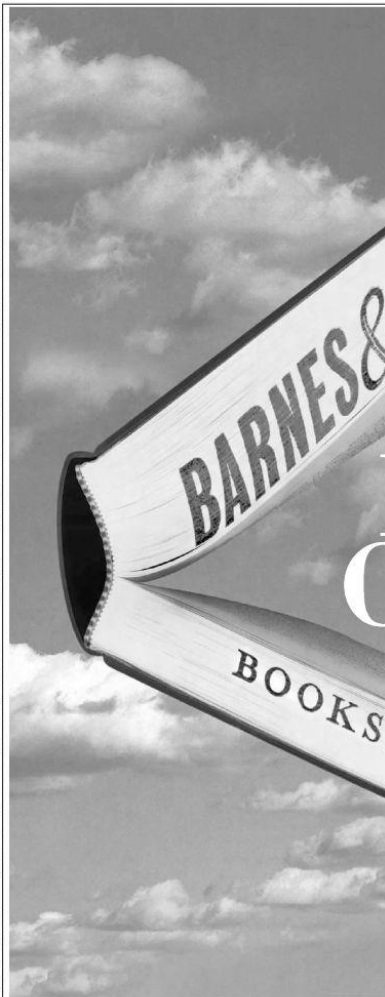
Inspectors also were curious why some uranium was missing from two small cylinders. Iran said the uranium probably leaked when the cylinders were

stored under the roof of the research reactor, where heat in the summer hit 131 degrees.

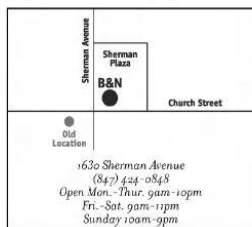
When inspectors took samples from under the roof, they indeed found uranium particles. But inspectors did not think Iran's explanation about leaking cylinders was plausible.

Eventually Iran acknowledged the missing uranium had been used in key enrichment tests in another facility.

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