

## Civex's Objectives

*The objectives of the Civex process as laid out by EPRI can best be summarized by simply quoting a small section of a paper titled "A Fast Breeder System Concept: A Diversion Resistant Fuel Cycle," written by Milton Levenson and Edwin Zebroski:*

Any sovereign nation making the overt decision to become a weapons owner can probably do so and nothing can be done by means of technology to prevent it. That is rather an issue for international treaties and agreements. However, two related issues — small bands of terrorists or large terrorist groups (or subnational groups) can be addressed by technology. We set as an objective the tailoring of a process and facility for a breeder reactor fuel cycle that would be proof against terrorist theft and so resistant to subnational group diversion as to be considered diversion-proof. The

related objective is to demonstrate that the existence in any area of such a diversion-proof civilian reprocessing (Civex) plant would not shorten the time from "decision to acquire" to "time of ownership" of pure plutonium. The existence of a Civex plant cannot prevent a nation from clandestinely building a small reprocessing plant to make pure plutonium — but if it is more practical to do that than it is to modify the Civex plant, the objective will have been achieved: the Civex plant will not have increased the probability of, or shortened the time to, a new weapons-capable nation or entity.

Once one has established an objective, it is necessary to develop criteria to help define whether one is meeting the objective...

First, there shall be no pure plutonium in storage. Thus, a small terrorist band cannot overpower the on-site guard force, grab bottles of plutonium, and flee, much as a small terrorist band might steal money from a bank vault.

## The New York Times's Reprocessing Cycle

In a March 1 editorial written in its best "consumerist" style, the *New York Times* charged EPRI and the other Civex proponents with conducting an unfair "Hard Sell on Nuclear Safety." The announcement of Civex, said the *Times*, actually "underscores the dangers in the world's current nuclear course." Backing up the *Times'* argument was a reference to "government experts."

It turns out that the "experts" behind the *Times* editorial were none other than New Directions.

The *New York Times* wasn't the only one on the New Directions debunking list. Sources say that Tom Cochran, a "physics expert" for the environmentalist Natural Resources Defense Council, hurried to the White House to deliver a copy of the New Directions charges to his good friend Kitty Shermer, an aide to President Carter.

It is therefore instructive to compare the *Times* editorial with New Directions' rush-job release on the Civex announcement.

*Times*: "If the claims hold up, the development (of Civex) would be a breakthrough in efforts to curb the proliferation of nuclear weapons. But the claims appear exaggerated — a hard sell on behalf of rapid development of the next generation of nuclear reactors."

*New Directions*: "EPRI is to be congratulated for facing up to the proliferation dangers of plutonium reprocessing, and accepting a 'no worse than light water reactor' nonproliferation. Unfortunately, the EPRI criterion still contains a major flaw and the fuel cycle proposed does not measure up to EPRI's own criterion."

*Times*: "There is irony in the new announcement...for it underscores the dangers of the world's current nuclear course. In describing the need for the new system, the researchers give a

frank appraisal of defects in the old systems. They argue that current nuclear reactors are producing vast quantities of material that could be fabricated into bombs."

*New Directions*: "The most surprising aspect of this proposal is that for the first time, EPRI has admitted the proliferation dangers of plutonium reprocessing and the breeder reactor. It also admits that both the breeder and plutonium reprocessing can be deferred....EPRI is now attempting to justify plutonium use by attacking light water reactors as major proliferation risks."

*Times*: "No more eloquent plea could be made for bringing spent fuel rods under better international control."

*New Directions*: "'Civex's criticisms of traditional plutonium reprocessing should ring the deathknell for the Windscale, Barnwell, and the Tokai Mura reprocessing facilities. None of these facilities as constructed or designed meets EPRI's proliferation criteria.'"

*Times*: "Still, government experts in energy and arms control...say it would still be possible to extract plutonium from the new system. And they fear that if plants incorporating the new system were spread around the world, they would increase the dangers of weapons proliferation by spreading nuclear expertise."

*New Directions*: "Secondly, Civex fails to meet its objective of being as proliferation-resistant as the light-water-reactor fuel cycle because it would place in many countries a plutonium extraction facility...a facility that can be easily converted to produce weapons usable material. Also, any country with a Civex reprocessing facility will have a trained cadre available to build a standard plutonium reprocessing plant."