

CRISIS IN THE GULF

Serious Study of Nuclear Option Is Highest Priority

by Laurence Hecht

June 26—Serious consideration for the design and deployment of a peaceful nuclear explosive to seal the gushing BP well in the Gulf of Mexico must now be a highest-level priority. On the basis of information available in the public domain, such preparation is mandatory. This was the conclusion reached by U.S. statesman Lyndon LaRouche, and communicated to associates earlier this week.

Testimony from the leading U.S. expert on peaceful nuclear explosions as to the efficacy of using a nuclear device to seal the BP well is now in the public domain. Evaluations of the probable compromised condition of the well bore and seafloor come from reliable professional sources, who point to the possibility that the relief well effort may fail, and therefore, another solution must be in preparation now. These are matters which can be checked by competent authorities acting in the U.S. national interest. But, BP's presentation of the situation must neither be believed, nor tolerated.

The political problem, LaRouche said, is that we have a President who is not in the real world. The very existence of the United States is endangered by the President's determination not to offend the British



U.S. Coast Guard

A peaceful nuclear explosion (PNE) is now the only possible way to close the damaged BP oil well (shown here), which continues to spew hundreds of thousands of gallons of oil into the Gulf of Mexico. Professor Nordyke states that, "there's essentially no concern that you would have radioactivity released to the surface of the ocean."

Empire, Wall Street, or both. But we can't let that stop us from saving the United States from a horrible fate. We can't wait two elections to save the United States from an incompetent President.

The prospect of massive flow of oil into the Atlantic,

possibly as early as the first week in July, according to a projection by the National Center for Atmospheric Research, will make this a global disaster. There might be debatable features of such estimates, but lying by BP and its apologists is so severe, that we cannot base policy on such vast and portentous cover-ups, LaRouche said. The moment that this massive oil leak enters the Atlantic, it is a point of no return for North, and possibly South America, and will rapidly move on to become a European and a global crisis.

This has become a major national security question, the only one more dangerous, being the President himself, LaRouche concluded his evaluation.

The Nuclear Option

Detonation of a low-yield nuclear device, under a rock depth of 6,000 feet or greater, is a proven technique for sealing runaway wells. It was used five times in the Soviet Union, between 1966 and 1981, to control burning gas wells. Four wells were completely shut down, and pressure was reduced in the fifth.

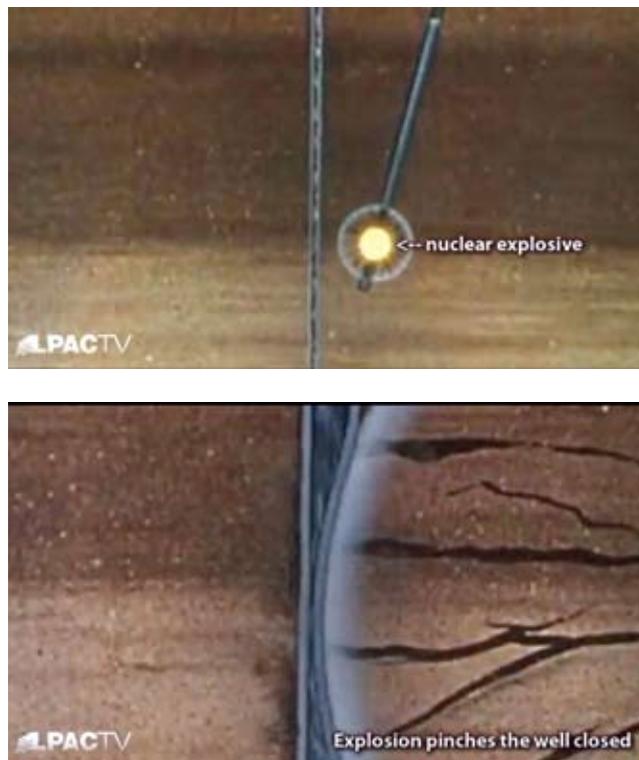
The nuclear explosion produces a compression wave, which crushes, and then squeezes the surrounding rock, pinching the well shut (**Figure 1**). The United States has ample experience in preparing and calculating the effects of such explosions, from the hundreds of underground nuclear explosions carried out through 1992.

According to Dr. Milo D. Nordyke, scientist emeritus at Lawrence Livermore National Laboratory, and the leading U.S. expert on peaceful nuclear explosions (see *Interview*, below), the preparations for such an effort would have to begin now, in order to have such an option ready, in the event that other efforts fail. There would be no danger of radioactive release at the depths at which the device would be deployed, Nordyke says. In the worst-case scenario of an accidental release, the amount of radioactive material released into the sea would be insignificant.

The depth of placement of the device would depend upon precise information about the geological strata, which is known from the drilling record. This would also permit precise calculation of the seismic effect. At depths greater than 6,000 feet, the felt effect would be minimal or non-existent.

No competent objection to Nordyke's proposal has been raised, nor is likely to be. According to knowledgeable sources, the nuclear option was considered by the Obama Administration early in the crisis. It was

FIGURE 1
An Animation of a PNE Closing a Damaged Oil Well



LPACTV videograb

From an animation of a Soviet documentary on the closing of the runaway gas well at Urtabulak in 1966. The Soviets sealed four burning, runaway gas wells, and reduced pressures in a fifth, by placing a nuclear device near the well bore at depths of 6,000 to 8,000 feet. The nuclear devices, one as small as 3.8 kilotons, were put into position through relief wells drilled for the purpose.

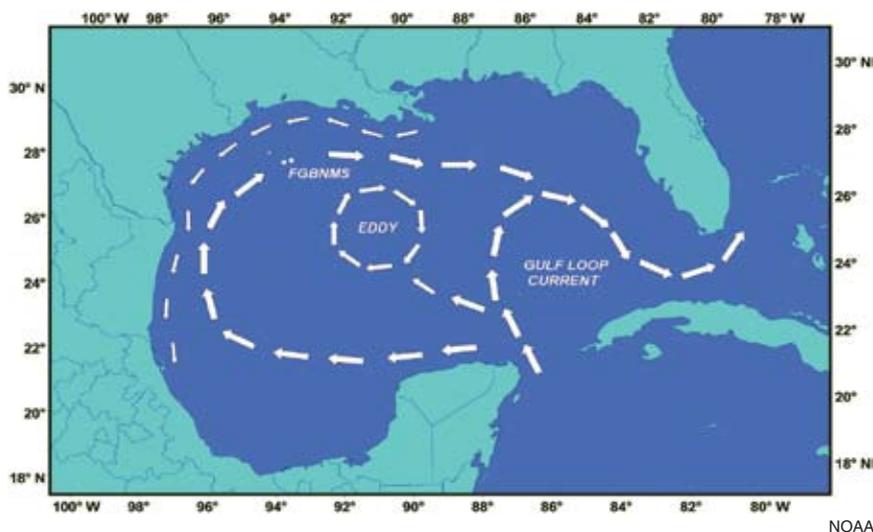
rejected not for any technical reason, but for political reasons.

The Hurricane Threat

As the hurricane season begins in the Gulf, some new threats have arisen. As of this writing, Tropical Storm Alex, now located off the Yucatan Peninsula, has increased to a wind speed of 55 knots. The present track would keep it in the southern Gulf, on a course to the coast of Mexico. Alex is the first, in what is forecast to be a severe season of storm and hurricane activity.

In analyzing the likely effect of a hurricane on the massive oil spill, some meteorologists have pointed to the possibility of a phenomenon known as *explosive intensification*. During hurricane season, the warm waters of the Gulf Loop Current (**Figure 2**) can produce a

FIGURE 2
The Gulf Loop Current



From the South, the Gulf of Mexico is fed by a current of warm water from the Caribbean, forming the Gulf Loop Current, which curves east and south along Florida's coast and exits through the Straits of Florida. There are fears that a significant circulation of oil in the Loop Current would darken the water surface, warming the water, and contributing to rapid, or even explosive, intensification of any tropical cyclone passing over.

sudden decrease in the atmospheric pressure of a tropical cyclone, a phenomenon known as rapid deepening, or rapid intensification. The lower the pressure, generally, the higher the winds will be, and the more destructive the effect of a storm.

The fear is that a significant circulation of oil in the Loop Current would darken the water surface, warming the water and contributing to rapid, or even explosive, intensification of any tropical cyclone passing over. The National Weather Service defines rapid deepening, or intensification, as a decrease of 42 millibars, in less than 24 hours. If the pressure drops at a rate of at least 2.5 millibars per hour, for a minimum of 12 hours, it is known as explosive intensification. The fastest recorded rate of intensification was in 2005, when Hurricane Wilma dropped 53 millibars in less than six hours. That same year, Katrina and Rita also underwent extremely rapid intensification.

This hypothesis is disputed by official statements from the National Oceanic and Atmospheric Administration (NOAA).

It is certain that storm winds and effects would drive oil-laden waters significantly inland in low-lying areas. A storm passing to the west of the oil slick area will tend to drive more oil to the coast, because of the coun-

ter-clockwise rotation of tropical cyclones in the Northern Hemisphere.

The Kill Zone

Intelligence sources report that the effect of the ongoing oil leak, has been to create a killing field for marine life in the Gulf of Mexico. Zones of zero or low oxygen have been created, where marine life has been eliminated. As with other aspects of the crisis, the full extent of this problem has not yet been revealed.

Satellite images are showing traces of oil from the British Petroleum gusher a few miles off the coast of Cuba, and off Jacksonville on the east coast of Florida, according to Bill Hogarth, the Dean of the College of Marine Science at the University of Southern Florida.

The oil is in the Loop Current, the transmission belt of water that originates in the Gulf of Mexico, transits

the Florida Strait, and then moves up the East Coast of the United States, as part of the Gulf Stream in the Atlantic Ocean. "Some of the tar balls may start showing up on the East Coast as far as Jacksonville," Hogarth said. He stressed that as the oil continues to gush a mile underwater, and the hurricane season proceeds, the impact is bound to be bad for Florida. "Things are very delicate right now," he noted.

The Gulf Stream is part of the global ocean conveyor system which circulates through all the world's oceans, with the exception of the Arctic.

According to a computer-generated oil-flow map from the National Center for Atmospheric Research, the oil slick could hit the southern tip of Florida in early July. From there, it would be picked up by the swift ocean currents, which would speed it up the Eastern Seaboard of the United States, in a thin band, maybe 100 miles offshore, and would move northeastward toward the coast of Ireland and northern Europe, at a rate of about 100 miles per day.

The Failure To Go Nuclear

The push to ever deeper and riskier offshore drilling sites is itself a result of the failure to go nuclear. Had U.S. nuclear development continued, as it should have,

after the 1979 sabotage of the Three Mile Island plant, the U.S.A. would, by now, have achieved real energy independence. Abundant electricity, hydrogen, and hydrogen-based synthetic hydrocarbons would have provided all the fuel we need for industry and transportation. Instead of transporting oil thousands of miles across oceans, a locally produced source of fuel would be ours at a reasonable price. We would by now have built the first commercial plants generating thermonuclear fusion energy, and be designing fusion-powered spacecraft capable of achieving the continuous 1g acceleration needed for manned space exploration

Newly uncovered evidence shows that the Three Mile Island plant was sabotaged by the introduction of two blind flanges and an undersized pipe into a critical feed-water system. According to a knowledgeable source, the sabotage may have occurred during a repair job carried out by personnel associated with the Halliburton Company. Despite the effort, the plant containment system held, and no health danger to the population occurred. However, hysteria created over the Three Mile Island accident, combined with a high interest-rate regime intended to crush industry, put an end to U.S. nuclear plant construction for almost three decades now.

The energy derived by nuclear fission from uranium and thorium fuel is millions of times greater than that contained in an equal weight of oil or gas. The surface area required to produce nuclear energy is hundreds of times less than that required for producing and transporting oil and gas, and tens of thousands of times less than that needed for wind or solar energy.

But beyond these advantages, nuclear energy represents a revolutionary capability for economic development which could never be achieved by conventional energy sources. There are two areas of interest here: the production of isotopes in controlled nuclear reactions, and the production of directed energy from nuclear explosions. The latter has, so far, been utilized largely for weapons applications. For example, we know how to transform some of the nuclear explosive output into x-ray laser beams sufficient to destroy hundreds of missile warheads in a single blow; how to generate tuned microwave pulses, particle beams, and spin polarized neutron beams. Enhanced Radiation and Reduced Residual Radiation devices (ER and RRRs) are early cases



Sandia National Laboratory

Project Plowshare was the U.S. program for peaceful use of nuclear explosions, directed by Lawrence Livermore National Laboratory. From 1959 to 1975, Plowshare conducted 35 nuclear tests, as well as numerous high explosives experiments simulating nuclear excavation. The 1968 Project Buggy test detonated five separate 1-kiloton nuclear devices simultaneously, creating a 900-foot-long ditch, 300 feet wide and 80 feet deep. This, and other experiments, furnished information on nuclear excavation techniques to be used in a proposed new Panama Canal project. The illustration is a detail from a Project Plowshare poster titled "Nuclear Excavations."

in point. The tuning range of nuclear explosives is virtually transfinite compared to that of chemical explosives, as Charles Stevens of *21st Century Science & Technology* noted.

Applying these effects of radiation to the tasks of economic development would mark a new stage in man's development. It would put an end to all arguments about the limits to growth. Stopping development of nuclear fission and fusion power has, therefore, been a main objective of the British empire forces, committed instead to global population reduction.

It would be a great irony if the worst ecological disaster in history should require the deployment of a peaceful nuclear explosion for its solution. Yet, it is appearing increasingly likely that such might be the case. With or without the use of a nuclear device to seal the well, the shift to a nuclear fission- and fusion-based economy is the only path to a true economic recovery for the globe, the only alternative to a descent into a new Dark Age. To achieve it will require the rapid removal of Britain's tool in the White House. Nothing positive shall come, so long as he remains.

The author is the Editor of 21st Century Science & Technology. He can be reached at: hecht3@verizon.net