Best tritium decision might be no decision

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Soon Secretary of Energy Bill Richardson will have an opportunity to demonstrate once again the enlightened and creative leadership that characterized his service at the United Nations and is becoming the hallmark of his early months at the Department of Energy. He must decide whether and at what facility additional supplies of the substance tritium should be produced.

In Washington, D.C., and in Seattle this decision is likely to be closely watched and highly charged; it will be at the center of the growing debate on the future of U.S. nuclear weapons after the Cold War.

But why?

Tritium is an essential ingredient of hydrogen bombs – it enhances the power of the awesome weapons many times over. It is the tritium in hydrogen bombs that makes modern thermonuclear weapons capable of destruction 10 to 100 times greater than the Hiroshima weapon. Injecting tritium into America's stockpile of nuclear weapons is one of a number of activities needed to maintain the stockpile in a state of readiness against the dark day when their use might possibly be required for national security purposes.

As it happens, tritium – used in the form of gas to enhance the force of our strategic nuclear weapons – is unstable. Tritium gas has a relatively short half-life (approximately 11½ years); it thus must be replaced from time to time as it ages in the various weapons. Requirements call for a five-year reserve of the material in addition to the tritium gas currently included in weapons in order to meet the need.

It has been urged that supplies of tritium are in need of replenishment now and, as most in Seattle know, the Fast Flux Test Facility in neighboring Hanford has been proposed as the place to produce this additional tritium.

But is more tritium really needed now, when the Cold War is over, when nuclear weapons no longer seem so relevant to our national security and when their numbers should be declining?

In fact, estimates are that if the United States were to maintain its number of strategic nuclear warheads at the level negotiated in the first Strategic Arms Reduction Treaty (START I) – that is 6,000 – the five-year reserve point for tritium would not be reached until 2005. With a two-year advance period required for actual production, manufacture of tritium could be postponed until 2003.

Beyond that, if the number of nuclear weapons the United States will maintain is the lower level provided in the START II Treaty – that is, 3,500 strategic nuclear war heads – no additional tritium would be required until 2011, with production beginning first in 2009 – more than a decade away.

So why must Richardson make the decision now?

The unstated, underlying answer probably is politics – a concern that our leaders in Washington not appear soft on defense; that we reserve our bargaining position in arms reduction talks with the Russians or possibly an interest in jobs. But here are the explanations offered:

Some argue that a tritium facility decision must be made now because 2003 is close at hand and the United States is obligated by federal law to be at START I levels until the Start II Treaty enters into force. There are a total of six options available to obtain the necessary tritium, including refurbishing the Hanford Fast Flux Test Reactor to serve as a production site. Each approach offers a different combination of expense and start-up effort, a decision is needed now to preserve all possible options.

Others argue that no decision should be taken until we know whether Start I or Start II requirements will govern the amount of tritium needed.

In fact, Start I legal requirements are likely to disappear next year for two reasons. Either the Start II Treaty will enter into force or Congress, on the strong recommendation of the Joint Chiefs of Staff for economic reasons, will repeal the law requiring that the United States maintain nuclear weapons at Start I levels. The strongest likelihood is that a tritium production decision will be required for the lower level of weapons of the Start II Treaty and no action will be necessary until 2009 at the earliest.

Meanwhile, the United States has proposed to Russia that we consider a START III, lowering our respective nuclear arsenals still further to 2,500 weapons. Such a development would push back any decision on tritium production still further, well beyond 2011. Added to this is the additional fact that Russia recognizes it can no longer afford to maintain its huge nuclear arsenal. The Russian minister of defense has stated publicly that Russia will have reduced its strategic weapons to 500 by the year 2012. From a political perspective, the United States would be hard-pressed to maintain its own level of nuclear weapons at 2,500 in the face of such dramatic Russian reductions. The corresponding need for tritium would be reduced accordingly.

It appears the wisest course for Richardson would be to announce contingency plans for obtaining tritium, but to leave the final decision on the selection of a production facility until a later time. Certainly there is every reason not to commit large sums now to complete or modify a facility for tritium production.

From a national defense perspective, the most important thing is to preserve flexibility as to when, if ever, we recommence tritium production. To push forward now, as if we consider Start I levels to be permanent, suggests a lack of confidence in the nuclear weapons reduction process or worse. It undermines the Nuclear Non-Proliferation Treaty and in so doing, the entire nuclear disarmament process – our principal means of preventing the proliferation of nuclear weapons to rogue states and terrorist groups. Most important, such decision erodes the moral high ground of U.S. leadership in working to persuade additional nations not to acquire nuclear weapons.

Seattle and the state of Washington have an important role to play in guiding this policy debate to a wise outcome. Our leaders in Washington, D.C., need to hear this community's answers to a number of questions that bear upon Richardson's decision. From a national defense perspective, the answer to the question "Shall we produce more tritium?" seems clear.

From a local perspective, however, some understandably will regret the loss of commercial activity that a decision not to produce tritium at the Fast Flux Test Facility reactor now would generate. To that concern an even more important question should be posed; wouldn't the money for tritium production be better spent on immediate attention to the vast costs of cleanup of the Hanford facility? Isn't that the most important commercial activity to generate now for everyone's benefit? We suspect the citizens of Seattle know the answer. We think Richardson will too.

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