John Ainslie

From: Di McDonald [di@nuclearinfo.org]
Posted At: 26 January 2006 17:03
Conversation: [Fwd: Trident Stuff]
Posted To: SCND Mailbox

Subject: [Fwd: Trident Stuff]

Hi John
Thought you 'd be interested in this
note [redacted] caution
best
Di

Dear All
Interesting anecdote.
On my way back from the UK I sat next a nice gentleman who was reading a report entitled "Trident Missile Explosive Safety" Auditors Year End Report 2005. He was also reading over the draft of a speech that an Admiral is to give this week to a JSTG 131 meeting (?) in Crystal City, just near DC.
Couldn't see much of the report, but did get to read a section that talked about studies done on the missile propellant to ensure that it remains stable at temperatures between 50 degrees c and -10., including in the case of dramatic temperature shifts. The report was not classified, just UK Restricted.
And then an interesting piece from the Inside Defense website on fitting conventional warheads to US Trident. Please don't circulate this too widely, at least by email, as I am breaking copyright by emailing it to you lot.
Cheers
[redacted]

Pentagon Wants Early Start on Conventional Missiles for Subs

Jan. 20, 2006 -- The Defense Department is readying a nearly $100 million reprogramming request for congressional approval that would allow the Navy to begin flight tests this year of a conventionally armed ballistic missile to be fielded on nuclear weapons carrying submarines, according to key officials and documents.

The funding scheme is aimed at jump-starting a Pentagon effort to acquire a "prompt global strike" capability in the near term by refitting some existing Trident D-5 submarine-launched ballistic missiles with conventional warheads. The two different payloads would ride aboard nearly identical D-5 missiles and be launched from the same Navy subs, according to defense officials.

To date, these long-range missiles have carried only nuclear weapons.
Even with a non-nuclear payload, giving the missile increased maneuverability should allow it to attack a number of critical targets once reserved for the U.S. nuclear warfighting plan, and perhaps serve even as a "bunker buster" in penetrating some hardened underground targets, officials say.

"On the conventional side, when you apply precision to the equation, what we have learned [is] the size of the weapon reduces to get the [same] effect," Marine Corps Gen. James Cartwright, head of the U.S.
Strategic Command, said in a Dec. 15 speech in Washington. "If you bring precision to this discussion and you have a set of targets, then it is only logical to take a look at that target set and say, 'Gee, I always held this at risk with a nuclear weapon for some reason. But I've got 10 years of history [and] two to three wars that show that I can do this very comfortably with a conventional weapon. Why am I still holding it at risk with a nuclear weapon?'"

For example, if the current standoff over the possibility that Iran will develop a nuclear weapons capability devolves into war, "there's nothing in Iran we can't take down with a conventional weapon," says one defense analyst, speaking last week on condition of anonymity. "You can trade [nuclear] kilotonnage for [conventional] speed and accuracy."

Defense officials hope Congress will support the reprogramming request as an initial step in a $500 million program the Pentagon includes for the first time in its fiscal

year 2007 to 2011 budget. /Bloomberg.com/ reported Jan. 17 on the project's new start in FY-07, based in part on a 33-page budget memo signed by Deputy Defense Secretary Gordon England.

But the news service made no mention of the Pentagon's intention to request almost $100 million in reprogramming funds to get the program started earlier in FY-06. The Defense Department is expected to deliver this request to Congress in the spring, according to sources.

The Pentagon has actually set aside funds for the Trident effort only through FY-10, with approximately $125 million in FY-07; $225 million in FY-08; $120 million in FY-09; and $30 million in FY-10, according to sources familiar with the plan.

That would pay for 96 conventional warheads placed on 24 missiles, at four warheads per missile, aboard 12 Trident submarines, according to officials. The new effort is to be underwritten, in part, with funds saved by retiring 50 Minuteman III land-based missiles and making the
B-52 bomber a conventional-only platform, defense sources say.

Behind the scenes, Cartwright has called for a capability to hit targets anywhere around the globe within 60 minutes of an order to strike, without having to use a nuclear weapon, defense officials say. He sees the ability as particularly crucial in light of the potential dangers posed by nuclear proliferation, officials say. For example, a fast-flying conventional missile could be used to destroy a North Korean nuclear weapon on its launch pad, if detected by overhead satellites or other intelligence platforms, according to defense officials.

A conventional submarine-based missile also could prove vital in quick attacks against terrorist leaders if short-lived intelligence about their whereabouts becomes available.

The military quietly established a formal requirement for such a capability in May 2003 when the Pentagon's Joint Requirements Oversight Council approved a mission need statement for prompt global strike, according to sources.

Just two conventional Trident missiles would be aboard each submarine, with most D-5s on the subs remaining nuclear-tipped. At any given time, four submarines would be in an "alert box" at sea from which they could launch missiles -- two subs in the Atlantic Ocean and another two in the Pacific -- giving Cartwright just eight conventional missiles available for near-term prompt strike, officials say.

But defense experts have long raised concerns about carrying both
nuclear- and conventionally armed Tridents aboard stealthy submarines.

If Russia or other nuclear weapons nations detect a Trident ballistic missile launch, they may be unable to determine whether it is equipped with a nuclear or conventional warhead, officials say. Critics worry such a U.S. launch could unintentionally trigger a nuclear response before it is clear where the missile will fall and what it is carrying.

As a result, if the conventional Tridents are fielded, some experts believe the strategic commander may be effectively limited to launching from the Pacific, where the missile trajectory would be less likely to be mistaken for an attack on Russia.

Other long-range conventional strike weapons exist today but require several hours or even days of notice before attacking a target, meaning brief windows of opportunity may be lost, according to defense experts.
Alternatives include conventional air-launched cruise missiles aboard long-range bombers and Tomahawk cruise missiles on submarines and surface ships.

But, says one source, "they're just not prompt."

Despite its relatively steep cost, the half-billion-dollar effort England recently approved in the classified "program decision memorandum III" is just a near-term fix to the problem Cartwright has identified, defense officials say. For the longer term, the Defense Department intends to initiate a joint program for prompt global strike that will employ more advanced technologies with greater capability, precision and survivability, officials tell /Inside the Pentagon/.

Air Force Space Command, headquartered in Colorado Springs, CO, was expected as early as this week to release a "request for information" to industry for the longer-term

effort dedicated to prompt global strike.
The system development effort will begin only after a two-year analysis of alternatives, according to industry officials.

Candidate systems likely will include conventional variations of existing land- and sea-based strategic nuclear ballistic missiles, with the near-term Trident D-5 modification as an example of the latter.

But the longer-term effort will almost certainly draw proposals, as well, for a wide variety of conventional ballistic missiles that differ markedly from nuclear weapons currently on alert. Boosters might launch one of the hypersonic, maneuvering re-entry vehicles under development, potentially to include the Army's Advanced Hypersonic Weapon or the Air Force's Common Aero Vehicle, which also involves the Defense Advanced Research Projects Agency, sources say.

Cartwright and other defense leaders are said to be particularly interested in the concepts for maneuvering, lifting or gliding vehicles out of concern that, in the long term, ballistic missile re-entry vehicles will not prove accurate enough.

Prompt global strike weapons are expected to have as much as 7,000- to 8,000-mile range, according to experts.

Though Congress has generally offered support for exploring this future capability, lawmakers are almost certain to raise serious questions about putting non-nuclear warheads on submarines that also carry look-alike, nuclear-tipped Trident missiles.

The Navy first requested seed funding in its FY-03 budget for a Trident missile accuracy enhancement that could be used with either a conventional or nuclear warhead, a story /Inside the Pentagon/ broke nearly four years ago.

Shortly thereafter, Lockheed Martin patented a "three-axis flap system" to increase the precision of the D-5's re-entry vehicle. In budget request documents, the Navy said the technology offers the D-5 "Global-Positioning System-like accuracy."

But Congress twice rejected Navy requests in the FY-03 and FY-04 budgets to modify the Trident missile's re-entry vehicle to make it maneuverable. Senate appropriators led the resistance to the concept, principally citing concern that technology developed to give the D-5 greater precision through maneuverability could lead to the creation of lower-yield -- and potentially more "usable" and riskier -- nuclear weapons.

The Navy has since won congressional approval in FY-05 and FY-06 for demonstrations of a conventional sea-launched intermediate-range ballistic missile aboard four converted Trident submarines, using tail-kit technology that may benefit the D-5 conventional strike effort.
The Air Force also was given funding in FY-06 to begin conventional ballistic missile systems engineering studies.

But critics say the new effort to modify the Trident D-5 missile for conventional strike comes at a steep cost.

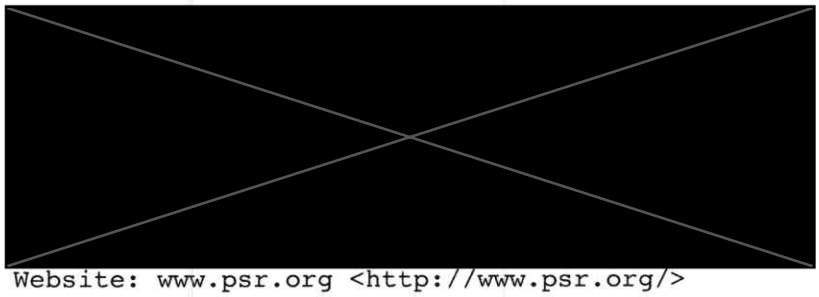
"Five hundred million dollars for 24 [deployed] missiles, of which four might be on alert, is very expensive," says one source, who questions whether there may yet be other near-term solutions that are more affordable.

Cartwright -- who initially wanted a near-term capability in 12 months but has agreed to getting the Trident capability in four years -- might have committed too early to the Navy concept and "lost his [other] options," says this source, speaking on condition of not being named.

The strategic commander reportedly is aware of the drawbacks in modifying the Trident for near-term prompt global strike and the congressional concerns the effort may raise. Cartwright is said to believe he now has the support of key lawmakers, having told them the submarine-based conventional weapon is the quickest hedge he could get against potential near-term threats.

For their part, congressional authorizers from the House and Senate recently encouraged the Pentagon's efforts to quickly close the "gap" in U.S. ability to promptly strike targets around the world using conventional, rather than nuclear, weapons. But they also chided the Defense Department for "neglecting land-based options" in assessing what kind of platform might best be used for this mission, and urged a "complete evaluation" that includes "both an ICBM-type conventional weapon and

a mobile, land-based boost-glide capability." -- /Elaine M. Grossman/



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