

# CRS Report for Congress

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## **Crusader XM2001 Self-Propelled Howitzer: Background and Issues for Congress**

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### **Summary**

The Army has been seeking to enhance its self-propelled 155mm artillery capabilities since the late 1970's. In addition to several programs to modify the M109 artillery system, culminating in the current M109A6 Paladin, since 1987 these efforts have focused on what is now called the XM2001 Crusader. Initially begun in order to match the mobility and firepower of Soviet artillery, the Crusader program is now the center of a controversy over whether it is an appropriate investment given the Army's on-going transformation to a lighter, more mobile force. Secretary of Defense Rumsfeld has announced his intent to terminate the program, however the Crusader's supporters in the House and Senate Armed Services Committees are seeking legislative provisions to maintain the program until at least May 2003 while an assessment of alternatives is conducted. This report will be updated as further events occur.

### **Background**

The Army has been seeking to enhance its self-propelled 155mm artillery capabilities since the late 1970's. Among other tasks, artillery systems provide direct-fire maneuver forces, such as tanks and infantry, with immediate, heavy, indirect fires from a distance. In addition to several programs to modify the existing M109 artillery system, culminating in the current M109A6 Paladin, these efforts have focused since 1987 on what is now called the XM2001 Crusader. Initially begun in order to match the mobility and firepower of Soviet artillery, the Crusader program is now the center of a controversy over whether

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it is an appropriate investment given the Army's on-going transformation to a lighter, more mobile force.<sup>1</sup>

The Crusader program is still in research and development, and was scheduled to undergo a "Milestone B" evaluation in April 2003, which would have decided whether the program would move into the "system development and demonstration" R&D phase. A prototype howitzer was delivered in early 2000 and has demonstrated the Crusader's firing capabilities. The plan has been to begin equipping units in FY2008. Approximately \$2 billion has been spent on the Crusader through FY2002, with the total program estimated to cost at least \$11 billion. This reflects a 1999 reduction in the procurement objective from 1,138 to 480 vehicles. The FY2003 Crusader budget request, as originally submitted, was \$475 million. The Crusader has been frequently mentioned over the last few years as a program that could be cut or terminated because it did not fit – by some analysts' definitions – the Army's transformation goals; and, its termination could free up funds for more technologically advanced systems. Its supporters, however, have maintained that a re-designed, lighter Crusader could play a vital role in both expeditionary and traditional heavy units.

The controversy intensified on May 3<sup>rd</sup> when Undersecretary of Defense for Acquisition Pete Aldridge directed the Army to prepare an "assessment of alternatives" to the Crusader by June 10, 2002. On May 8<sup>th</sup>, however, it was announced that Secretary Rumsfeld, with the concurrence of President Bush, was recommending an amendment to the FY2003 DOD budget request terminating the Crusader program. Deputy Secretary Paul Wolfowitz explained that the decision to terminate the Crusader without the review of alternatives was determined by the congressional schedule for consideration of the DOD FY2003 authorization legislation.<sup>2</sup> Press reports indicate that within the Department of the Army there was considerable opposition to the Crusader's cancellation, which led to a controversy over whether inappropriate steps were taken to provide congressional supporters with "talking points" in favor of the program after Secretary Rumsfeld had made his decision.<sup>3</sup> The Crusader would be built by United Defense, LP in a new plant in Oklahoma. The United Defense headquarters is in Minnesota and major subcontractors are in California, Michigan, New Mexico, Pennsylvania, Vermont, and Virginia.

Almost simultaneously, proponents of the Crusader program gained the support of the House Committee on Armed Services, which included language in its May 3<sup>rd</sup> report on the DOD FY2003 authorization legislation (H.R. 4546/H.Rept. 107-436) directing

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<sup>1</sup> For a discussion of the U.S. Army's efforts to transform, see CRS Report RS20787, *Army Transformation and Modernization: Overview and Issues for Congress*, by Edward F. Bruner. For discussions of transformation efforts in the other Services, see CRS Report RS20859, *Air Force Transformation: Background and Issues for Congress*, by Christopher Bolkcom; and CRS Report RS20851, *Naval Transformation: Background and Issues for Congress*, by Ronald O'Rourke.

<sup>2</sup> Department of Defense News Briefing, May 8, 2002.

<sup>3</sup> *Ibid.* The DOD IG conducted an investigation into the allegation, which resulted in the resignation of a mid-level appointee in the Army legislative liaison office.

that there be no change to the Crusader development schedule, funding or procurement requirements, to include termination, until the completion of the Army's Milestone B Analysis of Alternatives. The Secretary of the Army shall present a report of the completed analysis to the congressional defense committees by March 1, 2003. The committees will respond to that analysis within 30 days so that the scheduled Milestone B review can be completed in April 2003.

On May 14, an amendment to the FY2002 Supplemental Appropriation was introduced in the House that was characterized as stopping “the Pentagon from killing the Crusader artillery program before it justifies its decision to Congress and recommends an alternative.”<sup>4</sup> On June 24, the House Appropriations Committee reluctantly agreed to the termination of Crusader but added \$173 million to the Administration’s proposal for the purpose of incorporating Crusader technologies into a Future Combat System artillery successor by 2008.<sup>5</sup>

As the Senate Armed Services Committee (SASC) considered its FY2003 DOD authorization legislation (S. 2514), Crusader supporters there sought to obtain a similar provisions, although in statutory rather than report language. The SASC invited the Secretary of Defense and the Chief of Staff, U.S. Army to testify about this matter on May 16, 2002.<sup>6</sup> One unresolved issue at that time was what it would cost to terminate the Crusader program; proposed estimates varied from \$136.3 to \$500 million.<sup>7</sup> On June 13, the SASC approved an amendment to S. 2514 that would prevent the Administration from disbursing any Crusader funds for alternative systems until the Army presents Congress a study on alternatives 30 days after enactment of the bill.<sup>8</sup>

## Issues for Consideration

Congress has become actively involved in deciding the fate of the Crusader, whether that be to endorse the DOD cancellation decision, continue the current development schedule, or to choose another option. There are many factors to weigh in considering this issue, including: DOD arguments, Army arguments, industrial base implications, affordability issues, and comparing shorter-term versus longer-term security interests. In the past, Congress has forced reversal of previous Administration decisions to cancel major weapons programs; witness the continued existence of the V-22 Osprey Tilt-Rotor

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<sup>4</sup> Lisa Caruso. *Congress Daily*, “Controversial Votes on Supplemental Will Be Delayed,” May 14, 2002.

<sup>5</sup> Frank Wolfe. *Defense Daily*, “HAC-D Adds \$173 Million For Technology Integration of Crusader Successor,” June 25, 2002, p.1.

<sup>6</sup> SASC held hearings on Thursday, May 16 with Panel 1 consisting of SECDEF Donald Rumsfeld, DEPSECDEF Paul D. Wolfowitz, and USD for Acquisition, Technology and Logistics Edward C. Aldridge. Panel 2 consisted of General Eric K. Shinseki, Chief of Staff, U.S. Army. Transcripts provided by Federal News Service.

<sup>7</sup> Erin Q. Winograd. *Inside the Army*, “Amended Budget Request Shifts Crusader Money To Other Army Efforts,” May 20, 2002, p. 10.

<sup>8</sup> Winograd. *Op. cit.*, “Senate Committee Rejects Bush Administration’s Crusader Amendment,” June 17, 2002, p.1.

Aircraft.<sup>9</sup> Compiled below are the major arguments made by advocates for canceling and for continuing the Crusader program.

## Arguments for Canceling the Crusader Program

In seeking to cancel the Crusader program, DOD officials maintain that it is “a system originally designed for a different strategic context, i.e. high intensity warfare against Soviet forces in Europe, than currently exists.” They also assert that it is important, wherever possible, to invest in truly transformational rather than legacy-type systems. While acknowledging that the requirement for long-range all-weather fire support remains, Crusader opponents suggest that there are alternatives more in keeping with the Army’s transformation to a more mobile and deployable force, and that these could be available in approximately the same time-frame as the Crusader.

On May 13, Under Secretary of Defense for Acquisition, Technology and Logistics Pete Aldridge banned the Army from spending more money on Crusader and ordered a separate review of which Crusader technologies the Army wishes to carry forward into the Future Combat System (FCS) program, due by June 30, 2002.<sup>10</sup> Deputy Secretary of Defense Paul Wolfowitz has suggested that funds allocated to the Crusader in the FY2004-2009 Defense Planning Guidance could be applied to a variety of new long-range fire support technology programs, including:

- Excaliber Guided Artillery Munition (Raytheon)
- Guided Multiple Launch Rocket System (Lockheed-Martin)
- High Mobility Artillery Rocket System (Lockheed-Martin)
- Non-Line-of-Sight Future Combat System (Boeing/SAIC)

The weight and timing of the Crusader are seen as key disadvantages. Its weight, about 40 tons, is twice the target weight of all other transformational weapons systems planned for the Army. It is designed to fight with the 70-ton Abrams tank, which will be phased out within 30 years. The General Accounting Office has noted that the Crusader will first be deployed in 2008, and this is the same year that the Army plans to begin deployment of the FCS, which would eventually replace the Crusader.<sup>11</sup> In his SASC testimony, Secretary Rumsfeld emphasized that Crusader was not designed to deliver precision fires and he favored transformational investments in precision fires.

Finally, cancellation of the Crusader is the kind of bold step forward that President Bush proposed during his election campaign with the concept of “skipping a generation” in weapons deployments. To illustrate the importance attached to this principle, the Office of Management and Budget stated that “The President’s senior advisors would

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<sup>9</sup> See CRS Report RL31384, *V-22 Osprey Tilt-Rotor Aircraft*, by Christopher Bolkcom.

<sup>10</sup> Erin Q. Winograd. *Inside Defense.com*, “OSD Bans Army From Spending Money On Crusader Development,” May 13, 2002.

<sup>11</sup> *Defense Acquisition: Army Transformation Faces Weapon Systems Challenges* (21-May-01, GAO-01-311)

recommend that he veto any bill which included statutory restrictions limiting his ability to cancel this program.”<sup>12</sup>

## Arguments for Continuing the Crusader Program

Many artillerymen believe that the howitzer will continue to occupy an important niche on the future battlefield.<sup>13</sup> U.S. infantrymen fighting recently in the Afghan mountains during Operation Anaconda had only man-packed mortars for fire support when combat aircraft were not available. The Excaliber round touted by the Administration would still require a 155 mm howitzer to fire it; and according to Crusader supporters, the advanced computers and battlefield networking capabilities of the Crusader would use Excaliber to better advantage than any other howitzers proposed.

Supporters of the Crusader emphasize that it has performed well in its live-firing tests, is on schedule, and believe that, with the weight reduction efforts the contractor has undertaken, has improved its deployability. The Program Manager Col. Russell Hrды has also noted that with the Crusader’s increased rate of fire, deploying 3 units would be the equivalent of deploying 6 M-109A5/6 Paladins, the Army’s current self-propelled 155mm artillery system. In other words, the 40 tons and 3-man crew of one Crusader would require less lift than the equivalent 60 tons and 8 crewmen of two Paladins. In regards to substituting the two advanced multiple launch rocket systems (GMLRS and HIMARS), it should be noted that one MLRS rocket weighs about 650 pounds, compared to about 100 pounds for one 155 mm artillery round.

The Army believes that Crusaders would remain in service until at least 2032, when the transformation to the Army’s new Objective Force and full deployment of the Future Combat Systems would be complete.<sup>14</sup> During that time, supporters have said the Crusader could provide excellent fire support to the Army’s Interim Force in a variety of scenarios and invaluable support to the Legacy Force of Abrams tanks – particularly should it face major combat against enemies equipped with Soviet-style artillery, e.g. North Korea, Iraq, China, and Russia.<sup>15</sup> In his SASC testimony, General Shenseki pointed out that precision weapons do not fulfill one important Crusader requirement, the ability to deliver, cost effectively, massed suppressive fires against close-in and imprecisely located enemy forces. Also, most proposed alternative fire support systems do not provide armored protection for their crews, as does Crusader.

Crusader supporters believe that the program should definitely not be terminated until a thorough review of alternatives for long-range fire support is completed. They point out that most of the alternatives suggested by DOD leadership are all in R&D (in the case of the FCS indirect fire variant, the technology has not even been decided), and

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<sup>12</sup> Jon M. Donnelly. *Defense Week Daily Update*, “White House Threatens to Veto Defense Bill Over Crusader,” May 9, 2002.

<sup>13</sup> For a more extensive list of these arguments, see Ann Roosevelt. *Defense Daily*, “Army Weighs Options Beyond Howitzers,” May 13, 2002.

<sup>14</sup> Pat Towell. *CQ Weekly*, “Army’s Three-Part Plan Causes Budget, Hill Disharmony,” April 27, 2002, p.1105.

<sup>15</sup> Ann Roosevelt, *op. cit.*

have not clearly demonstrated that they could fulfill the long-range fire support requirement in a timely fashion. The Army appears to be fully committed to transformation and has cancelled many programs on its own to free up funds for the FCS.<sup>16</sup> The full support the Crusader program received from the Army leadership (including Army Chief of Staff General Shinseki), up to the cancellation decision, may be taken as an indication of the program's importance to current Army war-fighting doctrine.

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<sup>16</sup> Frank Tiboni. *Defense News*, "U.S. Army Targets 18 Programs for Cancellation," February 18-24, 2002. Included examples are: Armored Combat Earthmover, Follow-on TOW ATGM, M113 A3, Wolverine Assault Bridge, and the Armored Security Vehicle.