

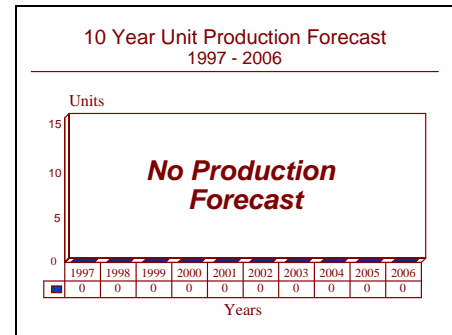
ARCHIVED REPORT

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Tactical Air-to-Surface Missile - Archived 3/98

Outlook

- UK has decided against development of a new nuclear TASM system
- Requirement for a TASM-like system does remain and for the near term will be fulfilled by a reconfigured Trident II
- UK continues to study this requirement, but has no immediate procurement plans



Orientation

Description. Air-launched stand-off nuclear missile.

Sponsor. The United Kingdom Ministry of Defence, London, England, UK, through the Royal Air Force (RAF).

Contractors. No specific contractor was selected. Potential competitors included Aerospatiale, Paris, France; and Martin Marietta Electronics, Information and Missiles Group, Orlando, Florida, USA. Martin Marietta was teamed with British Aerospace. Boeing Aerospace was also involved.

Status. Program delayed indefinitely. This £1 billion TASM program may remain under study, but no procurement is planned. The SR(A) 1244 requirement will be filled by a reconfigured Trident II. Part of the reason for abandoning this program was the continued US

moratorium on nuclear testing. The UK would have had to use the Nevada Test Site to develop the new tactical nuclear missile. The United Kingdom is also attempting to deal with skyrocketing public-sector spending.

Total Produced. No production has taken place. Procurement could have involved between 100 and 200 units.

Application. Stand-off, air-to-surface delivery of a tactical nuclear warhead.

Price Range. No specific price is known, although estimates place the possible TASM per-unit cost in the area of \$1.5 million to \$1.9 million.

Technical Data

Design Features. No technical data is presently available since a specific system has not been selected for this requirement. The missile is expected to be capable of engaging targets at a range of approximately 480 kilometers, delivering a 150-kiloton warhead. Develop

ment work on the new nuclear warhead for the TASM has commenced at the Royal Atomic Weapons Establishment. The new TASM cruise missile will arm the United Kingdom's fleet of Panavia Tornados and Bae/ McDonnell Douglas Harriers.

Variants/Upgrades

Presently, no additional variants or upgrades are known to be planned by the UK government.

Program Review

Background. The United Kingdom was interested in acquiring a new air-to-surface missile system for the delivery of a tactical nuclear warhead. This tactical air-to-surface missile, also known as TASM, was being considered to fulfill the UK Ministry of Defence Staff Requirement (Air) 1244. This requirement called for a new stand-off missile with a range of approximately 482.7 kilometers to replace the Royal Air Force's inventory of 150 WE 177 free-fall nuclear bombs. The system selected for SR(A) 1244 was to have been carried by Royal Air Force Tornado and Royal Navy Harrier fighters, and possibly by Nimrod maritime patrol aircraft.

The UK Government was evaluating competing designs offered from British Aerospace/Martin Marietta and Aerospatiale. Boeing Aerospace was proposing a derivative of the SRAM II, the AGM-131B SRAM-T (Tactical). However, since the cancellation of the main SRAM II program by the Bush Administration, Boeing may have opted out of this competition (see separate AGM-131A SRAM II report). Aerospatiale was offering a new development system, the Air Sol Longue Portee (ASLP). This system is the follow-on to the current air-launched ASMP (see separate ASMP/ASLP report).

This requirement was originally expected to be finalized sometime in 1990, with full-scale development to commence in 1992. The final decision on the UK TASM was anticipated in late 1990, but has since been delayed. Other factors governing the decision delay include political and the aforementioned technical reasons. The resignation of Margaret Thatcher as Prime Minister was thought to have also contributed to the delay. According to sources, Thatcher was a driving force behind the TASM program in the United Kingdom, although her replacement, John Major, appeared (at first) to be continuing to support this effort. One source has said that the final decision between an American or French system was to be purely political, the driving issue being one of greater European cooperation or maintaining the US/UK special relationship.

However, shortages in personnel at the Atomic Weapons Establishment, Aldermaston, were causing speculation that the United Kingdom may not have been able to develop its own warhead. The people at this facility were already stretched to the limit trying to keep up with Britain's Trident submarine nuclear missile program. There could

also have been problems testing the newly developed warhead, since London was allowed access to US test facilities only if it was a joint Anglo-American effort. Furthermore, using French test facilities in the Pacific could have been politically unacceptable to the United Kingdom.

US/UK Cooperation. The US and Great Britain were said to have agreed to co-develop a new Tactical Air-to-Surface Missile (TASM) to replace the WE 177 free-fall nuclear bomb. The bilateral agreement called for the initiation of a competition between Boeing Aerospace and Martin Marietta for this requirement. Martin Marietta, possibly teamed with British Aerospace/Hunting Engineering, was offering a nuclear version of its AQM-127 Supersonic Low Altitude Target (SLAT) drone. Boeing Aerospace was proposing its AGM-131B SRAM-T (Short-Range Attack Missile - Tactical), a version of the AGM-131A SRAM II which was canceled by the Bush Administration.

The decision to compete a pair of American systems did appear to have put to rest the idea of a joint Anglo-French program to develop a long-range version of the ASMP (the ASLP). However, this system was not expected to provide a range capability similar to that possible with the development of the ASLP. Furthermore, talks were continuing between London and Paris on a possible cooperative ASLP development project. Aerospatiale was awarded a feasibility study contract by the UK Ministry of Defence, similar to those received by Martin Marietta and Boeing Aerospace, in early 1990.

Previously, then-UK Defence Minister George Younger and French Defense Minister Andre Giraud had ordered a joint detailed study in late 1987. Younger said it was an idea the UK government would be glad to discuss with the French in case there is any way we can collaborate in this important area. UK and French defense staffs ordered a study of the feasibility of a joint development program which would field a new system by the late 1990s.

Initially, collaboration on an air-launched missile was pressed by former SDP leader David Owen, who said that President Reagan had called for a more equal relationship between the US and Europe. Among the suggestions which Dr. Owen prescribed was collaboration between British Aerospace and

Aerospatiale to boost the range of the ASMP. The US was not expected to put any impediment in the way of a joint project to increase the ASMP's range beyond 400 km (250 miles), if Britain should have opted for such a cooperative program to fulfill its SR(A) 1244 need. However, some French and UK officials felt that the development of a joint cruise missile would cost so much as to have been possibly prohibitive even if the two nations collaborated. The United Kingdom denied reports that Paris and London had abandoned talks on a joint nuclear missile development program, due to cost considerations, complexity of the undertaking, and technical problems.

TASM/US. Britain was evaluating a Martin Marietta system under a Memorandum of Understanding (MoU) signed in December 1989. Martin Marietta, which was teamed with British Aerospace/Hunting Engineering, was expected to offer a nuclear missile using integral rocket ramjet technology developed under its AQM-127 Supersonic Low Altitude Target (SLAT) and Advanced

Strategic Air-Launched Missile (ASALM) programs. The ASALM effort was a US Air Force program aimed at providing an extremely long-range air-to-air missile for strategic aircraft (such as the B-1). The AQM-127A SLAT was a supersonic target drone being developed for the US Navy's low-altitude anti-ship missile simulator need. However, both these efforts were canceled prior to the start of production. Martin Marietta would have supplied parts to British Aerospace for final assembly and guidance system integration, with Hunting Engineering supplying nuclear warhead interface and perhaps continuing as part of the weapon integration team.

TASM/France. A cooperative ASLP program had also been under discussion between France and the United Kingdom for almost four years. The new system would have a range of between 800 kilometers and 1,000 kilometers, as compared to the 150 kilometers of the in-service ASMP. For additional information please see the separate ASMP/ASLP report.

Funding

No specifics are available concerning research and development funding related to the UK TASM program. The overall cost of the program has been placed at £1 billion.

Recent Contracts

Aerospatiale was awarded a \$1.6 million TASM feasibility study contract by the UK Ministry of Defence, as were Martin Marietta (via BAe/Hunting) and Boeing Aerospace. Martin Marietta received a follow-on contract in 1992 from Hunting Engineering for pre-project definition studies on TASM. This latest contract, believed to be an extension of the original award, includes continued concept definition, development of a forebody mock-up and inlet wind tunnel model, studies of motor intake over concepts, and cost reduction trade-offs.

Timetable

	1980s	Study contracts awarded to Martin, Boeing, and Aerospatiale
	1993	TASM program abandoned
Early (^a) estimates	2000s ^(a)	WE177 free-fall bombs withdrawn from Royal Air Force service

Worldwide Distribution

Since this weapon is intended to be a nuclear delivery system, no exports are anticipated.

User Country(s). Had the TASM been developed, the United Kingdom would have been the exclusive operator.

Forecast Rationale

No procurement of a new UK Tactical Air-to-Surface Missile is anticipated. The United Kingdom decided to forgo the development of a new nuclear TASM due to defense budget cuts and a desire to preserve its Trident II program. Supporting both programs provided impossible. The requirement that TASM was to fulfill, SR(A) 1244,

remains but will now be fulfilled by a reconfigured Trident II used in a substrategic role. Proposals to purchase a nuclear-capable submarine-launched cruise missile were supposedly also ruled out, although the UK will acquire conventionally armed Tomahawks.

Ten-Year Outlook

ESTIMATED CALENDAR YEAR PRODUCTION

Missile	(Engine)	thru 96	High Confidence Level				Good Confidence Level			Speculative		06	Total 97-06
			97	98	99	00	01	02	03	04	05		
UNSPECIFIED													
TASM - UK(a)	UNSPECIFIED		0	0	0	0	0	0	0	0	0	0	0
Total Production			0	0	0	0	0	0	0	0	0	0	0

(a) This production line does not include RDT&E units.