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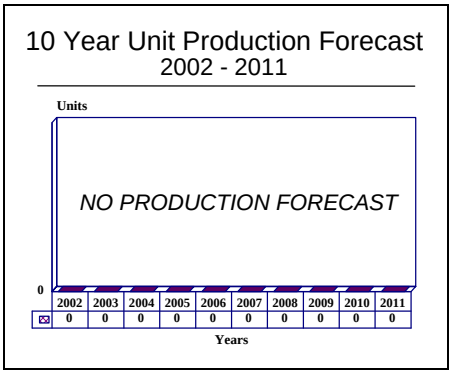
BQQ-6 – Archived 05/2003

Outlook

- Spares and support only
- To be replaced by BQQ-10
- This report will be archived next year, 2003



Orientation

Description. The BQQ-6 is an integrated advanced active/passive bow-mounted sonar for US Navy ballistic missile submarines.

Sponsor

US Navy
Naval Sea Systems Command
Arlington, Virginia (VA)
USA
(Program Manager)

Contractors

Lockheed Martin Corp
Naval Electronics & Surveillance Systems-Undersea Systems (NE&SS-Undersea Systems)
9500 Godwin Drive
Manassas, Virginia (VA) 22110
USA
Tel: +1 800 325 4019
Tel: +1 703 367 2121
Fax: +1 703 367 6091
Web site: http://www.lockheedmartin.com/manassas
(Development and Production)

Vitro Corp
520 Thame Street
Groton, Connecticut (CT) 06340
USA
Tel: +1 860 441 2200
Fax: +1 860 441 2213
(Technical Support Services)

Southwest Marine Inc
2205 East Belt Street
San Diego, California (CA) 92113-3634
USA
Tel: +1 619 238 1000
Fax: +1 619 239 1751
Web site: http://www.swmarine.com
(Technical Support Services)

Status. In service, upgrade to BQQ-5E integration and configuration completed. No further production expected.

Total Produced. A total of 19 systems produced (18 for submarines, one shore-based trainer).

Platform. US Navy SSBN-726 Ohio class nuclear-powered Trident ballistic missile submarines.

Application. Detection, localization and avoidance of hostile submarines, surface ships and mines.

Price Range. From US$11 million to US$12 million per system (in FY91 US dollars) when it was originally manufactured.

Technical Data

The BQQ-6 is a fully integrated sonar system, which includes a passive spherical bow-mounted array, two hull-mounted passive line arrays along the port and starboard sides, and towed array sensors with an acoustic intercept receiver. The system is used for underwater communications, environment-sensing, and magnetic recording, and features enhanced maintenance capabilities and acoustic emergency devices.

The sonar uses the passive systems of the BQQ-5 (see BQQ-5 report) integrated sonar system, which is used on fast attack submarines. About 75 percent of the BQQ-6 is common to the BQQ-5.

USS Michigan SSBN-727 Ohio class ballistic missile submarine is a typical example of the BQQ-6 sonar platform carrier

Source: US Navy

Variants/Upgrades

This system has no variants; however, it has been upgraded and integrated with a BQQ-5E subsystem.

Program Review

Background. The BQQ-6 sonar is part of the Ohio class submarine's command and control system. It is designed to help these ballistic missile submarines detect and avoid any hostile submarines or surface ships that might be trying to track them.

The system was developed in the mid-1970s in response to a requirement for a new integrated sonar system for the Navy's SSBN-726 Ohio class submarines. As these submarines were (and still are) one of the key elements of the US strategic triad, the Navy wanted to be assured the Ohio class had the latest sensors. These sensors enabled the submarines to detect any other submarines

or surface ships passively at very long ranges, allowing plenty of time to avoid detection.

The BQQ-5E subsystem completed OPEVAL in FY97, and is currently undergoing additional modifications for integration into the BQQ-6. Full integration to the BQQ-5E configuration was completed by the end of year 2000. There has been talk within the industry that both the BQQ-6 and BQQ-5, as well as other legacy systems, will be replaced with the BQQ-10 sometime in the future.

Funding

No further BQQ-6 development funding has been allocated. Most of the upgrade funding was allocated under BQQ-5(V) development.

Recent Contracts

No recent contracts have been identified through public sources.

Contractor	Award ($ millions)	Date/Description
Loral	22.8	July 1994 – FFP contract modification to previously awarded contract for two BQQ-6 to BQQ-5E(V)4 upgrade kits and associated engineering services. (N00024-93-C-6501)
Vitro	9.5	February 1995 – Indefinite delivery/indefinite quantity contract with a CPFF pricing arrangement for engineering and technical services in support of BQQ-5, BQQ-6, BSY-1, and BSY-2 submarine sonar systems. Contract completed by February 2000. (N66604-95-D-0991)
Southwest Marine	10.3	November 1996 – FFPC maintenance and services contract for production of BQQ-6 sonars and trainer equipment. (N00024-92-H-8030)
BAE Systems	7.9	February 2000 – Contract for installation design, feasibility studies, documentation review, and ILS program development for the BQQ-5, BQQ-6, BSY-1, BSY-2, ARCI, and New Attack Submarine sonars. This is a five-year multi-phase contract. (Contract number not available)

Timetable

Year	Major Development
FY75	Early prototype fabricated
FY76	Engineering model fabricated
FY77	Software package fabricated
FY78	IOT&E
FY85-88	Towed array upgrades developed
FY97	BQQ-5E subsystem OPEVAL
FY98-00	Integration of BQQ-5E subsystem with BQQ-6

Worldwide Distribution

This a **US Navy** sonar system for submarines.

Forecast Rationale

The BQQ-6 is an integrated advanced active/passive bow-mounted sonar used on US Navy Ohio class ballistic missile submarines. Thanks in part to the ample components commonality, the BQQ-6 was able to be upgraded and integrated to the BQQ-5E subsystem configuration. The upgrade was reportedly completed by the end of the year 2000. The BQQ-5E (see related report "BQQ-5(V)") equips the US Navy's Los Angeles class (SSN-688) attack submarine. Designated the BQQ-5E(V)4, this enhanced version is a passive design that was integrated with the Mk 2 Mod 3 Combat Data System as part of the Ohio class improvement program.

The Ohio class is now the only ballistic missile submarine class still active within the US Navy, and the older boats are being converted for various other missions No replacements have been identified at this time. It is highly unlikely any addition BQQ-6 systems will be produced; any repairs or spares could come from decommissioned ships. The system is likely to be kept running only until it is replaced by the BQQ-10 some time in the future.

Ten-Year Outlook

Production completed at 19 total systems (18 for submarines, one for shore-based training). Future efforts likely to be spares and support activity only. **This report will be archived next year, 2003.**

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