

**The Secretary of Defense Performance-Based Logistics Awards Program
For
Excellence in Performance-Based Logistics
In
Life Cycle Product Support**

**Section 2
Summary of Criteria Accomplishments**

Improvements in Warfighter-Based Capabilities and Outcomes

Mission Success: The AN/ARC-210 Performance Based Logistics (PBL) agreement is one of the oldest and most time-tested PBL contracts administered by NAVSUP Weapon Systems Support (NAVSUP WSS) Philadelphia, providing superior support to the warfighter for over 14 years. The original 5-year \$18.7M PBL was awarded to Rockwell Collins (Rockwell) in August 2001 in support of the AN/ARC-210 Radio Set. As the AN/ARC-210 PBL contract language and processes have been refined and improved since 2001, the agreement with Rockwell has provided a solid foundation for the PBL contracts that followed. In March 2002, the contract was modified to provide coverage for additional host airborne platforms and expanded to include ground-based AN/ARC-210 (V) equipment requirements. In June 2005, an additional contract modification was issued to cover Shipboard AN/ARC-210 (V) Line Replaceable Units (LRUs). The current \$53.2 million, 10-year, Firm-Fixed Price (FFP) contract was awarded on August 23, 2006.

The AN/ARC-210 system is composed of a family of Weapons Replaceable Assemblies [see Figure 1] which can be configured to meet individual customer requirements. The system provides two-way, secure, jam-resistant, multi-mode voice and data communications via Line of Sight or Satellite Communications over the 30 to 941 MHz frequency range covering both Ultra High Frequency (UHF) and Very High Frequency (VHF) bands. The AN/ARC-210 radio provides data link and secure communications features providing total battlefield interoperability and high-performance capabilities in the transfer of data, voice and imagery. AN/ARC-210 systems are installed in a wide range of aircraft, helicopters and ships across all the U.S. military services, the U.S. Coast Guard, and foreign militaries which allows for interoperability among U.S. coalition forces. The AN/ARC-210 supports multiple U.S. Navy and Marine Corps and other aircraft platforms, including the AV-8B, C-2, C-130, C-37, C-40, E-2, EA-6B, F/A-18, H-1, H-53, H-46, H-60, MQ-4, MQ-8, P-3, USQ-113, and V-22 [see Figure 2].

Under the AN/ARC-210 PBL, Rockwell assumes responsibility for an increased scope of effort compared to traditional, transactional support. These additional functions include obsolescence and configuration management, reliability and availability improvement, wholesale inventory management, requisition processing, transportation, quality assurance, and other logistics elements. Rockwell applies best commercial practices and takes greater ownership for full life-cycle support of their products. The focus is on the procurement of a material availability outcome, i.e., Supply Response Time (SRT), vice procurement of a pre-determined number of repairs, parts and supplies. Under this contract Rockwell is given the opportunity to pursue improvements, increase efficiencies, and remove waste. The Business Case Analysis (BCA) ensures affordability and the Firm-Fixed Price (FFP) contract controls cost growth.

Under the AN/ARC-210 PBL, battlefield interoperability and mission set availability has improved from 64% to 99.4%. This improvement in asset availability and a total elimination of backorders has enhanced mission set readiness by a total of 35.4% with direct correlations to improved weapon system availability for tasking. Correspondingly, total mission success has been enhanced through partnership efforts between Rockwell and NAVSUP WSS who jointly identified improvements to field-testing and field-repair capabilities that prevented the unnecessary return of 24% of fully mission capable assets. The joint streamlined supply chain integration leans out a projected \$12 million in cost over the life of the 10 year contract.

Material Availability: The SRT material availability metric requires Rockwell to deliver replacement assets to fleet customers within 2 – 5 days depending on requisition priority. Measurement begins with receipt of an electronic requisition at the contractor's facility and ends when the replacement asset arrives at the customer's location. The contractual metric is 85%. Since award of the PBL, all availability metrics have been significantly exceeded at no additional cost to the Navy. Material availability prior to the PBL was at 70%. Since contract award, Rockwell has achieved greater than 99.6% material availability [See Figure 3]. Total flight hours associated with the AN/ARC-210 from Feb 2014 to Jan 2015 were 741,814 with 1,298 requisitions filled during that same timeframe. The PBL includes coverage to 15% above forecasted flying hour levels to provide continued availability during surges in Fleet operations.

Reliability: The FFP nature of the PBL inherently incentivizes Rockwell to improve reliability and reduce returns

to the depot. The PBL contract also includes gain-sharing provisions if the contractor achieves significantly higher reliability levels. Reliability is tracked for all AN/ARC-210 components and analysis of reliability trends is part of all performance reviews. The field engineering teams working with Rockwell Technical Support Representatives (TSRs) and Fleet avionics technicians have identified root causes to many field induced failures, and implemented immediate corrective actions not only on system units but also on aircraft installation and wiring. Sample documented reliability improvements have been made on the following components: CV-4092 Mean Time Between Failure (MTBF) increased by 1,100 hours, AS-3972 MTBF increased by 663 hours, and C-11898 MTBF by 412 hours.

Other program specific supportability Key System Attributes: The AN/ARC-210 PBL has improved the supply chain through streamlined commercial engineering and supply chain efficiencies enabled through the contract structure. Improved material availability results in lower Fleet maintenance costs as cannibalization and cross-deck actions are reduced with less on-station support required. All wholesale inventory has been moved from Government storage to Rockwell bonded storeroom custody freeing up approximately 10,000 cubic feet in DLA warehouses during the PBL period of performance. In addition, significantly improved reduced logistics response times and Repair Turn-around-Times through the PBL have also reduced the wholesale inventory footprint.

Sustainment Strategy Effectiveness/Efficiency

Operations and Support Cost Reduction: The NAVSUP WSS BCA affordability analysis identified \$15.3M in cost avoidance when the PBL was renewed in 2006. This cost avoidance was shared between airborne systems (\$15M) and ground and shipboard-based systems (\$300K). Rockwell's proposal was also determined fair and reasonable by the NAVSUP WSS Contracting Officer. The long-term nature of the PBL allowed Rockwell to meet affordability criteria through reengineering of the support process. With a guaranteed business base, Rockwell, as the Original Equipment Manufacturer (OEM), brings its best practices and in-depth knowledge of the AN/ARC-210 systems to sustainment support. The FFP nature of the PBL incentivizes Rockwell to make capital investments and support decisions that pay off over the long-term through improved parts support, investments in reliability, optimized depot processes, and decreased depot returns. Rockwell has consistently and efficiently directed resources

to optimize the performance outcome specified in the contract. Results are further enabled through efficient teaming and sharing of best practices leading to effective and affordable support. A gain sharing provision is included in the contract whereby the government will share in the savings associated with fewer repairs in the event reliability improvements (Mean Flight Hour Between Removals) are greater than 51% above the guaranteed minimum improvements negotiated in the contract for each system component. The improved MTBFs cited in the preceding section also result in lower maintenance man-hour costs as Fleet maintainers replace radios less often. The end result is substantially improved material availability and reliability for lower cost than would have been paid under traditional support.

Should Cost Initiatives: The NAVSUP WSS Pricefighters organization reviews every PBL proposal from a “should cost” perspective. The contractor’s proposal estimate is examined, analyzed and recreated using various cost estimating techniques to develop a cost model to capture all of the cost elements. Each of the contractor’s Basis of Estimates (BOEs) is evaluated. Price Fighters recommendations are provided to the Contracting Officer and are used to prepare the Pre-Negotiation Business Clearance and to assist in contract negotiations.

Arrangement Type/Period of Performance/Incentives:

The current PBL is FFP for 10-years with a 5-year base and one 5-year option. The contract type and period of performance maximize Rockwell’s incentive to improve processes and performance. Years of actual cost and reliability data fully support the FFP arrangement. The FFP nature of the PBL also controls cost growth. The 10-year commitment gives Rockwell the opportunity to make long-term return on investment decisions, increasing innovation and productivity. PBL metrics are aligned with Fleet requirements; flying hour bands allow for cost adjustments to meet changing operational requirements. PBL support is fully integrated into the existing Navy Supply System; the PBL structure maximizes and maintains use of existing Navy infrastructure and expertise. Gain sharing provisions maximize Navy potential for savings. The PBL is clearly structured to effectively and affordably meet Fleet requirements and incorporates the desired outcomes of DoD Acquisition Reform and Better Buying Power guidance.

A follow-on PBL is being developed that is also planned to be FFP with a 10-year period of performance. A provision in the renewal statement of work affords DoD Services expansion to support the Air Force and Foreign

Military future requirements should they decide to participate. Reliability and costs will be re-baselined in the renewal to garner improvements attained during the current period of performance.

Public-Private Partnering: Although depot touch labor is performed at Rockwell, the PBL is a true partnership and collaboration between Government and Industry. Navy and Rockwell team members meet regularly and consistently document performance through Program Management Reviews (PMRs) to analyze engineering, reliability, obsolescence and support issues. Rockwell technical support representatives (TSRs) provide on-site guidance and technical expertise to Navy maintainers at point of use. Effective coordination, communication, and sharing of best practices among all members of the Navy-Rockwell Integrated Product Team (IPT) have assured accountability and success of the program. Most importantly, the PBL strategy is integrated into, and enhances the use of the existing Navy logistics infrastructure. All support flows through the current Navy Integrated Supply System and is transparent to Fleet customers.

Systems Engineering for Supportability Approach: Rockwell has TSRs stationed at numerous activities. The TSRs provide on-site and on-time technical support to Navy technicians. Rockwell provides engineering support and investigation for on-aircraft discrepancies and Fleet training. A Rockwell/Navy No Fault Found Reduction team provides training to platform maintainers experiencing higher Return-Test OK rates. Quarterly meetings are held for the specific purpose of promoting communication between Navy maintainers and Rockwell engineers. While Navy and USMC artisans frequently rotate jobs and locations, this consistency and active communication promotes the win-win arrangement that PBLs provide DoD and Industry.

Obsolescence and Diminishing Manufacturing Sources and Material Shortages Management: Rockwell is responsible for obsolescence management on the program. Rockwell's process includes a proactive approach to qualify new sources for obsolete parts, initiate lifetime buys, and recommend material/component design changes. Multiple improvements have been made to the Power Amplifier to mitigate obsolescence issues. Knobs and dials have been redesigned to minimize Fleet-induced damage. Expanded Class II Engineering Change Proposal (ECP) authority permitted by the contract allows Rockwell to quickly implement changes. Rockwell's proactive approach to obsolescence has resolved issues on 183 obsolete components on the RT-1556, 237 obsolete items on the RT-1747 and 40 obsolete items on the C-11898.

Figure 1: AN/ARC-210 Weapons Replaceable Assemblies



Figure 2: AN/ARC-210 Users

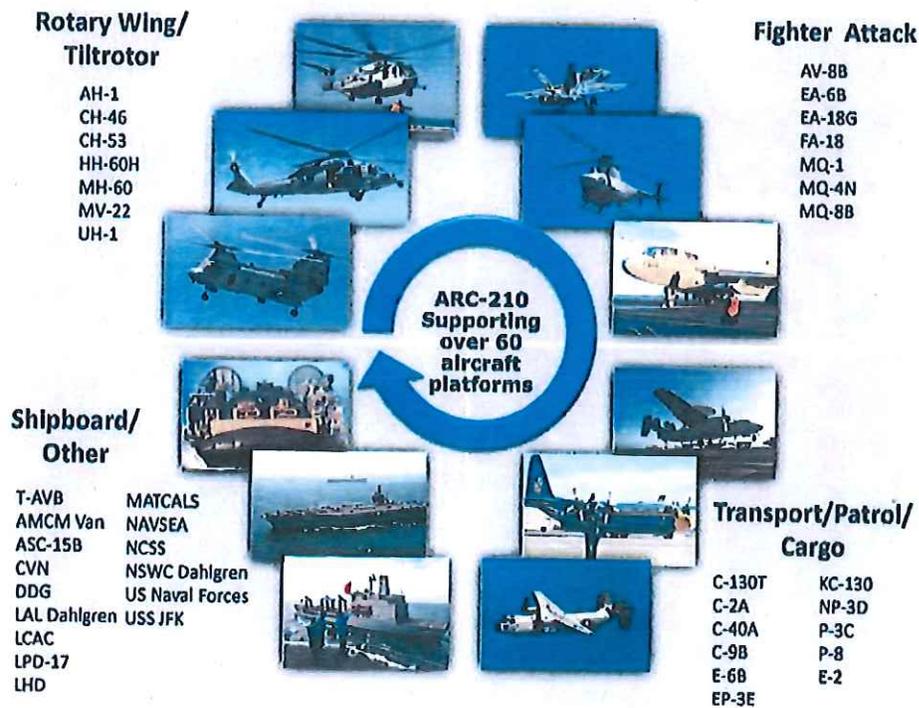
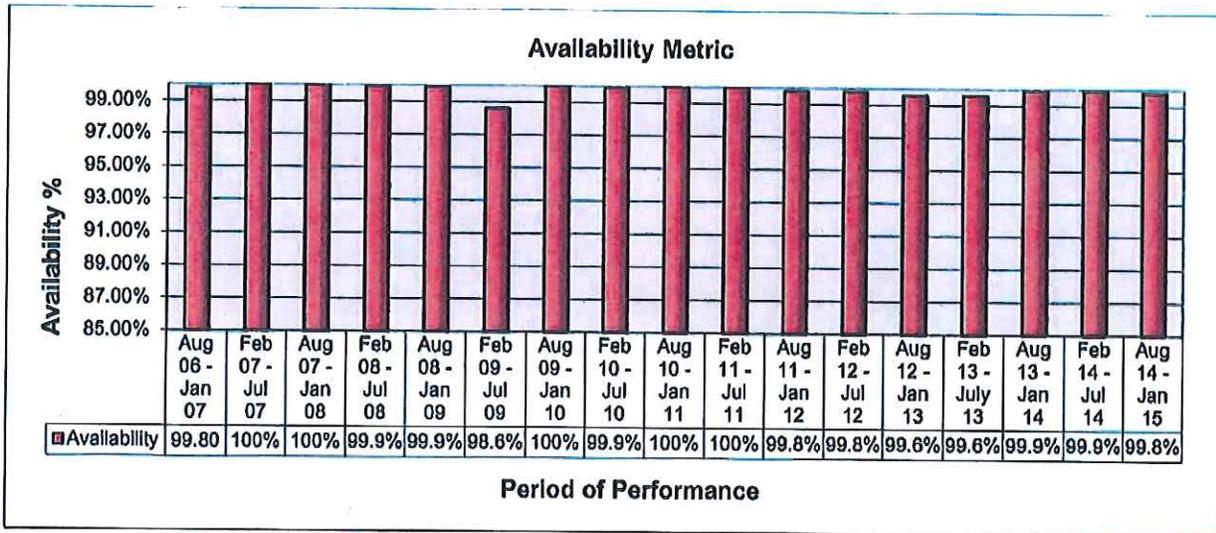


Figure 3: AN/ARC-210 Material Availability



**The Secretary of Defense Performance-Based Logistics (PBL) Awards Program
For
Excellence in Performance-Based Logistics
In
Life Cycle Product Support**

**Section 4
Achievements**

The AN/ARC-210 PBL team has set the benchmark for Performance Based Logistics at the sub-system level. The results of the team's efforts culminated in the award of a ten-year contract valued at \$53.2M. The PBL supports multiple airborne, shipboard, and ground-based radios totaling hundreds of thousands of operational hours. Rockwell consistently achieved NAVSUP WSS outcomes executing responsibilities under the contract which encompassed logistics and inventory management, requirements determination, depot repair and spares production, sustainment engineering, and reliability growth program excellence. NAVSUP WSS affordability analysis identified \$15.3M in cost avoidance at time of PBL renewal in 2006. Material availability has improved from 70% pre-PBL to a sustained 99% or better since contract award. The Firm-Fixed Price (FFP) PBL vehicle incentivizes Rockwell to make investments and support decisions that pay off over the long-term through improved parts support, investments in reliability, optimized depot processes, and decreased depot returns. Rockwell manages all facets of the supply chain to ensure availability of spares to the warfighter. Rockwell offers its best practices and in-depth knowledge of the AN/ARC-210 system to sustainment support and integrates that knowledge within existing infrastructure in coordination with Navy members of the PBL team. The AN/ARC-210 systems currently stand at their highest level of combat readiness and customer satisfaction since being introduced to the Fleet. Since 2001, the AN/ARC-210 PBL has provided a foundation for the numerous other PBL contracts and lessons learned continue to expand to new PBL programs. The mutual trust, clear and documented communication Program Management Reviews (PMRs) are model examples of a high performing and committed team. The PBL provides superlative cost-wise performance to the Fleet.