Billing Code: 5001-06

DEPARTMENT OF DEFENSE

Office of the Secretary

[Transmittal No. 16-84]

Arms Sales Notification

AGENCY: Defense Security Cooperation Agency, Department of Defense.

ACTION: Arms sales notice.

SUMMARY: The Department of Defense is publishing the unclassified text of a section 36(b)(1) arms sales notification.

FOR FURTHER INFORMATION CONTACT: Pamela Young, (703) 697-9107, pamela.a.young14.civ@mail.mil or Kathy Valadez, (703) 697-9217, kathy.a.valadez.civ@mail.mil; DSCA/DSA-RAN.

SUPPLEMENTARY INFORMATION: This 36(b)(1) arms sales notification is published to fulfill the requirements of section 155 of Public Law 104-164 dated July 21, 1996. The following is a copy of a letter to the Speaker of the House of Representatives, Transmittal 16-84 with attached Policy Justification and Sensitivity of Technology.

Dated: July 24, 2017.

Aaron Siegel,

Alternate OSD Federal Register Liaison Officer,

Department of Defense.

DEFENSE SECURITY COOPERATION AGENCY
201 12TH STREET SOUTH, STE 203
ARLINGTON, VA 22202-5408

JUN 05 2017

The Honorable Paul D. Ryan
Speaker of the House
U.S. House of Representatives
Washington, DC 20515

Dear Mr. Speaker:

Pursuant to the reporting requirements of Section 36(b)(1) of the Arms Export Control Act, as amended, we are forwarding herewith Transmittal No. 16-84, concerning the Department of the Army's proposed Letter(s) of Offer and Acceptance for the Kingdom of Saudi Arabia for defense articles and services estimated to cost $662 million. After this letter is delivered to your office, we plan to issue a news release to notify the public of this proposed sale.

Sincerely,

J. W. Rixey
Vice Admiral, USN
Director

Enclosures:
1. Transmittal
2. Policy Justification
3. Sensitivity of Technology
4. Regional Balance (Classified Document Provided Under Separate Cover)

Transmittal No. 16-84

Notice of Proposed Issuance of Letter of Offer
Pursuant to Section 36(b)(1)
of the Arms Export Control Act, as amended

(i) Prospective Purchaser: Kingdom of Saudi Arabia

(ii) Total Estimated Value:

Major Defense Equipment*	$482 million
Other	$180 million
TOTAL	$662 million

(iii) Description and Quantity or Quantities of Articles or Services under Consideration for Purchase:

Major Defense Equipment (MDE):
Twenty-six (26) each AN/TPQ-53(V) Radar Systems to include Solid State Phased Array Radar with KN-4083 Selective Availability Anti-Spoofing Module (SAASM) enhanced Land/Sea Inertial Navigation System (INS) and automatic leveling system
Eight hundred and forty (840), M931 Full Range Training Round, 120mm Projectiles with M781 fuzes (for live fire exercise)
Two thousand, two hundred and forty (2,240), M107, 155MM Projectiles with M557 fuzes (for live fire exercise)

Non-MDE includes:
Single Channel Ground and Airborne Radio Systems (SINCGARS) and accessories; Defense Advanced Global Positioning System (GPS) Receiver (DAGR) equipment and accessories; Miltope laptops and accessories; Medium Tactical Vehicles FMTV M1092 5-ton trucks/chassis with support and accessories; software support; support equipment; classroom simulators; government furnished equipment; technical manuals and publications; essential spares and repair parts; consumables; live fire exercise and ammunition; tools and test equipment; training; transportation; U.S. Government technical support and logistic support; contractor technical support; repair and return support; quality assurance teams; in-country Field Service Representative (FSR) and other associated equipment and services.

(iv) Military Department: Army (ZAI)

(v) Prior Related Cases, if any: None

(vi) Sales Commission, Fee, etc., Paid, Offered, or Agreed to be Paid: None

(vii) Sensitivity of Technology Contained in the Defense Article or Defense Services Proposed

to be Sold: See Annex Attached

(viii) Date Report Delivered to Congress: June 5, 2017

*as defined in Section 47(6) of the Arms Export Control Act.

POLICY JUSTIFICATION

Kingdom of Saudi Arabia – AN/TPQ-53(V) Radar Systems and Related Support

The Government of the Kingdom of Saudi Arabia has requested a possible sale of twenty-six (26) AN/TPQ-53(V) Radar Systems to include Solid State Phased Array Radar with KN-4083 Selective Availability Anti-Spoofing Module (SAASM) enhanced Land/Sea Inertial Navigation System (INS) and automatic leveling system; Eight hundred and forty (840), M931, 120mm Projectiles with M781 fuzes (for live fire exercise); Two thousand, two hundred and forty (2,240), M107, 155MM Projectiles with M557 fuzes (for live fire exercise); Single Channel Ground and Airborne Radio Systems (SINCGARS) and accessories; Defense Advanced Global Positioning System (GPS) Receiver (DAGR) equipment and accessories; Miltope laptops and accessories; Medium Tactical Vehicles FMTV M1092 5-ton trucks/chassis with support and accessories; software support; support equipment; classroom simulators; government furnished equipment; technical manuals and publications; essential spares and repair parts; consumables; live fire exercise and ammunition; tools and test equipment; training; transportation; U.S. Government technical support and logistic support; contractor technical support; repair and return support; quality assurance teams; in-country Field Service Representative (FSR) and other associated equipment and services. The total estimated program cost is $662 million.

This proposed sale will contribute to the foreign policy and national security objectives of the United States by helping to improve the security of an important partner which has been and continues to be a leading contributor of political stability and economic growth in the Middle East.

Saudi Arabia intends to use these radars to support its border security requirements and modernize its armed forces with a more current capability to locate and counter the source of incoming ballistic artillery, rockets, and mortars. This will contribute to Saudi Arabia's goal to update its military capability while further enhancing greater interoperability among Saudi Arabia, the United States and other allies. Saudi Arabia will have no difficulty absorbing this equipment into its armed forces.

The proposed sale of this equipment and support will not alter the basic military balance in the region.

The Lockheed Martin Corporation, Liverpool, New York, is the principal contractor for the AN/TPQ-53 (V) Radars. There are no known offset agreements proposed in connection with this potential sale.

Implementation of this proposed sale will require U.S. Government or contractor representatives to travel to the Kingdom of Saudi Arabia for a period of four (4) months for in-processing/fielding, system checkout and new equipment training, as well as providing the support of two in-country FSRs for two years.

There will be no adverse impact on U.S. defense readiness as a result of the proposed sale.

Transmittal No. 16-84

Notice of Proposed Issuance of Letter of Offer
Pursuant to Section 36(b)(1)
of the Arms Export Control Act

Annex
Item No. vii

(vii) Sensitivity of Technology:

1. The AN/TPQ-53(V) radar system is a highly mobile radar that automatically detects, classifies, tracks, and locates the point of origin of projectiles fired from mortar, artillery and rocket systems with sufficient accuracy for first round fire for effect. It mitigates close combat radar coverage gaps and replaces the AN/TPQ-36 and AN/TPQ-37 Firefinder Radars; fully supporting Brigade Combat Teams (BCT), Division Artilleries (DIVARTYs), and Field Artillery (FA) Brigades. Designed to be transported by ship, trucks, train, or aircraft, it is capable of deploying as part of the counter-rocket, artillery, and mortar system of systems to provide a sense and warn capability for fixed and semi-fixed sites. The AN/TPQ-53(V) provides a net ready system with increased range and accuracy throughout a 90 degree search sector (stare mode) as well as 360-degree coverage (rotating).

a. The Active Electronically Scanned Array (AESA) hardware design of the AN/TPQ-53(V) is UNCLASSIFIED. Foreign source systems of similar design and capability are available in advanced industrial nations such as Sweden and Israel.

b. The AN/TPQ-53(V) software gives it an enhanced capability in terms of target detection and classification in an Electronic Countermeasure (ECM) environment. Release of detailed knowledge of the software code or test data could aid an adversary trying to identify ways of countering the detection capabilities of the AN/TPQ-53(V) or improve the performance of their own radar systems. Although the detection, classification technology, and concept used in the AN/TPQ-53(V) has been utilized for more than a decade, the ability to incorporate such technology on a solid state air cooled radar would be a major technological improvement. The software is UNCLASSIFIED. The system is classified SECRET when employed in a theater of operations.

c. The Single Channel Ground and Airborne Radio System (SINCGARS) is a tactical radio providing secure jam-resistant voice and data communications of command, control, targeting, and technical information for the AN/TPQ-53(V) radar system. The spread-spectrum frequency hopping Electronic Counter-Counter Measures (ECCM) technology resident in the radio is sensitive but UNCLASSIFIED. While sensitive, the frequency-hopping algorithms used to generate the ECCM waveform are unique to the country of ownership and cannot be manipulated by potential adversaries for use or interference with other countries possessing SINCGARS technology. Should a potential adversary come into possession of one of these radios, they would have the potential to intercept operational command, control, and targeting information. This potential problem is mitigated by the fact that the customer can secure information passed over the radio network using a commercial grade security capability equivalent to an AES 256-bit encryption system whose keys are controlled by the customer country.

d. The Defense Advanced Global Positioning System (GPS) Receiver (DAGR) is a handheld GPS location device with map background displaying the user's location. Unlike commercial grade GPS receivers capable of receiving Standard Positioning Signals (SPS) from GPS satellites, the DAGR is capable of receiving Precise Positioning Signals (PPS). PPS satellite signals provide significantly more accurate location data than do SPS signals. This capability within DAGR is possible due to the Selective Availability Anti-Spoofing Module (SAASM). The SAASM is an encrypted device permitting both receipt of PPS signals and the benefit of preventing potential adversaries from spoofing the system to display incorrect location information. The SAASM capability within the DAGR is sensitive but UNCLASSIFIED. The SAASM capabilities are sensitive due to the system's ability to access restricted PPS GPS satellite signals and to prevent spoofing. While sensitive, the ability of potential adversaries to exploit the system are limited. The SAASM chip goes through a special process of loading encryption signals and unique access codes keyed to the customer country. These processes are strictly controlled by the US Air Force. If the DAGR is compromised, the US Air Force can cut off the device access to PPS signals and the anti-spoofing capability.

e. The same SAASM capabilities resident in the DAGR are also resident in the AN/TPQ-53(V) KN-4083 Inertial Navigation System (INS). The KN-4083 is a SAASM enhanced INS capability with a 3-axis Monolithic Ring Laser Gyro allowing extremely accurate location as well as 3-axis accelerometer to provide angular information regarding the radar position (i.e. pitch, roll, and azimuth data). While inertial navigation and accelerometer capabilities are well-known, the SAASM capability within the system makes it sensitive but UNCLASSIFIED. As with the DAGR, the US Air Force can cut off access to PPS signals and anti-spoofing capabilities, minimizing impacts should a potential adversary obtain the system.

2. If a technologically advanced adversary were to obtain knowledge of the specific radar hardware and software elements, the information could be used to identify ways of countering the detection capabilities of the AN/TPQ-53(V) Radar System or improve the

performance of their radar systems. Testing and identification of methods to defeat the AN/TPQ-53(V) ECCM capabilities would lead to improvements in the overall effectiveness of an adversary's system and improve their survivability.

3. A determination has been made that Saudi Arabia can provide substantially the same degree of protection for the technology being released as the U.S. Government. This sale is necessary in furtherance of the U.S. foreign policy and national security objectives outlined in the Policy Justification.

4. All defense articles and services listed in this transmittal have been authorized for release and export to the Kingdom of Saudi Arabia.

[FR Doc. 2017-15810 Filed: 7/26/2017 8:45 am; Publication Date: 7/27/2017]