U.S. Customs and Border Protection

Air and Marine Operations Tethered Aerostat Radar System

FACT SHEET

U.S. Customs and Border Protection's Air and Marine Operations (AMO) uses the Tethered Aerostat Radar System (TARS) to provide long-range detection of low-altitude aircraft at the radar's maximum range. The elevated sensor mitigates curvature of the earth and terrain masking limitations.

The aerostat system consists of a helium-filled balloon, fixed site mooring and tether controls, command and control stations, data distribution network, and maintenance support vehicles and facilities. The TARS is capable of carrying payloads to altitudes above 10,000 feet mean sea level.

AMO operates two types of aerostats, the 275K and 420K, powered by an onboard 8.5kW 400 Hz diesel generator with a 100-gallon diesel fuel tank. The hull of the aerostat contains two parts separated by a gas-tight fabric partition. The upper chamber is filled with helium and provides the aerostat's lifting capability. The lower chamber of the hull is a pressurized air compartment.

A minimum of five operators launch and recover the TARS from a site containing a fixed mooring system. AMO operates eight sites along the southern border of the United States, from Arizona to Puerto Rico.

Performance and Weights:

- **Manufacturer**
  ILC Dover
- **System Integrator**
  TCOM
- **Volume**
  275,000 cubic feet (275K)
  420,000 cubic feet (420K)
- **Length**
  186 feet (275K) / 208.5 feet (420K)
- **Diameter**
  62.5 feet (275K) / 69.5 feet (420K)
- **Maximum Payload**
  1,200 pounds (275K)
  2,400 pounds (420K)
- **Range (Air Search)**
  Approximately 200 miles