

DEPARTMENT OF THE AIR FORCE

PRESENTATION TO THE ARMED SERVICES COMMITTEE

UNITED STATES SENATE

SUBJECT: 2004 AIR FORCE TANKER LEASE PROPOSAL

**STATEMENT OF: THE HONORABLE JAMES G. ROCHE
 SECRETARY OF THE AIR FORCE**

4 SEPTEMBER 2003

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BY THE ARMED SERVICES COMMITTEE
UNITED STATES SENATE**

Thank you for the opportunity to appear before you today to discuss the necessity of the Air Force's tanker lease proposal and the status of the KC-135 fleet. In my testimony I will outline the importance of the Air Force's tanker fleet to this nation's security, the status of that fleet, the proposals that were before us, and finally, our choice of the tanker lease proposal which best serves this nation's security interests, the American public's interests, and the operational needs of the Air Force and our warfighting Combatant Commanders.

Before I begin, I must commend the men and women who fly, maintain, and deliver the impressive combat capability that is our topic today. Without these incredibly talented uniformed and civilian airmen, this discussion would be irrelevant. These airmen, the heart of our air refueling force, operate everyday all over the globe. From active duty and our Reserve Component units, we draw our vital tanker capabilities from places like Selfridge, Michigan; Phoenix, Arizona; Altus, Oklahoma; Forbes, Kansas; Birmingham, Alabama; Honolulu, Hawaii; Bangor, Maine; Tampa, Florida; Lincoln, Nebraska; Warner-Robins, Georgia; Grissom, Indiana; Niagara, New York; and Goldsboro, North Carolina.

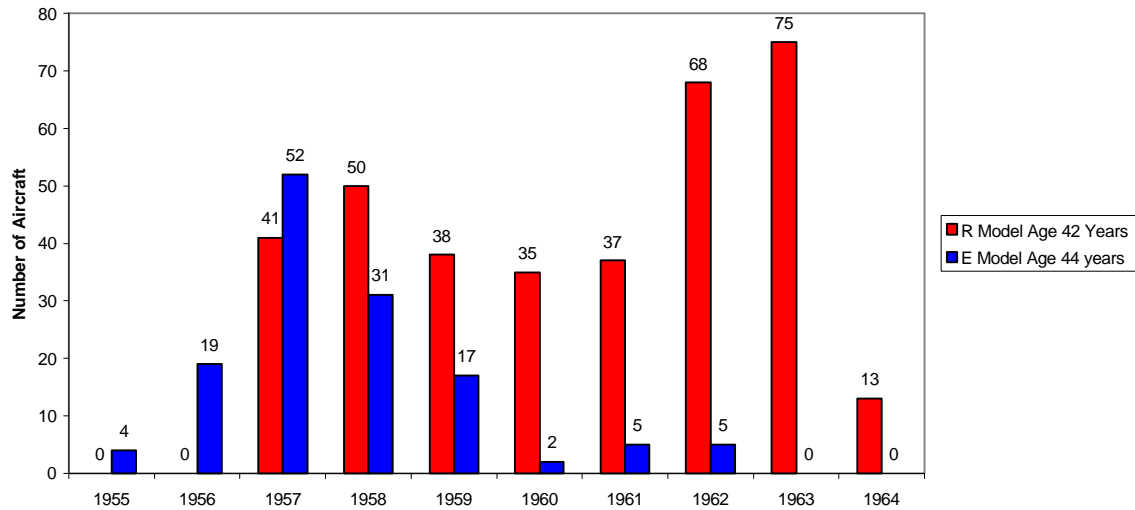
During the past two years, these airmen and our tanker fleet have been tested hard, flying Operation NOBLE EAGLE (Homeland Defense), Operation ENDURING FREEDOM (Afghanistan), and Operation IRAQI FREEDOM (Iraq). And they delivered far more than could reasonably be expected while operating and maintaining the oldest fleet in the United States Air Force inventory.

Current status of fleet

Tanker dependence in recent wars and the advanced age of the nation's air refueling aircraft fleet drive the Air Force's urgency to recapitalize as soon as possible. Today, a single 44-year old aircraft type, the KC-135, supports eighty-two percent of our combat air refueling capability. Beginning manufacture under the Eisenhower administration, 732 KC-135s entered military service between 1957 and 1965. The remaining 544 KC-135s on duty today have the oldest average fleet age of any Air Force combat aircraft, and the "E" model (131) is 44 years old on average. It is the old KC-135Es we seek to replace soonest. The ongoing war on terrorism heightens our concerns regarding these aging aircraft. Our new "steady state" includes tankers supporting fighters defending the homeland as well as the need to maintain the nation's global reach capability.

Aircraft life can be measured in three ways – usage (flight hours), physical age (years), and utility (usefulness). The KC-135's physical age is the driving need to recapitalize. Through the 1990s, the KC-135 fleet started to show its age. In 1991, Air Force Materiel Command initiated aging aircraft inspections and repairs to maintain the airworthiness of this legacy fleet. By 2000, thirty-two percent of the KC-135 fleet (a significant portion of this nation's overall Air Force refueling capability) was unavailable due to programmed depot level maintenance as the number and complexity of repairs drastically increased. This reduced the refueling capability to our warfighters and caused a backlog at the depot facilities, as the average number of days in depot-level maintenance peaked at over 400 days.

KC-135 Aircraft Age



Annual depot price per aircraft grew significantly as the fleet availability decreased. The combination of increasing costs and decreasing availability projected into the future compels the Air Force to act now to balance cost, capability, and risk; it compels us to begin recapitalization of the KC-135 fleet.

Although General John Jumper, our Chief of Staff, and I have visited the depot at Tinker Air Force Base to investigate the condition of our KC-135s, we do not rely on our observations or anecdotal evidence alone. Independent teams, including teams from Office of the Secretary of Defense, the GAO, and many others, that have visited the KC-135 depot maintenance line at Tinker Air Force Base unanimously recognized the risk that this 44-year-old aircraft could encounter a fleet-grounding event, negatively impacting combat operations across all services and coalition partners.

It should be noted that aircraft corrosion is a significant concern for aging aircraft, both military and civilian. Congress enacted the Aging Aircraft Safety Act, Title IV of Public Law 102-143, in October of 1991 after the in-flight structural damage of a

Hawaiian Airlines 737 in April 1988. As you may remember, corrosion had so weakened the fuselage of the aircraft that it burst when it reached altitude and could not sustain the pressure differential between the pressurized cabin and the atmosphere outside. The Federal Aviation Administration has enacted additional rules regarding corrosion and inspections for corrosion since it is of such critical concern for aging aircraft.

The KC-135E fleet -- our oldest -- is beset with problems that adversely impact its utility to the Air Force, our sister services, and our friends and allies. The planes are operating under flight restrictions pending interim repair of an engine strut -- interim repair costs \$150 thousand per aircraft, must be complete by September 2004. If the repairs are not made at that time, the unrepaired aircraft must be grounded. The interim repair will only last for five years at which time the permanent repair must be made. Permanent repair of the engine strut would cost \$2.9 million per aircraft. If the permanent repairs are not made, the unrepaired aircraft in that case must also be grounded. We are facing a continual set of repairs and maintenance actions that only delay that event. There is also the KC-135 fuel system, which requires repair to deteriorating internal corrosion barriers. Those repairs are estimated to cost \$500 thousand per aircraft. Of course, there are always the "unknown unknowns" which become much more prevalent in aging hardware -- for example, 40% of the KC-135 fleet was non-mission capable from September 1999 to February 2000 as a result of a requirement to replace the horizontal stabilizer trim actuator -- an unexpected event that grounded a major portion of our fleet.

Requirement for recapitalization

The cost of continuing to operate the existing KC-135 air refueling force will continue to escalate dramatically. Corrosion, major structural repairs, and an increased rate of inspection are major drivers for increased cost and time spent in depot. More time in the depot directly decreases operational aircraft availability. Operational availability is expected to continue to decrease throughout the remainder of the KC-135's lifespan. Under these conditions of increasing costs and steadily declining availability and performance, combined with the increasing operational demands, actions to replace the KC-135 must begin now.

Our proposal -- using commercial airline bodies as tanker platforms -- is not without precedent. In the late 1970s, Secretary of Defense Harold Brown began to buy DC-10 aircraft converted into tankers, and Secretary Weinberger continued the program, resulting in the 60 KC-10s that ultimately became our lifeblood. The airplane had been designed and proven successful as a platform, the result of investment by the contractor, not the taxpayer. In hindsight, the success of the KC-10 fleet (59 of 60 are still in the inventory) proves the wisdom of Secretaries Brown and Weinberger's decision to buy commercially developed aircraft, even though the KC-135 fleet at that time was only 16 to 18 years old.

In the case of the KC-135, military aircraft was specially developed for the Air Force. From this model the industry created the commercial carrier, the B-707. These commercial airplanes have been retired for the most part in favor of newer airplanes. In this case, it was the contractor who benefited from the investment made by the Air Force.

You will recall that we capitalized the original 732 KC-135s at a rate of 90 aircraft per year. To recapitalize the 544 that remain at an economical but affordable rate could take more than 30 years. We may already be behind the power curve. We can no longer accept the risk of these venerable aircraft continuing their age-induced death spiral without taking immediate action. A realistic replacement program will take decades to recapitalize a fleet of this size. Even beginning today, some of our KC-135s will pass their 70th birthday before they retire.

Operational need for tankers

We do not propose leasing tankers as a bailout for Boeing or any other aircraft manufacturer. We propose leasing tankers because we need tankers to fight our nation's wars, and we do not believe we should take the risk to wait for years before we begin.

The Air Force tanker fleet delivered over 375 million pounds of fuel during 30 days of Operation IRAQI FREEDOM, ninety percent of the total fuel delivered by all joint and coalition forces. In addition, our tanker fleet participated in air bridge operations, long-range strike missions, and other global commitments during this time. This great feat allowed Air Force strike aircraft to put relentless pressure on the Iraqi leadership and the Iraqi armed forces. It was the key to 24-hour airborne surveillance. Aerial refueling was the reason that the Air Force could dedicate so many assets to on-call close air support, on-call strikes on time-sensitive targets, and on-call support for our highly successful special operations forces.

But more than just an Air Force asset, our tanker capability enables the combat capabilities that our sister services and coalition partners bring to the fight. For instance, tankers made it possible for Navy and Marine fighters to launch from carriers in the

Persian Gulf and strike targets deep inside Iraq. Tankers permitted C-17s to take off from Italy and drop Army paratroopers in northern Iraq. United States Air Force air refueling aircraft delivered over 90% of fuel offloaded to our sister services and allies during OIF. On a global scale, General John Handy and his folks at US Transportation Command managed the tanker air bridge throughout these campaigns, simultaneously sustaining our airlift to the theater while our combat forces continued to deter our enemies in the Pacific. Without these vital refuelings, troops and materiel that our nation needed halfway around the world would have been less effective and slower to respond, jeopardizing our ability to project global land, sea, and air power.

Air refueling tankers enable our entire force to protect our homeland, conduct combat operations, and provide humanitarian relief around the world. They enable other Air Force, Navy, Marine Corps and allied aircraft to fly farther, stay airborne longer, and carry more weapons, equipment, and supplies. As we just experienced in Operation ENDURING FREEDOM and Operation IRAQI FREEDOM, the Air Force tanker was a critical force enabler and force multiplier that allowed our coalition force to operate over a distant battlefield. Air refueling tankers ensure our nation has the global reach to respond quickly and decisively anywhere in the world. In short, our National Security Strategy is unexecutable without air refueling tankers.

Need/utility of *these* tankers

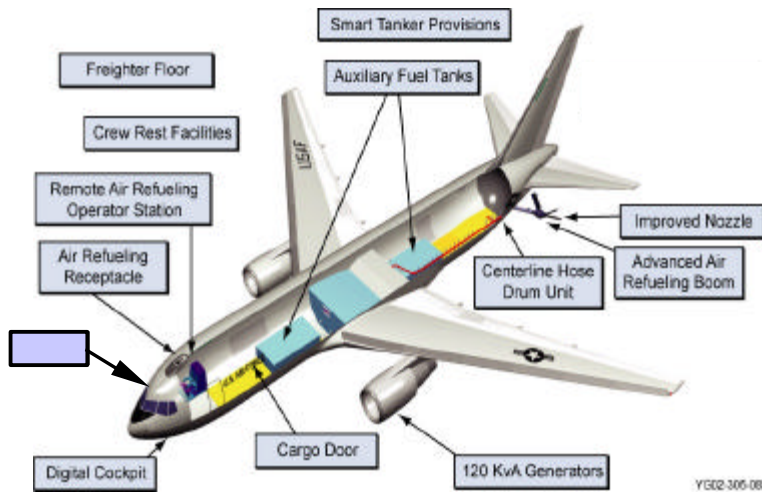
But again, 90 percent of our current air refueling fleet rests in this single aged weapon system. In fact, the warfighter had to adapt his basing plan to address the limitations of the “E” model of the KC135. During Operation IRAQI FREEDOM, the “E” models were deemed incapable of sustained operations in the AOR due to the high

temperatures and shorter runway lengths in theater and the lower fuel capacity and less efficient engines of the “E” model. We found use for them in EUCOM locations during the war, but their support was limited to airbridge, homeland defense, and global power operations. The KC-767A, however, will truly enhance our warfighting flexibility. We will replace 131 KC-135Es with 100 KC-767As, and increase our capabilities.

The KC-767A is a tanker version of the long-range commercial aircraft. This tanker was developed and commercially offered to the international community by the Boeing Company as the Global Tanker Transport Aircraft (GTTA). Italy was the first customer, ordering four aircraft, and has been followed by Japan. The KC-767 tanker will be the world’s newest and most advanced tanker. It can offload 20% more fuel than the KC-135E, and unlike the E-model, but like the KC-10, can itself be refueled in flight. The KC-767 Tanker also has the capability to refuel probe- and receptacle-equipped aircraft on every mission – an enormous benefit for joint operations. While the KC-767 will have roughly the same maximum fuel offload as the KC-135R, it can takeoff at maximum gross weight in approximately 3500 ft less runway – hence, along with greater operational capabilities, the KC-767A is able to operate from four times as many runways as the KC-135. As delivered, the KC-767A will be configured as a convertible freighter being able to carry all passengers (approximately 200) or all cargo (19 pallets vs. 6 on the KC-135).

It will have a digital cockpit, cargo door, auxiliary fuel tanks, remote air refueling boom operators station, centerline hose drum unit, crew rest facilities, larger 120 kilovolt-Ampere generators, advanced air refueling boom, and aeromedical evacuation capability.

KC-767A Attributes



Alternatives considered

In selecting the KC-767A, the Air Force considered a variety of airframes and acquisition strategies. By DoD regulations, the Air Force was not required to conduct an Analysis of Alternatives (AOA) for the KC-767 tanker lease, the reasons for which I will address in more detail later. Even though the Air Force did not complete a formal AOA on the KC-767A, we performed several trade analyses to ensure the KC-767A was the right solution to meet the operational requirements.

Maintain current force structure: The Air Force first considered maintaining the current force structure. The damaging effects of aging quickly became apparent from KC-135 depot work. The unpredictable nature of age-related corrosion – its timing, location, and extent – increases our concern for the risk of an event that would ground the KC-135 fleet. Thus, continuing the status quo was rejected because of unpredictable and potentially calamitous operational mission impacts.

Re-engine: The Air Force also quickly recognized that re-engining the venerable KC-135Es did not address the aging issues, risks to our combat operations, or increasing

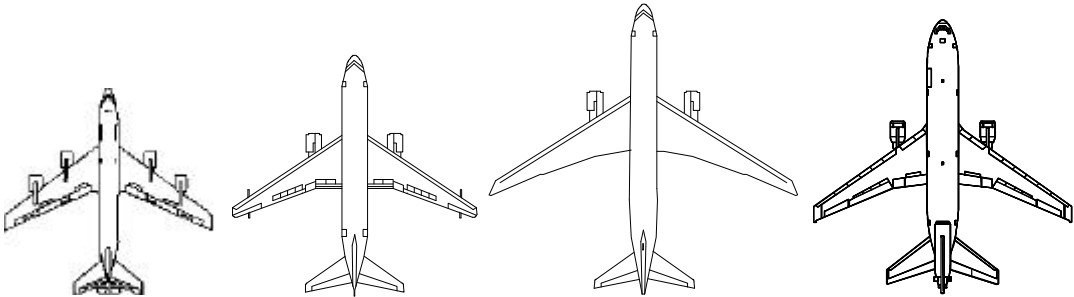
costs. Re-engining would amount to spending billions of dollars for only a 20% improvement over KC-135E capability, but without addressing the “old iron” that needs replacing. Re-engining was not selected as the solution.

Commercial alternative: The Air Force considered acquisition of commercial derivative platforms in tanker configurations. This strategy acquires air refueling tankers derived from commercially available airframes to avoid the high costs of new aircraft research and development. The use of a commercial-based airframe forges synergy with industry in worldwide logistics networks and other support. The question then became: How can we get these mission critical assets to the warfighter in the most expeditious way, at a reasonable cost to taxpayers? Our answer: lease a tanker aircraft that is already commercially available.

In February 2002, the Air Force issued a Request for Information (RFI) to both Boeing and European Aeronautic Defense and Space Company (EADS) to evaluate available technologies and associated risks. Consideration of acquisition of commercially derived platforms included the B757, B767, B777, and the Airbus A330 in tanker configurations, considering both a lease option and a direct purchase. Based on the responses to the RFI, the Boeing 767 was found to be the most favorable. The Boeing 757 was too small to replace KC-135 one-for-one, and would drive additional manpower requirements on a tanker force that is already limited by available crews. The Boeing 777 required almost twice as much ramp space as a KC-135 -- more than a KC-10 -- but had a reduced fuel offload capability when compared to the KC-10. Further, the B777 required significant engineering analysis and design work to be modified into a tanker, including the possibility of a shortened fuselage to accommodate a refueling

boom during takeoff. The Boeing 767 was selected over EADS aircraft as a result of its favorable design, schedule, risk factors, and proven boom technology.

AIRCRAFT DIMENSION COMPARISON

	KC-135R	B767	A330	KC-10
Length:	136 ft 3 in	159 ft 2 in	191 ft 6 in	181 ft 7 in
Span:	130 ft 10 in	156 ft 1 in	197 ft 10 in	165 ft 4 in
Height:	41 ft 8 in	52 ft	58 ft 8 in	57 ft 10 in
				
Max Taxi Wgt:	322,500 lbs	396,000 lbs	509,042 lbs	593,000 lbs
Op. Empty Wgt:	123,000 lbs	194,000 lbs	252,890 lbs	237,000 lbs
Fuel @ Max Taxi:	199,500 lbs	202,000 lbs	246,185 lbs	356,000 lbs

To begin the recapitalization of the 544 KC-135 aircraft, the Air Force considered two primary alternatives as acquisition strategies -- a traditional procurement of 100 KC-767A aircraft, and an operating lease of commercially derived air refueling tankers in accordance with section 8159 in FY02 legislation. In addition, the Office of the Secretary of Defense Leasing Review Panel considered several alternate procurement approaches in contrast to the lease or planned purchase, including purchases on the same delivery schedule as the lease and applying the funding stream required for a lease to a more traditional purchase program. The Secretary of Defense determined that the lease option best satisfied this nation's military needs.

The Air Force, with permission from Congress, began negotiations with Boeing for an operating lease of 100 commercially developed KC-767A air refueling tankers. At the time of the FY04 President's Budget submittal, negotiations for the lease were unfinished. Plan A, a KC-X procurement program, was included in the President's FY04 budget, with the program to begin, because of affordability constraints, in FY06. This program in the FY04 PB would deliver one tanker to the warfighter in FY09. The 100th aircraft would be delivered in FY16.

In contrast, under the negotiated lease, the contractor will deliver 60 new tankers to the warfighter by FY09, and deliver all 100 by FY11 which is five years sooner than the FY04 PB procurement program. This plan provides for a quicker start to recapitalization of the tankers. To match such a recapitalization schedule under a purchase option would require billions of additional dollars to be invested during the FYDP as well as waivers of various acquisition rules. Since those funds are already committed to other uses, there would have to be significant restructuring and/or cancellation of ongoing and planned programs.

Business case analysis

Obviously, cost is a big driver when choosing an acquisition strategy. In isolation, a leasing strategy requires additional funds in then-year dollars relative to the cost of a traditional purchase. Economic considerations, however, are not limited to expected funding flows, which ignore the time-value of money. To account for this time-value of money and gain insight into the economic implications of leasing as an acquisition strategy, Office of Management and Budget Circular (OMB) A-94 directs a present value comparison between the proposed lease and a hypothetical purchase based

on the same delivery/return profile. The financial analysis for the A-94 test is highly sensitive to the underlying assumptions such as purchase price, expected inflation and appropriate discount rate. Since OMB oversees governmental leases, the A-94 analysis, and the defining requirements for an operating lease, the Air Force consulted them in developing its analytic assumptions. Applying the A-94 test the Air Force determined that the net present value of the multiyear lease option and a traditional purchase option results in a net present value difference favoring a purchase by \$150 million -- about 1% of the total cost. These calculations do not take into account any operational savings which the lease would permit to accrue sooner.

The advantages in schedule and reduced impact to currently budgeted programs outweighed the results of the A-94 analysis and drove the leasing decision. The Air Force and Department of Defense selected leasing as the acquisition strategy primarily based on affordability -- by reducing the near-term cost -- and minimizing the budgetary impact to our plans for getting accelerated capability of the new weapon system to our frontline troops.

Under the lease option, the Air Force can afford to field this new fleet of tankers at a quicker pace than under a traditional purchase plan. Jumpstarting replacement of the older, less-capable tankers enables faster modernization of air expeditionary forces. The lease not only advances the first delivery by three years, *it puts the 100 aircraft fleet at the disposal of our frontline commanders for combat operations by FY11, five years ahead of the planned purchase.* If we were to purchase these aircraft in a traditional buy on the same delivery schedule, while maintaining our financial top-line, we would have to take billions of dollars out of other important programs.

Implementation plans

Under this Pilot Program, the Air Force intends to lease 100 KC-767A aircraft with Congressional approval of the New Start notification. The lease program will be sole source, using terms and conditions germane to commercial aircraft leases and commercial business practices in accordance with the Federal Acquisition Regulation and section 8159. Terms and conditions of the lease arrangement meet all requirements of the FY02 Defense Appropriations Act including OMB Circular A-11 criteria for an operating lease. Full details of the lease are included in the Report to the Congressional Defense Committees.

This will be a three-party contract between the US Government, Boeing Integrated Defense Systems, and a third-party Trust, the KC-767A USAF Tanker Statutory Trust. The Trust will issue bonds on the commercial market based on the strength of the lease contract with the US Government (rather than the credit worthiness of Boeing), will buy the aircraft from Boeing, and will lease them to the Government. The Trust will not make a profit but will provide for the funds necessary to pay bondholders and pay off the debt after the sale of the aircraft. Any residual funds acquired from the possible sale of the aircraft subsequent to lease termination will be refunded to the Government as an overpayment.

The contract will include “Most Favored Customer” clauses stating that if Boeing sells comparable aircraft (up to 100) during the term of the contract for a lesser price, the Government will receive an equitable adjustment. Besides being a fixed-price contract, and to further guarantee the taxpayers receive a favorable deal, Boeing has agreed to a Return-on-Sales (ROS) cap of 15%, whereby in 2011, any ROS in excess of 15% in

either commercial or military manufacturing centers will be returned to the Government. Again, this is something unprecedented in military acquisitions.

It is not unexpected that new ways of doing business might raise questions or controversies. There have been several questions with respect to this arrangement that I would like to address.

Analysis of alternatives: As stated earlier, the Air Force was not required to conduct an Analysis of Alternatives (AOA) for the KC-767 tanker lease. There is no statutory requirement to conduct an AOA. Regulatory requirements for AOAs are contained in our DoD instruction, *Operation of the Defense Acquisition System*, which provides for their flexible application. Under “Plan A,” an AOA was planned to complement the work done under the Tanker Requirements Study and the Economics Service Life Study, to lead to a traditional purchase beginning with the delivery of one aircraft by 2009. However, the operational requirements of the Global War on Terror and the increased demand on the tanker fleet highlighted the need to accelerate the recapitalization of this national asset. “Plan B,” this lease program, addressed the critical need the Congress and we saw for jump-starting recapitalization and it made good business sense.

In fact, it is not unusual for a major program to not conduct an AOA. The GAO has previously stated (NSIAD-94-194), "Applicable defense acquisition regulations allow management discretion in these matters for the purpose of minimizing development time and reducing costs." There is additional precedence for not completing an AOA when either the item is a commercial product or there is a low-risk in delivering a product that will be militarily useful. The Air Force did not complete an AOA for the C-130J program since this was an acquisition of a commercial product that had already been

marketed to foreign customers - similar to the KC-767A Tanker. No AOAs were conducted for programs such as the KC-10 or the F/A-18 E/F.

Even though the Air Force did not complete a formal AOA on the KC-767A, we performed several trade analyses to ensure the KC-767A was the right solution to the operational requirements. We looked at maintaining the status quo, but we judged the risk too high to not begin the recapitalization effort now as a result of 9/11, increased tanker operations tempo for homeland defense and Operation ENDURING FREEDOM, increased operations and support costs and risks of an aging fleet (catastrophic/grounding event that would significantly erode our ability to meet our mission). We evaluated the feasibility of re-engining KC-135Es, but this does not reduce the aging aircraft risk - we would still have old aircraft that will need to be recapitalized, and the payback of the re-engining cost AND retirement savings [if we were allowed to retire 31 KC-135Es] exceeds 11 years. We researched using "stored" commercial aircraft, but all the aircraft had high hours, different engines, required heavy modifications and there were insufficient numbers of aircraft available to be cost effective. We investigated using a commercial fee-for-service, but while this has been successful in Navy training scenarios, it did not meet our overall operational requirements. We looked at other operational commercial platforms to include an Airbus 330, Boeing 757 and Boeing 777. The Airbus 330 had significant technical risk with integrating boom technology into the aircraft. The B-757 could not carry enough fuel to make it an efficient tanker. The B-777 was too large, reducing the airfields where the aircraft could be deployed. Finally, we researched the feasibility of building a new tanker from the ground up, but this alternative carries a much higher cost and developmental risk, and would not be available within the

timeframe the KC-767As would be delivered. The decision to select Boeing was based on Boeing's response to our RFI, including its favorable design, schedule, risk factors, and boom technology.

Why we need tankers so urgently despite the 2001 Economic Service Life Study Report that intimated that the current fleet would last until 2040

Much has been made about the ESLS's prediction that we could operate the current tanker fleet until 2040. What is rarely mentioned is that even the optimistic 2001 Study predicted that Operations and Sustainment (O&S) costs would increase 43% by 2040 with 15% decrease in availability. The study assumed only 1%/year cost growth, but even in as little time as 18 months, that figure was seen as flawed. The updated report raised that figure to 1.5%/year. The study was based on statistical calculations, but actual depot sales rates show much greater increases in O&S costs. There have been several studies regarding the aging aircraft.

1995 Fatigue Life Study: Boeing and the C/KC-135 SPO continued their evaluation of the KC-135 expected service life with a fatigue analysis in 1995. This analysis indicated that the KC-135R fleet would not exhibit significant fatigue damage, in the absence of corrosion or widespread fatigue damage, until 70,000 flight hours (66,000 for the KC-135E).

The Air Force and industry debate over the unknown effects of corrosion on fatigue life prompted the C/KC-135 SPO to contract with Boeing to update the fatigue life to include effects of increased stress from corrosion-associated material thinning. Using this combined "net-area" fatigue/corrosion life, the KC-135R service life was adjusted to 39,000 flight hours and the KC-135E life was adjusted to 36,000 hours.

Today, the average flight-hour distribution for R models is 16,000-17,000 hours, and 17,000-19,000 hours for the E models. An Air Force/industry “Blue Ribbon Panel” convened in 1996 and acknowledged operation of the fleet out to 2040 is achievable, assuming aggressive corrosion control. Further analysis would conclude that the KC-135 service life is actually limited by age in years, not flight hours.

As early as the Air Mobility Master Plan of 1995, Air Mobility Command (AMC) acknowledged corrosion as a “major factor in the continued service life of the KC-135 forces.” At that time, AMC pursued corrosion forecasting technologies and planned on initiating replacement of the KC-135 fleet in FY07 pending verification of the magnitude of the corrosion problem. The 1998 Air Mobility Master Plan again noted that corrosion studies were required with a notional replacement date of FY13. However, as more and more of these inspections took place, it was obvious by 2001, that our reports may have been overly optimistic. In Air Force studies conducted in 2001 we proposed a notional replacement date of FY10.

The depot level maintenance cost growth experienced due to the aggressive maintenance practices implemented with the Aging Aircraft Program caused concern within AMC. The Mobility Master Plan of 2000 called into question the high cost required to maintain the aging KC-135 fleet. The plan states, “The major factor limiting structural life is fleet corrosion. Previous studies did not include corrosion as a significant factor in the service life, nor did they address increased costs and decreased availability that would result from the aggressive maintenance practices required to maintain adequate safety margins.” Consequently, previous service life estimates and projected retirement dates may be overly optimistic.

1994-1995 RAND studies: The Air Force contracted RAND to conduct aging aircraft studies based on commercial and military aircraft fleets in order to determine the feasibility of long-term sustainability of the Air Force's aging fleets. RAND completed a series of five studies beginning in 1994 and ending in 1999. These studies raised technical concerns regarding the 1) viability of retaining commercial aircraft past their design lives, 2) viability of retaining Air Force aircraft past their design lives, 3) potential maintenance cost growth associated with aging aircraft, 4) potential engine cost growth, and 5) projection of Air Force fleet-specific Program Depot Maintenance (PDM) and engine cost growth through 2022. The results of the studies concluded that "major support challenges may result from corrosion, insulation cracking, composite delamination, and other material degradation processes for which there are no scientific aging models or relevant historical experience. Most important, many of the challenges associated with aging material have emerged with little or no warning. This raises the concern that a new challenge may suddenly jeopardize an entire fleet's flight safety." The final study recommended a three-pronged strategy for maintaining aging aircraft: 1) risk management strategy to identify age-related hazards that affect cost and safety hazards and develop solutions to reduce their effects, 2) fleet contingency strategy to reduce aircraft design and production lead times of obsolete replacement parts to minimize fleet-wide failures, and 3) mission management strategy to implement acquisition and retirement plans that balance fleet ages within mission areas, making the Air Force less dependent upon a particular fleet of aging aircraft.

The Air Force has implemented two out of three prongs of RAND's strategy for maintaining aging aircraft. The C/KC-135 SPO's Aging Aircraft Program created a risk

management strategy by establishing Major Structural Repairs and tracking their repair. The SPO also developed fleet contingency strategies by contracting with new vendors for obsolete parts. The Air Force partially implemented a mission management strategy with the acquisition of the KC-10s; however, 90 percent of the refueling fleet still resides within the KC-135 fleet, creating the potential for fleet-wide system failure. At least partial recapitalization of the KC-135 fleet is needed to satisfy all of RAND's recommendations.

1996 GAO study: The GAO drafted this report in 1996 to validate Air Force actions to preserve its aging tanker fleet and to examine the effects of increased demands on the services' air refueling fleets after Operation DESERT STORM. The study noted that "the Air Force's principal tanker aircraft—the KC-135s—are 30 to 40 years old and, as a result, are taking progressively more time and money to maintain and operate." The results of the study noted, "Air Mobility Command doubts that the KC-135 can be economically operated beyond 2020." This is the result of projected cost-per-flying-hour increases of 24 percent from 1996 to 2001, and historical depot labor hour increases of 36 percent, and depot flow day (aircraft time spent in depot) increases of 55 percent from 1991 to 1995. The study recommends recapitalizing the air refueling fleet with a "dual-use replacement aircraft (that) could fulfill both airlift and air refueling missions."

Negotiated Price

The Air Force negotiated this agreement at the highest levels possible. We employed standard commercial "best" business practices as we negotiated the deal. We firmly believe that the Air Force price is the best price -- the best price that can be achieved in the commercial market place in the real world. The difference is primarily

one of assumptions. The Air Force treated the tanker lease as a commercial item. The Air Force followed the guidance for buying commercial items contained in Federal Acquisition Regulation (FAR) Part 12. In addition, Section 8159 of the FY02 DoD Appropriations Act specifically authorized the Air Force to use terms and conditions that are customary in non-Government leases. The final price is a product of a careful analysis and market research by the Air Force and extensive price negotiations with the contractor. We believe the Air Force has received a fair and reasonable price under the lease. However, we are not relying solely on our price analysis. The lease agreement contains most favored customer provisions and a 15% limitation on the contractor's total return on sale for the tankers. In addition, the contractor bears the risk of delivering conforming aircraft at a fixed price.

Also, the aircraft price must be viewed in a larger context. The aircraft must meet the performance specifications stated in the contract and must have a high [80%] operational availability rate. The contractor must maintain the aircraft to the specifications and the high (80%) availability rate throughout the term of the lease.

In contrast, the study conducted by IDA used a different basis of estimate; they looked at the manufacturing process used, associated development costs, risk management, and contract type. Nonetheless, the Air Force capitalized on much of the additional information derived through the review by the Office of the Secretary of Defense in our final negotiations.

Programmed retirements

Our plan to retire 68 KC-135Es in FY04 will increase fleet utilization by freeing money and personnel that would be required for maintaining KC-135Es that could be used on KC-135Rs. This is true even if we do not lease the 767. This retirement of 13% of the fleet would result in only 4 to 5% decrease in average sortie generation. If we only retire 12 aircraft in FY04 versus going with the original 68-reduction plan, we would need approximately \$40M FY04 dollars to cover the additional costs of keeping the E's around. This is based on three additional Programmed Depot Maintenance requirements at approx \$8M a piece and thirteen additional engine overhaul requirements at \$962K a piece. Additionally, we will need to replace \$75M in funds offset in FY04 to divest 44 tankers. This includes flying hours and military personnel costs. The total bill in summary: added DPEM costs plus FY04 offset, $\$40M + \$75M = \$115M$. The "retire 12 in FY04" plan has no monetary impact on the "68-reduction" plan in FY05 and FY06, assuming that we use FY05 to "catch up" on aircraft retirements, but may require some operational workaround to account for the rapid retirement.

Conclusion

I want to thank the Committee for allowing the Air Force to share its concerns about the need for a new tanker. I believe the KC-767A Multi-Year Aircraft Lease Pilot Program offers us the opportunity to jumpstart recapitalization of our aging KC-135 tankers. Recent events and increased requirements to support homeland defense have spotlighted our reliance on these critical refueling assets. Tanker dependence in recent wars and the advanced age of the nation's air refueling aircraft fleet drive the Air Force's urgency to begin recapitalization as soon as possible. The KC-767A supports the

requirements for our next generation tanker aircraft. The negotiated lease proposal would provide for the delivery of 60 aircraft within the FYDP and field the 100th aircraft by 2011, five years faster than current purchase plans. This minimizes near-term budgetary impact to other important programs.

I fully support this leasing alternative to provide the warfighters with new equipment as quickly as possible. This leasing program supports the Air Force's essential mission requirements that support the defense of America.

I appreciate the support provided by Congress and look forward to working with this Committee to best satisfy our warfighter needs in the future. Thank you for the opportunity to provide this statement for the record.