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**Testimony
of
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Director
Office of Commercial Space Transportation
U.S. Department of Transportation
before the
Senate Commerce Subcommittee on Science,
Technology and Space
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STATEMENT OF
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U.S. DEPARTMENT OF TRANSPORTATION

BEFORE THE

SUBCOMMITTEE ON SCIENCE, TECHNOLOGY AND SPACE
COMMITTEE ON COMMERCE, SCIENCE AND TRANSPORTATION
U.S. SENATE
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MR. CHAIRMAN, MEMBERS OF THE SUBCOMMITTEE, THANK YOU FOR GIVING ME THE OPPORTUNITY TO DISCUSS THE PROPOSED FISCAL YEAR 1990 BUDGET FOR THE DEPARTMENT'S OFFICE OF COMMERCIAL SPACE TRANSPORTATION (OCST) AND TO ADDRESS OTHER ISSUES AFFECTING THE AMERICAN COMMERCIAL SPACE LAUNCH INDUSTRY.

MR. CHAIRMAN, I AM, AS YOU KNOW, NEW TO THIS JOB. IT IS, HOWEVER, ALREADY QUITE EVIDENT TO ME THAT THE SUPPORT THAT YOU AND THE OTHER SUBCOMMITTEE MEMBERS HAVE GIVEN TO THE COMMERCIAL LAUNCH INITIATIVE OVER THE YEARS HAS BEEN A KEY FACTOR IN THE VERY REAL PROGRESS THAT HAS BEEN MADE. AS WE BEGIN AN EXCITING NEW CHAPTER IN THE HISTORY OF U.S. SPACE ENDEAVORS, I WOULD LIKE TO SAY, ON BEHALF OF SECRETARY SKINNER AND THE DEPARTMENT OF TRANSPORTATION, I LOOK FORWARD TO WORKING WITH YOU AND CONTINUING THIS COOPERATIVE EFFORT IN THE COMING YEARS.

ON FEBRUARY 9, PRESIDENT BUSH PRESENTED HIS BUDGET INITIATIVES TO CONGRESS AND THE NATION. AT THAT TIME, HE INDICATED THAT AGGRESSIVE PURSUIT OF OUR VARIED NATIONAL OBJECTIVES IN SPACE WOULD BE A HIGH PRIORITY FOR HIM. IN PARTICULAR, HE MADE IT CLEAR THAT THE PRIVATE SECTOR MUST PLAY AN

INCREASINGLY ACTIVE, DIRECT ROLE IN ACHIEVING THESE OBJECTIVES.

"WE MUST," HE SAID, "HAVE A MANNED SPACE STATION, A VIGOROUS, SAFE SHUTTLE PROGRAM, AND MORE COMMERCIAL DEVELOPMENT IN SPACE."

OCST IS COMMITTED TO WORKING TOWARD OUR PART OF THIS GOAL, AND I BELIEVE IT CAN BE DONE WITHIN THE FRAMEWORK OF A REALISTIC AND REASONABLE BUDGET. THAT SAID, IT BEARS EMPHASIZING THAT WITH MORE THAN HALF A DOZEN U.S. FIRMS CONDUCTING COMMERCIAL LAUNCH ACTIVITIES, AND WITH FOREIGN COMPETITION HEATING UP ON SEVERAL FRONTS, OUR PROGRAM MUST BE PROPERLY FUNDED IN ORDER FOR OCST TO PERFORM ITS OVERSIGHT AND GUIDANCE RESPONSIBILITIES EFFECTIVELY.

FOR FISCAL YEAR 1990, WE ARE REQUESTING A TOTAL BUDGET OF \$4.4 MILLION. BEFORE ADDRESSING SPECIFIC PROPOSED PROJECT EXPENDITURES, LET ME TAKE A MOMENT TO DESCRIBE THE PRESENT FOCUS OF THE PROGRAM AND SEVERAL OF OUR RECENT ACCOMPLISHMENTS.

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FIRST, THE MAJOR PORTION OF OUR TIME AND RESOURCES IS FOCUSED ON THE CONTINUING DEVELOPMENT OF OUR REGULATORY PROGRAM. LAST YEAR, THE OFFICE PUBLISHED FINAL LICENSING REGULATIONS WHICH PROVIDE THE ADMINISTRATIVE FRAMEWORK FOR OVERSEEING THE BROAD RANGE OF LAUNCH ACTIVITIES THAT ARE BEING CONDUCTED OR PLANNED.

MORE RECENTLY, WE AUGMENTED THESE FORMAL PROCEDURES WITH INTERNAL ONES RELATING TO THE MONITORING OF LICENSED ACTIVITIES AND THE INVESTIGATION OF LAUNCH ACCIDENTS AFFECTING PUBLIC SAFETY. THESE MEASURES WERE IN PLACE IN ORDER FOR US TO PROVIDE

APPROPRIATE SUPERVISION FOR THE SPACE SERVICES INCORPORATED OF AMERICA LAUNCH IN MARCH. SIMILAR ACTIONS ARE PLANNED FOR THE UPCOMING LAUNCHES, NOTABLY THE MCDONNELL DOUGLAS LAUNCH FROM CAPE CANAVERAL NEXT MONTH.

IN MEETING ITS MANDATE TO LICENSE COMMERCIAL LAUNCH ACTIVITIES TO ENSURE THAT THEY ARE CONDUCTED AS SAFELY AS POSSIBLE, OCST HAS COMPLETED A BASELINE ASSESSMENT OF THE EASTERN SPACE AND MISSILE CENTER AND IS WORKING ON BASELINE ASSESSMENTS OF THREE OTHER EXISTING RANGES: WHITE SANDS MISSILE RANGE, VANDENBERG AIR FORCE BASE AND WALLOPS ISLAND FLIGHT FACILITY. THESE ASSESSMENTS ARE ONE OF SEVERAL ANALYTICAL BASES OCST USES TO EVALUATE AN APPLICANT'S LAUNCH SAFETY PLANS.

OTHER ANALYTICAL BASES INCLUDE A MAJOR, COMPREHENSIVE SAFETY STUDY REPORT THAT WE HAVE ISSUED, "HAZARD ANALYSIS OF COMMERCIAL SPACE TRANSPORTATION," AND THE INTER-AGENCY REPORT ON ORBITAL DEBRIS HAZARDS.

THIS INFORMATION, ALONG WITH ACTIVITIES IN ASSESSING AND EVALUATING LAUNCH RISKS, AND INSPECTING LAUNCH SITES, VEHICLES AND PAYLOADS, ENABLES OCST TO MEET ITS REGULATORY OBLIGATIONS AND SET APPROPRIATE INSURANCE REQUIREMENTS.

OCST HAS ALSO BEEN WORKING TO DEVELOP APPROPRIATE INVESTIGATION PROCEDURES WHICH WOULD APPLY IN THE EVENT OF AN ACCIDENT.

TO DATE, OCST HAS ISSUED LAUNCH LICENSES TO THREE COMPANIES

(MCDONNELL DOUGLAS, CONATEC, SPACE SERVICES INCORPORATED OF AMERICA); WE EXPECT TO ACT ON AT LEAST SIX MORE LICENSE APPLICATIONS THIS YEAR.

OCST HAS ALSO BEEN WORKING TO ACHIEVE PROMPT IMPLEMENTATION OF THE 1988 COMMERCIAL SPACE LAUNCH ACT AMENDMENTS, AND I AM HAPPY TO REPORT TO YOU THAT MUCH PROGRESS HAS BEEN MADE IN ALL THE SIGNIFICANT AREAS ADDRESSED BY THE AMENDMENTS.

SECTION 8 OF THE AMENDMENTS DIRECTS OCST, IN COOPERATION WITH THE DEPARTMENT OF DEFENSE AND NASA, TO STUDY WAYS TO FACILITATE COMMERCIAL USE OF U.S. LAUNCH FACILITIES. OCST STAFF HAVE EVALUATED THE SCHEDULING PROCEDURES OF LAUNCH FACILITIES AND SOLICITED INFORMATION REGARDING SCHEDULING REQUIREMENTS AND CONCERNS FROM BOTH THE LAUNCH FIRMS AND THEIR CUSTOMERS. WE EXPECT TO REPORT THE STUDY FINDINGS TO CONGRESS THIS MONTH.

SECTION 6 OF THE AMENDMENTS PROVIDES INCENTIVES FOR SATELLITES THAT WERE OFF-LOADED FROM THE SHUTTLE TO USE DOMESTIC COMMERCIAL LAUNCH VEHICLES. OCST IS CURRENTLY WORKING WITH INDUSTRY AND GOVERNMENT AGENCIES TO IDENTIFY THE SATELLITES ELIGIBLE FOR THESE INCENTIVES AND TO DEVELOP MECHANISMS FOR ACHIEVING THE ACT'S OBJECTIVES IN THIS AREA.

PERHAPS MOST IMPORTANT, IN THE LAST SEVERAL MONTHS WE HAVE SPENT A SIGNIFICANT AMOUNT OF TIME ADDRESSING ISSUES ASSOCIATED WITH THE PROVISIONS IN THE AMENDMENTS PERTAINING TO INSURANCE AND OTHER LIABILITY-RELATED REQUIREMENTS. ALTHOUGH THIS IS A VERY COMPLEX AREA, I AM, ONCE AGAIN, HAPPY TO REPORT THAT, PURSUANT TO

THE PROVISIONS OF THE AMENDED ACT, WE WERE ABLE TO ESTABLISH REQUIREMENTS FOR BOTH THE PREVIOUS SSI LAUNCH AND THE UPCOMING MCDONNELL DOUGLAS LAUNCH NEXT MONTH. IN ADDITION, WE ARE WELL ON OUR WAY TO CRAFTING APPROPRIATE INSURANCE REQUIREMENTS FOR TWO OTHER MAJOR LAUNCH FIRMS, GENERAL DYNAMICS AND MARTIN MARIETTA.

ANOTHER ACHIEVEMENT IS AN AGREEMENT WITH THE FEDERAL EMERGENCY MANAGEMENT AGENCY TO ASSIGN PRIORITY TO THE COMMERCIAL SECTOR FOR ALLOCATION OF SCARCE SOLID ROCKET FUEL.

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ANOTHER IMPORTANT FOCUS INVOLVES THE MULTIFACETED AREA OF INTERNATIONAL COMPETITION. THE ISSUES HERE ENCOMPASS NOT ONLY OUR EFFORTS TO FURTHER THE ADMINISTRATION'S AND THIS COMMITTEE'S COMMON OBJECTIVE OF SECURING A "LEVEL PLAYING FIELD" FOR U.S. FIRMS, BUT ALSO OUR EFFORTS TO ENSURE THAT U.S. FIRMS CAN MEET THE CHALLENGE POSED BY NEW COMPETITORS LIKE THE PEOPLE'S REPUBLIC OF CHINA. OCST WAS THE FIRST OFFICE IN THE EXECUTIVE BRANCH TO RECOGNIZE THE IMPLICATIONS FOR U.S. COMMERCIAL LAUNCH PROVIDERS OF THE CHINESE GOVERNMENT'S NEW ROLE AS A MARKET COMPETITOR AND WAS VERY ACTIVE IN THE ADMINISTRATION TO ENSURE THAT CHINA'S ENTRY WAS CONDITIONED BY APPROPRIATE SAFEGUARDS. IN FACT, OCST HAS RECENTLY DESIGNATED AN INTERNAL TASK FORCE TO FACILITATE OCST'S ROLE IN MONITORING CHINA'S COMPLIANCE WITH THE LONG MARCH AGREEMENT PROVISIONS.

DOT HAS ALSO SERVED AS THE LEAD AGENCY SUPPORTING THE EFFORTS OF THE U.S. TRADE REPRESENTATIVE TO ASSESS THE UTILITY OF A FORMAL

TRADE ARRANGEMENT WITH THE EUROPEAN SPACE AGENCY AND TO DEVELOP APPROPRIATE TRADE PRINCIPLES. THAT EFFORT IS ONGOING AND WILL CONTINUE TO BE A PRIME FOCUS THIS SPRING.

THE CHALLENGE BEFORE US IS NOT SIMPLY ONE OF ENCOURAGING FOREIGN LAUNCH SERVICE PROVIDERS, BACKED BY EXTENSIVE GOVERNMENT SUPPORT, TO COMPETE FAIRLY WITH U.S. FIRMS. WE ALSO FACE THE EVEN MORE DIFFICULT TASK OF FACILITATING THE DEVELOPMENT OF AN INTERNATIONAL INDUSTRY ON THE BASIS OF ECONOMIC VALUES AND PRACTICES OUR COUNTRY HAS LONG SOUGHT TO INFUSE IN THE INTERNATIONAL MARKETPLACE. IN THE END, IT IS CHIEFLY THROUGH THIS MEANS THAT THE LONG-TERM COMPETITIVENESS OF THE U.S. LAUNCH INDUSTRY CAN BE ASSURED.

WE HAVE OUR WORK CUT OUT FOR US; OUR FOREIGN COMPETITORS ARE EAGERLY JOINING THE COMMERCIAL SPACE RACE. ARIANESPACE CURRENTLY HAS AN ORDER BOOK OF 34 SATELLITE PAYLOADS WITH A TOTAL ORDER VALUE OF \$2.4 BILLION, AND IT HAS LAUNCHED 17 SATELLITE PAYLOADS SINCE 1988.

AS I MENTIONED BEFORE, THE PEOPLE'S REPUBLIC OF CHINA HAS AGREEMENTS TO LAUNCH SATELLITES FOR FOREIGN CUSTOMERS. ALSO, WITH DEVELOPMENT OF THE H-2 LAUNCH VEHICLE, JAPAN HAS SET THE STAGE FOR ITS ENTRANCE INTO THE COMMERCIAL LAUNCH MARKETPLACE. THESE ACTIVITIES HAVE A BIG IMPACT ON AMERICAN COMPANIES' PLANS AND ABILITY TO COMPETE EFFECTIVELY.

CLEARLY, THE U.S. HAS THE CAPABILITY AND THE WILL TO BE A STRONG COMPETITOR IN THE WORLD MARKET. OCST CONTINUES TO

VIGOROUSLY MONITOR THESE WORLD MARKET DEVELOPMENTS TO HELP PROTECT U.S. INTERESTS AND TO ENSURE THAT OUR NATION IS IN A BETTER POSITION TO PLAY A MAJOR LEADERSHIP ROLE IN THE WORLD COMMERCIAL LAUNCH MARKET IN THE YEARS TO COME.

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IN THE FISCAL YEAR 1990 BUDGET, OCST IS REQUESTING \$3.6 MILLION TO FUND RESEARCH PROGRAM ACTIVITIES AND \$805,000 FOR ADMINISTRATIVE SALARIES AND EXPENSES.

OCST'S ABILITY TO PROVIDE EFFECTIVE REGULATORY GUIDANCE FOR COMMERCIAL LAUNCH ACTIVITIES IS DIRECTLY AFFECTED BY THE AVAILABILITY OF RESEARCH ON SAFETY AND LAUNCH OPERATION ISSUES. OUR RESEARCH STUDIES ARE ESSENTIAL TO CREATE A DATABASE THAT CAN BE ADAPTED TO THE UNIQUE COMMERCIAL SPACE CONTEXT AND USED TO RESPOND TO THE PROBLEMS ASSOCIATED WITH COMMERCIAL SPACE ACTIVITY. THIS KIND OF DATA IS NOT AVAILABLE FROM OTHER GOVERNMENT SOURCES; OCST MUST DEVELOP IT.

FOR SAFETY RESEARCH, WE HAVE REQUESTED \$1.5 MILLION TO FUND SEVERAL PROJECTS, INCLUDING:

* RESEARCH ON COMMERCIAL LAUNCH OPERATIONS AND RANGES (\$1,060,000). EXISTING LAUNCH FACILITIES AND OPERATIONS USED BY NASA AND THE MILITARY MAY NOT BE ENTIRELY APPROPRIATE FOR, OR ADAPTABLE TO, FUTURE COMMERCIAL LAUNCH ACTIVITIES. THEREFORE, OCST MUST STUDY EXISTING SITE CONDITIONS, LAUNCH OPERATION PROCEDURES, PERSONNEL CERTIFICATION, AND EQUIPMENT AND DESIGN REQUIREMENTS. THE STUDY FINDINGS WILL BE USED TO DEVELOP CRITERIA APPROPRIATE FOR FUTURE COMMERCIAL LAUNCH SITES, ACTIVITIES AND PERSONNEL.

ALSO, IN THE SHORT RUN, THIS DATA IS REQUIRED TO EVALUATE THE SAFETY OF COMMERCIAL OPERATIONS AND EXISTING LAUNCH FACILITIES. THESE FACILITIES WERE DESIGNED TO SUPPORT GOVERNMENT OPERATIONS. THE BEGINNING OF COMMERCIAL ACTIVITIES AT THESE FACILITIES HAS CREATED PROFOUND CHANGES IN THE ROLES OF THE RANGE AND THE LAUNCH OPERATOR. ALSO, AS THE LAUNCH INDUSTRY INTRODUCES NEW VEHICLES, NEW TECHNOLOGIES, AND NEW OPERATING STYLES TO THESE FACILITIES, OVERALL SAFETY LEVELS ARE AFFECTED; THE IMPACT OF THESE EVENTS MUST BE TRACKED.

* RESEARCH ON ENVIRONMENTAL SAFETY (\$200,000). OCST MUST REVIEW THE IMPACT OF COMMERCIAL LAUNCHES ON NEARBY LAND, WATER, ATMOSPHERE AND WILDLIFE TO ENSURE THAT PROPOSED LAUNCHES WILL BE CONDUCTED IN CONFORMITY WITH NATIONAL ENVIRONMENTAL POLICY ACT REQUIREMENTS.

* RESEARCH ON ORBITAL SAFETY (\$100,000). THE DEVELOPMENT OF EFFECTIVE SAFETY STANDARDS INCLUDES ASSESSING ON-ORBIT AND RE-ENTRY HAZARDS TO COMMERCIAL LAUNCH VEHICLES AND DANGERS TO INDIVIDUALS AND PROPERTY ON EARTH.

* RESEARCH ON PAYLOAD SAFETY (\$100,000). AS COMMERCIAL LAUNCHES GET UNDERWAY AND NEW TECHNOLOGY IS INTRODUCED INTO THE LAUNCH SERVICES MARKET, NEW PAYLOADS WILL BE DEVELOPED. OCST MUST REVIEW THESE NEW PAYLOADS TO ENSURE THEY MEET APPROPRIATE SAFETY STANDARDS.

OCST IS REQUESTING A TOTAL OF \$475,000 FOR SUPPORT AND MANAGEMENT OF SPACE SAFETY DATA.

THIS ENTAILS DESIGNING AND IMPLEMENTING COMPUTER SYSTEM

SOFTWARE AND HARDWARE USED TO TRACK OCST'S LICENSING ACTIVITIES, AND DEVELOPING PERFORMANCE MEASURES TO ANALYZE FLIGHTS AND RISK MODELS TO ASSESS FUTURE LAUNCHES. IT ALSO INCLUDES FUNDING FOR CONTINUED TRANSPORTATION SYSTEMS CENTER RESEARCH AND DEVELOPMENT IN SUPPORT OF OCST'S PROGRAMS.

OCST IS REQUESTING \$575,000 FOR CONTINUED LICENSING AND ENFORCEMENT OPERATIONS.

THIS INCLUDES ONGOING LICENSE REVIEW ACTIVITIES, AND DEVELOPMENT OF INSPECTION METHODOLOGY AND ACCIDENT INVESTIGATION PROCEDURES FOR COMMERCIAL LAUNCHES. IN THIS CONTEXT, IT IS IMPORTANT TO STOP AND NOTE THE SHARP INCREASE IN THE NUMBER OF LICENSE APPLICATIONS. IN 1988, OCST REVIEWED SIX LAUNCH APPLICATIONS. IN 1989, WE EXPECT UP TO NINE, AND IN 1990, WE ANTICIPATE HANDLING UP TO 20 APPLICATIONS.

OCST IS REQUESTING \$400,000 TO TRACK AND MAINTAIN INFORMATION ON THE CAPABILITIES, MARKET DEVELOPMENTS, AND COMPETITIVENESS OF COMMERCIAL LAUNCH PROVIDERS AND CUSTOMERS.

WE ARE DEVELOPING THE SPACE TRANSPORTATION ANALYSIS AND RESEARCH (STAR) DATABASE SYSTEM TO ASSIST IN THIS EFFORT. THIS AUTOMATED DATABASE ENABLES OCST TO INSTANTLY ACCESS A WIDE RANGE OF INFORMATION PERTAINING TO U.S. AND FOREIGN COMMERCIAL LAUNCH SERVICES. STAR CONTAINS DATA ON THE PHYSICAL CHARACTERISTICS OF EXISTING AND PROJECTED LAUNCH VEHICLES, KNOWN CONTRACTS FOR LAUNCH SERVICES, AND POTENTIAL PAYLOADS FOR FUTURE LAUNCHES. SOME OF THE REQUESTED FUNDS WILL BE USED TO ENHANCE THE STAR DATABASE, WITH CRITICAL OBJECTIVES BEING THE DEVELOPMENT OF A COMPREHENSIVE

MARKET FORECASTING CAPABILITY AND THE IMPROVEMENT OF COST AND PRICE COMPONENTS.

OCST IS REQUESTING \$627,000 FOR RESEARCH-RELATED SALARIES AND ADMINISTRATIVE COSTS.

OCST IS REQUESTING \$50,000 TO FACILITATE RESPONSES TO INDUSTRY REQUESTS FOR INFORMATION ON ITS ACTIVITIES.

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MR. CHAIRMAN, THE CONGRESS AND THE ADMINISTRATION ARE ALLIED WITH AMERICAN BUSINESS IN THE DEVELOPMENT OF A DYNAMIC NEW INDUSTRY -- THE COMMERCIAL LAUNCH INDUSTRY. WE STAND JOINTLY ON THE CREST OF A WAVE OF AGGRESSIVE, IMAGINATIVE ACTIVITY ON THE PART OF A DIVERSE GROUP OF COMPANIES. THIS ACTIVITY MAY WELL CONTRIBUTE MUCH TO OUR FUTURE ECONOMIC WELL-BEING, GROWTH AND PRODUCTIVITY FOR MANY YEARS TO COME. HOWEVER, MOVING BOLDLY INTO THE FUTURE IS GOING TO REQUIRE A FIRM AND CONSISTENT POLICY FROM THE GOVERNMENT.

AS A NATION WE CAN LOOK FORWARD TO THE TECHNOLOGICAL, ECONOMIC AND NATIONAL SECURITY BENEFITS OF A THRIVING COMMERCIAL SPACE INDUSTRY. GENERATIONS THAT FOLLOW US WILL BE GRATEFUL FOR THE DECISIONS MADE TODAY THAT LAY THE GROUNDWORK FOR TOMORROW. I REALIZE THAT ALL SPENDING DECISIONS ARE DIFFICULT WITHIN THE CURRENT BUDGETARY CONTEXT. HOWEVER, I WOULD HOPE THAT WE CAN AVOID TRADING AWAY THIS NATION'S FUTURE POTENTIAL IN COMMERCIAL SPACE ENTERPRISE IN THE COURSE OF REDRESSING BUDGET ILLS.

MR. CHAIRMAN, PRESIDENT BUSH AND OUR INTERNATIONAL COMPETITORS HAVE ISSUED THE CHALLENGE. IT'S NOW UP TO US TO RESPOND. THANK YOU FOR THIS TIME TODAY, AND I AM HAPPY TO ANSWER ANY QUESTIONS YOU MAY HAVE. WITH ME AT THE TABLE ARE MR. GERALD MUSARRA, OCST'S PROGRAM COUNSEL, AND MR. NORMAN BOWLES, ASSOCIATE DIRECTOR FOR LICENSING PROGRAMS. WITH YOUR PERMISSION, THEY WILL ASSIST ME IN RESPONDING TO ANY QUESTIONS.

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