

Commission should adopt rules establishing an approval mechanism for new content protection and recording technologies to be used with demodulator products. Consumer electronics manufacturers may be required to seek such approval prior to implementing content protection and recording technologies in demodulator products. We welcome comment on modifications of this proposal to lessen any potential impact on small entities, while still remaining consistent with our policy goals. The Further NPRM also seeks comment on whether cable operators should be allowed to encrypt the digital basic tier in order to be able to give effect to the ATSC flag through cable operators' conditional access system. While we do not believe that this rule change would have a potential impact on small entities because it would be voluntary in nature, we seek comment on whether a special approach toward any possible compliance burdens on small entities might be appropriate.

38. *Federal Rules Which Duplicate, Overlap, or Conflict with the Commission's Proposals.* None.

Federal Communications Commission.

**Marlene H. Dortch,**

*Secretary.*

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## DEPARTMENT OF COMMERCE

### National Oceanic and Atmospheric Administration

#### 50 CFR Part 216

[Docket No. 031112277-3277-01;I.D. 080603B]

RIN 0648-AR70

#### Taking and Importing Marine Mammals; Taking Marine Mammals Incidental to Space Vehicle and Test Flight Activities from Vandenberg Air Force Base (VAFB), CA

**AGENCY:** National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

**ACTION:** Proposed rule; request for comment.

**SUMMARY:** NMFS has received a request from the 30th Space Wing, U.S. Air Force (USAF) for the authorization for the harassment of small numbers of pinnipeds incidental to space vehicle and test flight activities from Vandenberg Air Force Base, CA (VAFB) between January 1, 2004, and December

31, 2008. By this document, NMFS is proposing regulations that govern that take. In order to issue a take authorization, NMFS must determine that the total taking will have a negligible impact on the affected species and stocks of marine mammals and will not have an unmitigable adverse impact on the availability of the species or stock(s) for subsistence uses. NMFS must also prescribe the means of effecting the least practicable adverse impact on such species or stock and their habitats. NMFS invites comment on the application and proposed regulations.

**DATES:** Comments must be postmarked no later than December 18, 2003. Comments will not be accepted if submitted via e-mail or the Internet.

**ADDRESSES:** Comments may be sent to and copy of the application may be obtained by writing to the Chief, Marine Mammal Conservation Division, Office of Protected Resources, National Marine Fisheries Service, 1315 East-West Highway, Silver Spring, MD 20910-3226 or by telephoning the contact listed here (see **FOR FURTHER INFORMATION CONTACT**). The NMFS' Administrative Record for this action will be maintained at this address. Copies of documents are available at this address.

**FOR FURTHER INFORMATION CONTACT:** Kimberly Skrupky, National Marine Fisheries Service, 301-713-2322, ext 163.

#### SUPPLEMENTARY INFORMATION:

##### Background

Section 101(a)(5)(A) of the Marine Mammal Protection Act (16 U.S.C. 1361 *et seq.*) (MMPA) directs the Secretary of Commerce (Secretary) to allow, upon request, the incidental, but not intentional taking of marine mammals by U.S. citizens who engage in a specified activity (other than commercial fishing) within a specified geographical region if certain findings are made and regulations are issued.

Permission may be granted for periods of 5 years or less if the Secretary finds that the total taking will have a negligible impact on the species or stock(s), will not have an unmitigable adverse impact on the availability of the species or stock(s) for subsistence uses, and regulations are prescribed setting forth the permissible methods of taking, other means of effecting the least practicable adverse impact on the affected species or stocks and their habitats, and the requirements pertaining to the monitoring and reporting of such taking.

NMFS has defined "negligible impact" in 50 CFR 216.103 as "an impact resulting from the specified activity that cannot be reasonably expected to, and is not reasonably likely to, adversely affect the species or stock through effects on annual rates of recruitment or survival." The MMPA defines "harassment" as:

any act of pursuit, torment, or annoyance which (i) has the potential to injure a marine mammal or marine mammal stock in the wild [Level A harassment]; or (ii) has the potential to disturb a marine mammal or marine mammal stock in the wild by causing disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering [Level B harassment].

#### Summary of Request

On September 2, 2003, NMFS received an application from the USAF requesting authorization under section 101(a)(5)(A) of the MMPA to harass small numbers of marine mammals incidental to space vehicle and test flight activities conducted by the USAF on Vandenberg. NMFS proposes regulations to govern these authorizations, to be effective from January 1, 2004, through December 31, 2008. These regulations, if implemented, would allow NMFS to issue annual Letters of Authorization (LOAs) to the USAF. The current regulations and LOA expire on December 31, 2003. A detailed description of the operations is contained in the USAF application (USAF, 2003) which is available upon request (see **ADDRESSES**).

#### Description of the Specified Activity

VAFB is the main west coast launch facility for placing commercial, government, and military satellites into polar orbit on expendable (i.e. not reusable) launch vehicles, and for testing and evaluation of intercontinental ballistic missiles (ICBM) and sub-orbital target and interceptor missiles. In addition to space vehicle and missile launches, there are security and search and rescue helicopter operations, as well as test and evaluation flights of fixed-wing air craft. The USAF expects to launch a total of 30 rockets and missiles from VAFB.

Currently five space launch vehicle programs use VAFB to launch satellites into polar orbit: Atlas IIAS, Delta II, Minotaur, Taurus, and Titan (II and IV). Two new programs, the Evolved Expendable Launch Vehicle (EELV) and Space X, are scheduled to make their inaugural launches at VAFB in 2004. The EELV will use a Boeing Delta IV vehicle and a Lockheed-Martin Atlas V. Eventually, these vehicles will replace

many of the other programs such as Atlas II and Titan, but initially there will be an overlap in the launches of each program. The Space X is a commercial program which will launch small payloads into low earth orbit. There is also a variety of small missiles, several types of interceptor and target vehicles, and fixed-wing aircrafts that are launched from VAFB.

### Atlas IIAS

The Atlas IIAS is launched from Space Launch Complex (SLC) 3E on south VAFB, approximately 9.9 km (6.2 mi) from the Rocky Point harbor seal haul-out area and 11.1 km (6.9 mi) from the Spur Road haul-out site. The Atlas IIAS is a medium-sized (up to 48m, 157.5 ft, tall) launch vehicle with approximately 724,800 lbs of thrust. Two Atlas IIAS launch vehicles have been launched from SLC 3E (the Atlas IIAS AC-141 Terra launched on 18 December 1999 and the Atlas IIAS MLV-10 launched on 8 September 2001).

The received sound level at south VAFB from the Atlas IIAS launches was relatively quiet, due to the great amount of attenuation from the 9.9 km (6.2 mi) distance between the measurement site and SLC-3E. Measurements at the south VAFB haul-out site were similar to those measured at the north base Spur Road monitoring site, but slightly higher. The A-weighted sound exposure levels (ASEL), measured at the south haul-out site for the two launches, were 87.3 and 88.5 dB, the unweighted SELs were measured at 124.2 and 118.0 dB and the C-weighted SEL were measured to be 113.6 and 112.1 dB. The launch noise reached a maximum fast sound level (Lmax) of 76.4 and 80.8 dB.

The launch noise measured at the north VAFB Spur Road acoustic monitoring site was slightly quieter than at the south VAFB monitoring locations, due to the greater distance between the site and the launch pad. The launch noise at this site was unsubstantial. The A-weighted SELs for both launches were measured to be 86.1 dB, and the Terra launch had an unweighted SEL of 117.2 dB, and a C-weighted SEL of 110.0 dB. The launch noise reached Lmax levels of 75.2 and 79.7 dB. A sonic boom was measured for the launch of the Atlas IIAS MLV-10 on SMI. The peak overpressure was 0.75 psf (125.1 dB) and the rise time was relatively slow at 2.6 milliseconds. This relatively slow rise time reduces the higher frequency content of the boom and tends to produce a sound more resembling distant thunder than the more familiar sharp crack of a distinct sonic boom.

### Delta II

The Delta II is launched from SLC-2 on north VAFB, approximately 2.0 km (1.2 mi) from the Spur Road harbor seal haul-out site. The Delta II is a medium-sized launch vehicle approximately 38 m (124.7 ft) tall. The Delta II uses a Rocketdyne RS-27A main liquid propellant engine and additional solid rocket strap-on graphite epoxy motors (GEMs) during liftoff. A total of 3, 4 or 9 GEMs can be attached for added boost during liftoff. When 9 GEMs are used, 6 are ignited at liftoff and 3 are ignited once the rocket is airborne. When 3 or 4 GEMs are used, they are all ignited at liftoff. The number of GEMs attached to each vehicle will determine the amount of launch noise produced by the vehicle.

Six Delta II launches have been acoustically quantified near the Spur Road harbor seal haul-out site. The noise at the Spur Road site from the Delta II launches is relatively loud, primarily due to the close proximity of the launch pad. The Delta II is the second loudest of the launch vehicles at the Spur Road haul-out site with unweighted SEL measurements ranging from 126.5 to 128.8 dB and averaging of 127.4 dB (as measured by the digital audio tape [DAT] recorder). The C-weighted SEL ranged from 124.3 to 126.7 dB with an average of 125.4 dB (DAT). The A-weighted SEL measurements from both a sound level meter (SLM) and the DAT were similar and ranged from 111.8 to 118.2 dB and had an average of 114.5 dB (DAT). The seal-weighted SELs were considerably reduced to range from 74.2 to 79.7 dB and averaged 76.9 dB. The Lmax values ranged from 104.2 to 112.5 and averaged 109.5 dB. Sonic booms have been measured on SMI from two Delta II launches, the Iridium MS-12 and EO-1. The Iridium MS-12 had two small sonic booms impact the Point Bennett area of SMI with peak overpressures of 0.47 and 0.64 psf and rise times of 18 and 91 ms. The Delta II EO-1 sonic boom had a peak overpressure of 0.4 psf and rise time of 41 microseconds ( $\mu$ s).

### Minotaur

The Minotaur launch vehicle is launched from the California Spaceport on south VAFB, near SLC-6 and is approximately 2.3 km (1.4 mi) from the south VAFB pinniped haul-out sites. The Minotaur launch vehicle is made up of modified Minuteman II Stage I and Stage II segments mated with Pegasus upper stages. The Minotaur is a small vehicle, approximately 19.2 m (63.0 ft) tall with approximately 215,000

lbs of thrust. Although the Minotaur produces less thrust than other larger launch vehicles, due to its close proximity to the south VAFB haul-out sites, it is one of the loudest vehicles at this site. Two Minotaur launch vehicles have been launched from VAFB (26 January 2000 and 19 July 2000).

The launch noise measured near the south VAFB haul-out sites was moderately loud, primarily due to the close proximity to the launch pad. The unweighted SEL measurements varied by 3.5 dB between the two launches and were measured to be 119.4 and 122.9 dB. The C-weighted SELs varied less and were measured at 116.6 and 117.9 dB. From the DAT and SLM measurements, the A-weighted SEL ranged from 104.9 to 107.0 dB. The launch noise reached an Lmax level of 101.7 and 103.4 dB.

### Taurus

The Taurus space launch vehicle is launched from 576-E on north VAFB, approximately 0.5 km (0.3 mi) from the Spur Road harbor seal haul-out site. There have been 6 Taurus rockets launched from 576-E. The standard Taurus is a small launch vehicle, at approximately 24.7 m (81.0 ft) tall and is launched in two different configurations: Defense Advanced Research Projects Agency (DARPA) and standard, with different first stages providing 500 or 400 kilopounds of thrust, respectively.

The launch noise from 4 Taurus launches has been measured near the Spur Road haul-out site. The noise arriving at the Spur Road monitoring site, near the harbor seal haul-out, was substantial due to the close proximity of the launch pad. At 0.5 km to SLC-576, the Taurus is the loudest of the launch vehicles at the Spur Road haul-out site. The unweighted SEL measurements from all the measured Taurus vehicles ranged from 135.8 to 136.8 and averaged 136.4 dB. The C-weighted SEL measurements were slightly lower as expected, ranging from 133.8 to 134.8 dB and averaged 134.5 dB. The A-weighted SEL measurements ranged from 123.5 to 128.9 dB with an average of 126.6 dB (SLM). The harbor seal-weighted SELs ranged from 88.0 to 91.3 dB and averaged 90.2 dB. The Lmax values were measured to range from 118.3 to 122.9 dB and averaged 120.9 dB (SLM).

### Titan II

The Titan II space launch vehicle is launched from SLC-4W, which is approximately 8.5 km (5.3 mi) north of the south VAFB pinniped haul-out sites.

The USAF has launched 6 Titan II space launch vehicles from SLC-4W during the study period. The Titan II space launch vehicle is a medium-sized liquid fueled rocket at 36.0 m (118.1 ft) tall. It has a small-to-medium weight lift capability; additional strap-on GEM solid rocket motors can be added to the first stage to increase the lift capability. All of the Titan II launch configurations were the same, launched without additional solid rocket motors attached and had a thrust of approximately 474,000 lbs.

The Titan II launch noise as measured near the south VAFB haul-out site, which is the closest haul-out to SLC-4W, is unsubstantial and ranks among the quieter vehicles. This is primarily due to its moderate thrust and the relatively long distance to the launch pad. The unweighted SEL measurements ranged from 116.3 to 120.3 dB and averaged 118.3 dB. The C-weighted SELs ranged from 109.6 to 115.0 dB and averaged 112.5 dB. The A-weighted SELs ranged from 83.5 to 95.7 dB and averaged 89.9 dB (DAT). The harbor seal-weighted SELs ranged from 38.2 to 54.5 dB and averaged 47.4 dB. The Lmax values were measured to range from 74.9 to 85.9 dB and averaged 80.1 dB.

#### **Titan IV**

The Titan IV space launch vehicle is launched from SLC-4E, which is approximately 8.5 km (5.3 mi) from the south VAFB pinniped haul-out site. The Titan IV series was developed as a complementary heavy-lift vehicle to the Space Shuttle and is by far the largest vehicle currently launched from VAFB. The Titan IV is approximately 44 m (144.5 ft) tall and has a liquid fuel core engine and two upgraded solid rocket motors (SRMU) that provide approximately 3,400,000 lbs of thrust. The Titan IV is moderately loud and is one of the louder vehicles at the south VAFB haul-out site, primarily due to its large amount of thrust. The launch noise measurements for the 4 Titan IV launches measured were all fairly consistent. The unweighted SELs ranged from 125.9 to 130.2 dB and averaged 127.8 dB. Similarly, the C-weighted measurements varied very little, with the C-weighted SELs ranging from 119.0 to 124.2 dB and averaging 121.5 dB. There was a greater difference with the A-weighted and harbor seal-weighted measurements with the A-weighted SELs ranging from 96.6 to 104.5 dB with an average of 101.5 dB (DAT). The harbor seal-weighted SELs ranged from 54.4 to 63.5 dB with an average of 60.3 dB. The Lmax values were determined to range from 88.2 to 100.6 dB and

averaged 95.6 dB. Several sonic booms have been measured for the launches of the Titan IV. The peak overpressures from sonic booms produced by this vehicle range from 1.34 to 8.97 psf. These booms have been measured for 4 launches of the Titan IV and have impacted each coast of SMI.

#### **Evolved Expendable Launch Vehicle (EELV)**

The EELV is the Air Force's newest launch vehicle program and will use the Atlas V vehicle from Lockheed-Martin and the Delta IV space launch vehicle from the Boeing Company for launches from VAFB. The EELV program will become the main space launch program over the next several years, replacing many of the other launch vehicles at VAFB. The maximum number of forecasted EELV launches per year is 5, with a total of 68 launches projected through 2020 (U.S. Air Force 2000).

The Atlas V consists of both a medium (V400) and heavy (V500) lift vehicle with up to 5 solid rocket boosters. During the next 5 years, only the medium lift V400 series vehicle will be launched from VAFB. The V400 series will lift up to 7,640 kg (16,843 lbs) into geosynchronous transfer orbit or up to 12,500 kg (27,557.3 lbs) into low earth orbit. The Atlas V consists of a common booster core (3.8 m, 12.5 ft, in diameter and 32.5 m, 106.6 ft, high) powered by an RD180 engine that burns a liquid propellant fuel consisting of liquid oxygen and RP1 fuel (kerosene). The RD180 engine provides 840,000 lbs of thrust on liftoff, and up to three solid rocket boosters can be attached to the common booster core to provide extra lift. There is a Centaur upper stage (3.1 m, 10.2 ft, in diameter and 12.7 m, 41.7 ft, high) powered by a liquid oxygen and liquid hydrogen fuel. The payload fairing is up to 4.2 m (13.7 ft) making the complete Atlas V up to 58.3 m (191.3 ft) high.

The Atlas V will be launched from SLC-3 East, the site of the current Atlas II launch facility. SLC-3 East is approximately 9.9 km (6.2 mi) north of the main harbor seal haul-out site in the area of Rocky Point. Launches of the smaller Atlas IIAS (47.4 m, 51.8 ft, in length and 700,000 lbs of thrust) produced A-weighted sound exposure levels ranging from 87.3 to 88.5 dB at the south VAFB haul-out site. The predicted noise level at the closest haul-out site (10 km, 6.2 mi, from the launch pad of an Atlas V) would be slightly louder than the noise levels from the Atlas IIAS. The maximum sonic boom impacting the Channel Islands would be 7.2 pounds per square foot (psf). The size of the actual sonic boom will

depend on meteorological conditions, which can vary by day and season and with the trajectory of the vehicle.

The Delta IV family of launch vehicles consists of 5 launch vehicle configurations utilizing a common booster core (CBC) first stage and 2 and 4 strap on GEMs. The Delta IV comes in four medium lift configurations and one heavy lift configuration consisting of multiple common booster cores. The Delta IV can carry payloads from 4,210 to 13,130 kg (9,281.3 to 28,946.2 lbs) into geosynchronous transfer orbit. The Delta IV will be launched from SLC-6, which is 2.8 km (1.7 mi) north of the main harbor seal haul-out site at South Rocky Point. The Delta IV will be the loudest vehicle at the south VAFB harbor seal haul-out site. The Delta IV is predicted to have a sonic boom offshore of up to 7.2 psf for the largest of the medium configurations and 8 to 9 psf for the heavy configuration. The size and location of the actual sonic boom will depend on meteorological conditions, which can vary by day and season and with the trajectory of the vehicle.

#### **Space X**

The Space X program will launch the Falcon space launch vehicle from SLC 3-West on south VAFB. The Falcon is a light space launch vehicle and will send small payloads of up to 500 kg (1102.3 lbs) into low earth orbit. The Falcon vehicle is 1.7 m (5.6 ft) in diameter and 20.7 m (67.9 ft) in height, making it approximately the size of a Peacekeeper missile. The Falcon is a two-stage liquid fuel vehicle. The first stage is reusable and uses a liquid oxygen and kerosene base fuel. The second stage is expendable and also uses a liquid oxygen and kerosene fuel.

#### **Other Launch Activities**

There are a variety of small missiles launched from VAFB, including Peacekeeper, Minuteman III, and several types of interceptor and target vehicles for the National Missile Defense Program. The missile launch facilities are spread throughout northern VAFB and are within 0.65 to 3.9 km (0.4 to 2.4 mi) of the recently occupied Lion's Head haul-out site and approximately 11 to 16.5 km (6.8 to 10.3 mi) north of the Spur Road and Purisma Point harbor seal haul-out sites.

The Peacekeeper missile is an Inter-Continental Ballistic Missile (ICBM) that was developed as part of the United States strategic deterrence force. The Peacekeeper is launched from various underground silos as part of a test and evaluation program. The Peacekeeper is composed of four rocket motors, 21.8 m

(71.5 ft) in length by 2.3 m (7.5 ft) in diameter, with the first stage thrust of 500,000 lbs. The Peacekeeper, unlike other silo launch missiles, is "cold launched," initially propelled out of the silo with pressurized gas. The first stage rocket motor is ignited once the vehicle is approximately 20 m (65.6 ft) above the ground. The Peacekeeper missile is being phased out and only a few launches remain.

The Minuteman III missile is an ICBM that was also developed as part of the United States strategic deterrence force. Similar to the Peacekeeper, the Minuteman III is launched from underground silos but is not cold launched. The Minuteman III is composed of three rocket motors and is 18.0 m (59.1 ft) in length by 1.7 m (5.6 ft) in diameter, with a first stage thrust of 202,600 lbs.

The Missile Defense Agency (MDA) is developing the Ground-based Midcourse Defense (GMD) element of the conceptual Ballistic Missile Defense System (BMDS). The BMDS concept is to defend against threat missiles in each phase or segment of the missile's flight. There are three segments of this conceptual system in various stages of technology development: Boost Phase Defense, Midcourse Defense, and Terminal Defense. Each segment of the BMDS is being developed to destroy an attacking missile in the corresponding boost, mid-course, or terminal phase of its flight. The GMD element is designed to protect the United States in the event of a limited ballistic missile attack by destroying the threat missile in the mid-course phase of its flight. During the mid-course phase, which occurs outside the earth's atmosphere for medium and long-range missiles, the missile is coasting in a ballistic trajectory.

A variety of small missiles under 13 m (42.7 ft) including the Hera, Lance, Patriot As A Target, ERINT, Black Brant, Terrier, SRTYPI II, Castor I, Storm, ARIES, and Hermes are also included in the application because of the new harbor seal pupping site that was established in 2002 at Lion's Head. Those missiles, in addition to missiles already included in previous NMFS authorizations for VAFB (Minuteman and Peacekeeper missiles and missiles from the Ground Based Interceptor programs), and the new generation of missiles from the MDA will be covered by these regulations and annual LOAs. Several types of missiles will be used for target and interceptor test and evaluation; some of these missiles are being used currently (Booster Verification Test) and the remainder will not be used until 2004 or later. All of the target and interceptor missiles are

smaller than the Minuteman III or Peacekeeper missiles that are currently launched from VAFB. Many of the different missile types have interchangeable first or second stage motors; therefore, most of the missiles may have similar noise characteristics, depending on their configuration.

The Ground Based Interceptors (GBI) are approved for launchings at VAFB (12 May 2003, 68 FR 25347). The GBI Booster Verification and the uncanisterized Orbital Booster Vehicle will be flight tested from LF-21 and LF-23. The missiles would be comprised of a commercially available, solid propellant booster consisting of three stages and an exo-atmospheric kill vehicle emulator.

#### Aircraft Activities

VAFB is also a site for limited flight testing and evaluation of fixed-wing aircraft. Three approved routes are used that avoid the established pinniped haul-out sites. A variety of aircraft, including the B1 and B2 bombers, F-14, F-15, F-16, and F-22 fighters, and KC-135 tankers may use the test and evaluation routes.

Various fixed-wing aircraft (jet and propeller aircraft) use VAFB for a variety of purposes including delivery of space or missile vehicle components, launching of launch vehicles at high altitude, such as the Pegasus, and emergency landings. VAFB has approximately 120-fixed-wing flights per year and 10,000 take offs and landings (training operations), which occur mostly on north VAFB (U.S. Air Force 2003). All aircraft are required to remain outside of an established 1,000-ft (304.8 m) bubble around pinniped rookeries and haul-out sites, except when performing a life-or-death rescue mission, when responding to a security incident, or during an aircraft emergency.

The VAFB helicopter squadron uses a UH-1N helicopter and provides support for launch operations, security reconnaissance, aerial photography, training, transport, and search and rescue. VAFB has approximately 75 helicopter sorties per month (U.S. Air Force 2003). All helicopters are required to remain outside of the 1,000-ft (304.8 m) bubble around pinniped rookeries or haul-out sites, except when performing a life-or-death rescue mission, when responding to a security incident, or during an aircraft emergency.

#### Description of Habitat and Marine Mammals Affected by the Activity

VAFB is composed of 99,000 acres of land and approximately 65 km (39 mi) of coastline on the coast of Central

California within Santa Barbara County. The northern Channel Islands are located 72 km (44.7 mi) south of VAFB and consist of San Miguel Island (SMI), Santa Cruz Island (SCI), and Santa Rosa Island (SRI). The northern Channel Islands are part of the Channel Islands National Park and the Channel Islands National Marine Sanctuary.

The most common marine mammal inhabiting VAFB is the Pacific harbor seal (*Phoca vitulina richardsi*). Harbor seals are local to the area, rarely traveling more than 50 km (31.1 mi) from their haul-out sites. They haul-out on small offshore rocks or reefs and sandy or cobblestone cove beaches. Although harbor seals can be found along much of the VAFB coastline, they congregate in the areas of Oil Well Canyon to South Rocky Point and near the boat harbor on south VAFB. The haul-out site on south VAFB has the largest population of harbor seals on VAFB, with up to 515 seals surveyed, and has been growing at an average annual rate of 12.7 percent since 1997 while the California population has remained stable. At least 700 harbor seals used SMI, 1,000 used SCI and 900 used SRI during the 2002 aerial counts (Lowry and Caretta 2003).

Less than 200 California sea lions (*Zalophus californianus*) are found seasonally on VAFB. Sea lions may sporadically haul-out to rest when in the area to forage or when transiting the area, but generally spend little time there. Sea lions may haul-out in the area of Rocky Point, Point Arguello, Point Pedernales, and Point Sal, just north of VAFB. In 2003, at least 142 sea lions and 5 pups were hauled out at Rocky Point. This was the first reported occurrence of sea lions being born at VAFB but may be a result of the El Niño conditions that existed at that time. SMI is one of the major California sea lion rookeries, along with San Nicolas Island, with about 23,000 pups born each year. Launches from VAFB will only affect SMI.

Approximately 150 northern elephant (*Mirounga angustirostris*) seals may be found seasonally on VAFB. Weaned elephant seal pups making their first foraging trips occasionally haul-out for 1 to 2 days at VAFB before continuing on their migration. In April 2003, approximately 88 juveniles and young adult females began to haul-out at South Rocky Point to molt. The nearest elephant seal haul-out point is at Point Conception, 25 km (15.5 mi) south of VAFB. Elephant seals primarily use SMI and SRI for breeding and hauling out to rest or molt. Up to 12,000 elephant seal pups are found on SMI and up to 1,500 on SRI (Lowry 2002).

There have been no reports of northern fur seals (*Callorhinus ursinus*) on VAFB. They are only found on the west end of SMI at Point Bennet and Castle Rock, just offshore of SMI. The SMI stock is approximately 4,000 fur seals (Forney et al. 2000d).

There have been no reports of Steller sea lions (*Eumetopias jubatus*) on VAFB. A single observation of a sub adult male Steller sea lion on SMI was made in the spring of 1998 prior to the breeding season (Thorson et al. 1999). Previously, the last observation of a Steller sea lion was made in the mid-1980's.

There have been no reports of Guadalupe fur seals (*Arctocephalus townsendi*) on VAFB. A few Guadalupe fur seals are seen each year at SMI, generally in the summer or fall.

#### **Potential Effects of Rocket and Missile Launches and Associated Activities on Marine Mammals**

The activities under these regulations create two types of noise: Continuous (but short-duration) noise, due mostly to combustion effects of aircraft and launch vehicles, and impulsive noise, due to sonic boom effects. Launch operations are the major source of noise on the marine environment from VAFB. The operation of launch vehicle engines produces significant sound levels. Generally, noise is generated from four sources during launches: (1) Combustion noise from launch vehicle chambers, (2) jet noise generated by the interaction of the exhaust jet and the atmosphere, (3) combustion noise from the post-burning of combustion products, and (4) sonic booms. Launch noise levels are highly dependent on the type of first-stage booster and the fuel used to propel the vehicle. Therefore, there is a great similarity in launch noise production within each class size of launch vehicles.

The noise generated by VAFB activities will result in the incidental harassment of pinnipeds, both behaviorally and in terms of physiological (auditory) impacts. The noise and visual disturbances from space launch vehicle and missile launches, and aircraft and helicopter operations may cause the animals to move towards the water or enter the water. The percentage of seals leaving the haul-out increases with noise level up to approximately 100 decibels (dB) A-weighted Sound Exposure Level, after which almost all seals leave, although recent data has shown that an increasing percentage of seals have remained on shore. Using time-lapse video photography, it was discovered that during four launch events, the seals that

reacted to the launch noise but did not leave the haul-out were all adults. This suggests that they had experienced other launch disturbances and had habituated to it in that they reacted less strongly than other younger seals.

The louder the launch noise, the longer it took for seals to begin returning to the haul-out site and for the numbers to return to pre-launch levels. In two past Athena IKONOS launches with A-weighted sound exposure levels of 107.3 and 107.8 dB at the closest haul-out site, seals began to haul-out again approximately 16 to 55 minutes post-launch (Thorson et al. 1999a; 1999b). In contrast, noise levels from an Atlas launch and several Titan II launches had A-weighted sound exposure levels ranging from 86.7 to 95.7 dB at the closest haul-out and seals began to return to the haul-out site within 2 to 8 minutes post-launch (Thorson and Francine 1997; Thorson et al. 2000). Seals may begin to return to the haul-out site within 2 to 55 minutes of the launch disturbance and the haul-out site has usually returned to pre-launch levels within 45 minutes to 120 minutes.

The main concern on the northern Channel Islands is potential impacts from sonic booms created during launches of space vehicles from VAFB. Sonic booms are impulse noises, as opposed to continuous (but short-duration) noise such as that produced by aircraft and rocket launches. The initial shock wave during a sonic boom propagates along a path that grazes the earth's surface due to the angle of the vehicle and the refraction of the lower atmosphere. As the launch vehicle pitches over, the direction of propagation of the shock wave becomes more perpendicular to the earth's surface. These direct and grazing shock waves can intersect to create a narrowly focused sonic boom, about 1 mile of intense focus, followed by a larger region of multiple sonic booms. During the period of 1997 to 2002, there were no sonic booms above 2.0 psf recorded on the northern Channel Islands. Small sonic booms between 1 to 2 psf usually elicit a heads up response or slow movement toward and entering the water, particularly for pups.

From the research and monitoring conducted over the last 5 years, it has become clear that there is little difference between distinctive classes of rockets (ballistic launches and satellite launches). Therefore, to better represent the possible impacts to marine mammals, launch activities at VAFB have been divided into three geographic zones that comprise the main pinniped haul-out on VAFB. This is because the

level of disturbance caused by launches is more closely associated with the geographical proximity of launch sites to haul-out sites.

Zone 1 is northern VAFB. The main haul-out site in this area is at Lion's Head and is regularly used by small numbers of harbor seals for resting and pupping. Although this is not a major haul-out site, it is an important site to consider during launches that occur during the harbor seal pupping season.

Zone 2 is in the central VAFB, running from Spur Road north to San Antonio Creek. This area has the two main harbor seal haul-out sites on north VAFB, Spur Road, and Purisima Point. Spur Road has up to 145 harbor seals but is not a pupping site. Purisima Point has up to 50 seals and up to 5 pups.

Zone 3 is in southern VAFB and covers from approximately the Boat Harbor to northern boundary of south VAFB. The main harbor seal haul-out site on VAFB is found in the area of the Boat Harbor to Rocky Point. Up to 500 harbor seals are found there during the molting season and up to 52 pups during the pupping season, March through June. California sea lions will haul-out on occasion on the Boat Dock jetty and seasonally at Rocky Point. Weaned northern elephant seal pups (only 1 to 2 seals) will haul-out occasionally for several days to rest in the area of Rocky Point during their first foraging trip to sea.

Sonic booms created by the larger space launch vehicles may impact marine mammals on the northern Channel Islands, particularly SMI. Based on previous monitoring of sonic booms created by space launch vehicles on SMI (Thorson et al. 1999a; 1999b), it is estimated that up to approximately 25 percent of the marine mammals may be disturbed on SMI. If conditions allow, under a scientific research permit issued under Section 104 of the MMPA, the hearing of harbor seals will be tested before and after each launch.

With respect to impacts on pinniped hearing, NMFS' proposed rule for the previous rulemaking indicated that VAFB launch and missile activities, including sonic booms, would have an impact on the hearing of pinnipeds (63 FR 39055; July 21, 1998). These impacts were limited to Temporary Threshold Shifts (TTS) lasting between minutes and hours, depending on exposure levels. Subsequent information on Auditory Brainstem Response (ABR) testing on harbor seals following Titan IV and Taurus launches indicates that no Permanent Threshold Shift (PTS) resulted from these launches. These results are consistent with NMFS'

previous conclusions in its prior rulemaking.

NMFS also notes here that stress from long-term cumulative sound exposures can result in physiological effects on reproduction, metabolism, and general health, or on the animals' resistance to disease. However, this is not likely to occur here, because of the infrequent nature and short duration of the noise, including the occasional sonic boom. Research shows that population levels at these haul-out sites have remained constant in recent years, giving support to this conclusion.

The USAF does not anticipate a significant impact on any of the species or stocks of marine mammals from launches from VAFB. For even the largest launch vehicles, such as Titan IV and Delta IV, the launch noises and sonic booms can be expected to cause a startle response and flight to water for those harbor seals, California sea lions and other pinnipeds that are hauled out on the coastline of VAFB and on the northern Channel Islands. The noise may cause TTS in hearing depending on exposure levels but no PTS is anticipated.

#### **Numbers of Marine Mammals Expected to Be Taken by Harassment**

It is estimated that up to approximately 25 percent of the marine mammals may be disturbed on SMI due to the rare occurrence of a sonic boom. Up to approximately 200 harbor seals of all age classes and sexes may be taken by level B harassment per launch on the northern Channel Islands, with an expected range of between zero and 200 harbor seals. Up to approximately 5,800 California sea lion pups and 2,500 juvenile and adult sea lions of either sex may be harassed at SMI per launch, with an expected range of between zero and 8,300 sea lions. Up to approximately 3,000 northern elephant seal pups and 10,000 northern elephant seals of all age classes and sexes may be taken, by level B harassment, per launch on the northern Channel Islands, with an expected range of between zero and 13,000 elephant seals. Up to approximately 300 northern fur seal pups and 1,100 juvenile and adult northern fur seals of both sexes may be taken, by level B harassment, per launch at SMI, with an expected range of between zero and 1,100 fur seals. One Steller sea lion of any age class or sex may be harassed during the period of the regulations. Up to two Guadalupe fur seals of any age class or sex may be harassed over the period of the proposed regulations. The numbers taken will depend on the type of rocket, location of the sonic boom, weather

conditions that influence the size of the sonic boom, the time of day and time of year. For this reason, ranges are given for the harassment of marine mammals.

#### **Effects of Rocket and Missile Launches and Associated Activities on Subsistence Needs**

There are no subsistence uses for these pinniped species in California waters, and, thus, there are no anticipated effects on subsistence needs.

#### **Marine Mammal Habitat at VAFB**

Harbor seals, California sea lions, northern elephant seals, northern fur seals, Guadalupe fur seals, and Steller sea lions are known to inhabit VAFB and the surrounding islands. There will only be short-term disturbance effects to the behavior of the marine mammals and this will not affect their habitat.

#### **Mitigation**

To minimize impacts on pinnipeds on beach haul-out sites and to avoid any possible sensitizing or predisposing of pinnipeds to greater responsiveness towards the sights and sounds of a launch, the USAF has prepared the following mitigation measures.

All aircraft and helicopter flight paths must maintain a minimum distance of 1,000 ft (305 m) from recognized seal haul-outs and rookeries (e.g., Point Sal, Purisima Point, Rocky Point), except in emergencies or for real-time security incidents (e.g., search-and-rescue, fire-fighting) which may require approaching pinniped rookeries closer than 1,000 ft (305 m). For missile and rocket launches, unless constrained by other factors including, but not limited to, human safety, national security or launch trajectories, holders of Letters of Authorization must schedule launches to avoid, whenever possible, launches during the harbor seal pupping season of March through June. NMFS also proposes to expand the requirement so that VAFB must avoid, whenever possible, launches which are predicted to produce a sonic boom on the Northern Channel Islands during harbor seal, elephant seal, and California sea lion pupping seasons.

If post-launch surveys determine that an injurious or lethal take of a marine mammal has occurred, the launch procedure and the monitoring methods must be reviewed, in cooperation with NMFS, and appropriate changes must be made through modification to an LOA, prior to conducting the next launch of the same vehicle under that LOA.

#### **Monitoring**

As part of its application, VAFB provided a monitoring plan, similar to

that in the current regulations (50 CFR 216.125), for assessing impacts to marine mammals from rocket and missile launches at VAFB. This monitoring plan is described, in detail, in their application (VAFB, 2003). The Air Force will conduct the following monitoring under the regulations.

The monitoring will be conducted by a NMFS-approved marine mammal biologist experienced in surveying large numbers of marine mammals. Monitoring at the haul-out site closest to the launch facility will commence at least 72 hours prior to the launch and continue until at least 48 hours after the launch.

#### *Monitoring for Vandenberg Air Force Base*

Biological monitoring at VAFB will be conducted for all launches during the harbor seal pupping season, 1 March to 30 June. Acoustic and biological monitoring will be conducted on new space and missile launch vehicles during at least the first launch, whether it occurs within the pupping season or not. The first three launches of the Delta IV will also be monitored. In addition, the hearing of harbor seals will be tested before and after each launch under a scientific research permit issued under Section 104 of the MMPA, which continues the hearing tests covered under a previous scientific research permit that expired in 2002.

Monitoring will include multiple surveys each day that record, when possible, the species, number of animals, general behavior, presence of pups, age class, gender, and reaction to launch noise, sonic booms or other natural or human-caused disturbances. Environmental conditions such as tide, wind speed, air temperature, and swell will also be recorded. Time-lapse photography or video will be used during daylight launches to document the behavior of mother-pup pairs during launch activities. For launches during the harbor seal pupping season (March through June), follow-up surveys will be made within two weeks of the launch to ensure that there were no adverse effects on any marine mammals. A report detailing the species, number of animals observed, behavior, reaction to the launch noise, time to return to the haul-out site, any adverse behavior and environmental conditions will be submitted to NMFS within 120 days of the launch.

#### *Monitoring for the Northern Channel Islands*

Monitoring will be conducted on the northern Channel Islands (San Miguel, Santa Cruz, and Santa Rosa Islands)

whenever a sonic boom over 1.0 psf is predicted (using the most current sonic boom modeling programs) to impact one of the Islands. Monitoring will be conducted at the haul-out site closest to the predicted sonic boom impact area. Monitoring will be conducted by a NMFS-approved marine mammal biologist experienced in surveying large numbers of marine mammals. Monitoring will commence at least 72 hours prior to the launch and continue until at least 48 hours after the launch.

Monitoring will include multiple surveys each day that record the species, number of animals, general behavior, presence of pups, age class, gender, and reaction to launch noise, sonic booms or other natural or human-caused disturbances. Environmental conditions such as tide, wind speed, air temperature, and swell will also be recorded. Due to the large numbers of pinnipeds found on some beaches of SMI, smaller focal groups should be monitored in detail rather than the entire beach population. A general estimate of the entire beach population should be made once a day and their reaction to the launch noise noted. Photography or video will be used during daylight launches to document the behavior of mother-pup pairs or dependent pups during launch activities. During the pupping season of any species affected by a launch, follow-up surveys will be made within two weeks of the launch to ensure that there were no adverse effects on any marine mammals. A report detailing the species, number of animals observed, behavior, reaction to the launch noise, time to return to the haul-out site, any adverse behavior and environmental conditions will be submitted to NMFS within 120 days of the launch.

#### Reporting Requirements

A report containing the following information must be submitted to NMFS within 120 days after each launch: (1) Date(s) and time(s) of each launch, (2) date(s), location(s), and preliminary findings of any research activities related to monitoring the effects on launch noise and sonic booms on marine mammal populations, and (3) results of the monitoring programs, including but not necessarily limited to (a) numbers of pinnipeds present on the haul-out prior to commencement of the launch, (b) numbers of pinnipeds that may have been harassed as noted by the number of pinnipeds estimated to have entered the water as a result of launch noise, (c) the length of time(s) pinnipeds remained off the haul-out or rookery, (d) the numbers of pinniped adults or pups that may have been injured or killed as

a result of the launch, and (4) any behavioral modifications by pinnipeds that likely were the result of launch noise or the sonic boom.

An annual report must be submitted no NMFS at the time of renewal of the LOA described in §216.127, that describes any incidental takings under an LOA not reported in the 120-day launch reports, such as the aircraft test program and helicopter operations and any assessments made of their impacts on hauled-out pinnipeds.

A final report must be submitted to NMFS no later than 180 days prior to expiration of these regulations. This report must summarize the findings made in all previous reports and assess both the impacts at each of the major rookeries and the cumulative impact on pinnipeds and any other marine mammals from Vandenberg activities.

#### Determinations

Based on the evidence provided in the application and this document, NMFS has preliminarily determined the requirements for authorizing the taking, by Level B harassment, of small numbers of marine mammals incidental to rocket and missile launch operations and aircraft overflights at VAFB have been satisfied. The total taking of marine mammals by Level B harassment from launch operations at VAFB over the period of these regulations will have no more than a negligible impact on affected marine mammal stocks. NMFS is assured that the space and missile test launch operations and aircraft overflights from VAFB off California will result, at worst, in temporary modifications in behavior by the affected pinnipeds and possible TTS in hearing of any pinnipeds that are in close proximity to a launch pad during launch. No take by injury and/or death is anticipated, and the potential for permanent hearing impairment is unlikely. NMFS has preliminarily determined that the requirements of section 101(a)(5)(A) of the MMPA have been met and the LOAs can be issued.

#### National Environmental Policy Act (NEPA)

The U.S. Air Force prepared an EA and issued a Finding of No Significant Impact in 1997, as part of its application for an incidental take authorization. NMFS is reviewing this EA and will prepare its own NEPA document before making a determination on the issuance of these regulations. A copy of the USAF 1997 EA for this activity is available upon request (see **ADDRESSES**).

#### Endangered Species Act (ESA)

Under section 7 of the ESA, NMFS has begun consultation on the proposed issuance of regulations under section 101(a)(5)(A) of the MMPA for this activity. Consultation will be concluded prior to promulgation of a final rule.

#### Coastal Zone Management Act Consistency

According to the USAF, it has received concurrence from the California Coastal Commission that the VAFB activities described in this document are consistent to the maximum extent practicable with the enforceable policies of the California Coastal Act.

#### Classification

This action has been determined to be not significant for purposes of Executive Order 12866.

The Chief Counsel for Regulation of the Department of Commerce has certified to the Chief Counsel for Advocacy of the Small Business Administration that this proposed rule, if adopted, would not have a significant economic impact on a substantial number of small entities since it would apply only to the 30th Space Wing, U.S. Air Force and would have no effect, directly or indirectly, on small businesses. It may affect a small number of contractors providing services on the base, some of which may be small businesses, but the number involved would not be substantial. Further, since the monitoring and reporting requirements are what would lead to the need for their services, the economic impact on them would be beneficial. Because of this certification, a regulatory flexibility analysis is not required and none has been prepared.

#### Information Solicited

NMFS requests interested persons to submit comments, information, and suggestions concerning the request and the structure and content of the regulations governing the taking. Because this document contains only a summary of the information provided in the documents available to the public (see **ADDRESSES**), commenters are requested to review these documents before submitting comments.

#### List of Subjects in 50 CFR Part 216

Exports, Fish, Imports, Indians, Labeling, Marine mammals, Penalties, Reporting and recordkeeping requirements, Seafood, Transportation.

Dated: November 21, 2003.

John Oliver,

Deputy Assistant Administrator for Operations, National Marine Fisheries Service.

For reasons set forth in the preamble, 50 CFR part 216 is proposed to be amended as follows:

**PART 216—REGULATIONS GOVERNING THE TAKING AND IMPORTING OF MARINE MAMMALS**

1. The authority citation for part 216 continues to read as follows:

**Authority:** 16 U.S.C. 1361 *et seq.*, unless otherwise noted.

2. In § 216.120, paragraph (a)(1) is revised to read as follows:

**§ 216.120 Specified activity and specified geographical region.**

(a) \* \* \*

(1) Launching up to 30 space and missiles vehicles each year from Vandenberg Air Force Base, for a total of up to 150 missiles and rockets over the 5-year authorization period.

\* \* \* \* \*

3. Section 216.121 is revised to read as follows:

**§ 216.121 Effective dates.**

Regulations in this subpart are effective from January 1, 2004, through December 31, 2008.

4. In 216.123, paragraph (c) and (d) are revised as follows:

**§ 216.123 Prohibitions.**

\* \* \* \* \*

(c) No person in connection with the activities described in § 216.120 shall:

- (1) Take any marine mammal not specified in § 216.120(b);
- (2) Take any marine mammal specified in § 216.120(b) other than by incidental, unintentional harassment;
- (3) Take a marine mammal specified in § 216.120(b) if such take results in more than a negligible impact on the species or stocks of such marine mammal; or
- (d) Violate, or fail to comply with, the terms, conditions, and requirements of these regulations or a Letter of Authorization issued under § 216.106.

5. In § 216.124, paragraphs (a)(1)–(3) are revised to read as follows:

5. In § 216.124, paragraphs (a)(1)–(3) are revised to read as follows:

**§ 216.124 Mitigation.**

(a) \* \* \*

(1) All aircraft and helicopter flight paths must maintain a minimum distance of 1,000 ft (305 m) from recognized seal haul-outs and rookeries (e.g., Point Sal, Purisima Point, Rocky Point), except in emergencies or for real-time security incidents (e.g., search-and-rescue, fire-fighting) which may require

approaching pinniped rookeries closer than 1,000 ft (305 m).

(2) For missile and rocket launches, holders of Letters of Authorization must avoid, whenever possible, launches during the harbor seal pupping season of March through June, unless constrained by factors including, but not limited to, human safety, national security, or for space vehicle launch trajectory necessary to meet mission objectives.

(3) VAFB must avoid, whenever possible, launches which are predicted to produce a sonic boom on the Northern Channel Islands during harbor seal, elephant seal, and California sea lion pupping seasons, March through June.

\* \* \* \* \*

6. In § 216.125, paragraphs (b) introductory text, (b)(2)–(b)(5) and (e) are revised and paragraphs (b)(6) and (b)(7) are added to read as follows:

**§ 216.125 Requirements for monitoring and reporting.**

\* \* \* \* \*

(b) Holders of Letters of Authorization must designate qualified on-site individuals, approved in advance by the National Marine Fisheries Service, as specified in the Letter of Authorization, to:

\* \* \* \* \*

(2) For launches during the harbor seal pupping season (March through June), conduct follow-up surveys within 2 weeks of the launch to ensure that there were no adverse effects on any marine mammals,

(3) Monitor haul-out sites on the Northern Channel Islands, if it is determined by modeling that a sonic boom of greater than 1 psf could occur in those areas (this determination will be made in consultation with the National Marine Fisheries Service),

(4) Investigate the potential for spontaneous abortion, disruption of effective female-neonate bonding, and other reproductive dysfunction,

(5) Supplement observations on Vandenberg and on the Northern Channel Islands with video-recording of mother-pup seal responses for daylight launches during the pupping season,

(6) Conduct acoustic measurements of those launch vehicles that have not had sound pressure level measurements made previously, and

(7) Include multiple surveys each day that record the species, number of animals, general behavior, presence of pups, age class, gender and reaction to launch noise, sonic booms or other natural or human caused disturbances, in addition to recording environmental

conditions such as tide, wind speed, air temperature, and swell.

\* \* \* \* \*

(e) An annual report must be submitted at the time of renewal of the LOA, described in § 216.127

\* \* \* \* \*

7. Section 216.127 is revised to read as follows:

**§ 216.127 Renewal of Letters of Authorization.**

A Letter of Authorization issued under § 216.126 for the activity identified in § 216.120(a) will be renewed annually upon:

- (a) Timely receipt of the reports required under § 216.125(d), if determined by the Assistant Administrator to be acceptable; and
- (b) A determination that the mitigation measures required under § 216.124 and the Letter of Authorization have been undertaken.

8. Section 216.128 is revised to read as follows:

**§ 216.128 Modifications of Letters of Authorization.**

(a) In addition to complying with the provisions of § 216.106, except as provided in paragraph (b) of this section, no substantive modification, including withdrawal or suspension, to a Letter of Authorization subject to the provisions of this subpart shall be made until after notice and an opportunity for public comment.

(b) If the Assistant Administrator determines that an emergency exists that poses a significant risk to the well-being of the species or stocks of marine mammals specified in § 216.120 (b), a Letter of Authorization may be substantively modified without prior notice and opportunity for public comment. A notice will be published in the **Federal Register** subsequent to the action.

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**DEPARTMENT OF COMMERCE**

**National Oceanic and Atmospheric Administration**

**50 CFR Parts 600 and 697**

[I.D. 110102A]

**Atlantic Coastal Fisheries Cooperative Management Act Provisions; Atlantic Coast Weakfish Fishery; Exempted Fishing Permits (EFPs)**

**AGENCY:** National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.