

[Federal Register: October 29, 2004 (Volume 69, Number 209)]
[Proposed Rules]
[Page 63114-63122]
From the Federal Register Online via GPO Access [wais.access.gpo.gov]
[DOCID:fr29oc04-32]

=====

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 216

[Docket No. 011011247-4249-02; I.D. 082701E]
RIN 0648-AP62

Taking and Importing Marine Mammals; Taking Marine Mammals
Incidental to Rocket Launches From Kodiak Island, AK

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

ACTION: Proposed rule; request for comments.

SUMMARY: NMFS has received a request from the Alaska Aerospace
Development Corporation (AADC) for Authorization to take by harassment
small numbers of pinnipeds incidental to rocket launches from the
Kodiak Launch Complex (KLC) on Kodiak Island, AK. By this document,
NMFS is proposing regulations to govern that take. NMFS also makes a
preliminary determination 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. In addition, NMFS proposes
reporting and monitoring requirements, and invites comment on the
application and proposed regulations.

DATES: Comments and information must be received no later than December
13, 2004.

ADDRESSES: You may submit comments on the application and proposed
rule, using the identifier 082701E, by any of the following methods:

E-mail: PR1.082701E@noaa.gov. You must include the
identifier 082701E in the subject line of the message. Comments sent
via e-mail, including all attachments, must not exceed a
10-megabyte file size.

Federal eRulemaking Portal: <http://www.regulations.gov>.

Follow the instructions for submitting comments.

Hand-delivery or mailing of paper, disk, or
CD-ROM comments: Stephen L. Leathery, Chief, Permits,
Conservation and Education Division, Office of Protected Resources,

National Marine Fisheries Service, 1315 East-West Highway,
Silver Spring, MD 20910-3225.

To help us process and review your comments more efficiently,
please use

[[Page 63115]]

only one method. A copy of the application containing a list of
references used in this document may be obtained by writing to the
address above or by telephoning the contacts listed under FOR FURTHER
INFORMATION CONTACT.

Comments regarding the burden-hour estimate or any other
aspect of the collection of information requirement contained in this
rule should be sent to NFMS via the means stated above, and to the
Office of Information and Regulatory Affairs, Office of Management and
Budget (OMB), Attention: NOAA Desk Officer, Washington, DC 20503.

FOR FURTHER INFORMATION CONTACT: Sarah Hagedorn, (301) 713-2322
ext 117, or Brad Smith, (907) 271-3023.

SUPPLEMENTARY INFORMATION:

Background

Section 101(a)(5)(A) of the Marine Mammal Protection Act (MMPA)(16
U.S.C. 1361 et seq.) 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 five 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 affecting 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.'' Except for categories of activities not pertinent here, 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 July 26, 2001, NMFS received an application from the AADC under
section 101(a)(5)(A) of the MMPA for authorization to take, by
harassment, Steller sea lions (*Eumetopias jubatus*) incidental to rocket

launches from KLC on Kodiak Island, Alaska. NMFS proposes this rule and regulations to govern these authorizations to be effective for a period of five years from December 1, 2004, through November 30, 2009. These regulations, if implemented, would allow NMFS to issue Letters of Authorization to the AADC. A full description of the operations is contained in the AADC application (AADC, 2001) which is available upon request (see ADDRESSES).

The KLC is a commercial rocket launch complex owned and operated by the State of Alaska through the AADC. Located wholly on state-owned lands, KLC occupies 43 acres (0.174 km²) within a 3,100 acre (12.545 km²) parcel on the eastern side of Kodiak Island on the Narrow Cape peninsula. The KLC was designed to accommodate a variety of small, solid rockets including such vehicles as the Minuteman II, Taurus, Conestoga, and Athena (Lockheed Martin Launch Vehicle). The largest vehicle that can be launched from KLC is the Athena-2 (Lockheed Martin Vehicle-2).

Launch operations at the KLC are authorized under license from the Federal Aviation Administration (FAA), Office of Associate Administrator for Commercial Space Transportation (AST) in accordance with the facility's Environmental Assessment (EA) and stipulations in the EA's Finding of No Significant Impact (FONSI) (see 61 FR 32884, June 25, 1996). These stipulations included a requirement to develop a Natural Resource Management Plan (NRMP) to address monitoring and mitigation activities for protected species in the area. This plan was developed in coordination with NMFS utilizing comparison of anticipated sound pressure levels from rocket motors to be launched from the KLC with documented marine mammal disturbance responses to such noise.

Measurement of Airborne Sound Levels

The following section is provided to facilitate an understanding of airborne and impulsive noise characteristics. Amplitude is a measure of the pressure of a sound wave that is usually expressed on a logarithmic scale with units of sound level or intensity called the decibel (dB). Sound pressure level (SPL) is described in units of dB re Micro-Pascal (micro-Pa, or [micro]Pa); for energy, the sound exposure level (SEL), a measure of the cumulative energy in a noise event, is described in terms of dB re micro-Pa²-second; and frequency, often referred to as pitch, is described in units of cycles per second or Hertz (Hz). In other words, SEL is the squared instantaneous sound pressure over a specified time interval, where the sound pressure is averaged over 5 percent to 95 percent of the duration of the sound.

For airborne noise measurements the convention is to use 20 Micro-Pa as the reference pressure, which is 26 dB above the underwater sound pressure reference of 1 micro-Pa and is the approximate threshold of human hearing. However, the conversion from air to water intensities is more involved than this and is beyond the scope of this document. NMFS recommends interested readers review NOAA's tutorial on this issue:

<http://www.pmel.noaa.gov/vents/acoustics/tutorial/tutorial.html>

Airborne sounds are also often expressed as broadband A-weighted (dBA) or C-weighted (dBC) sound levels. When frequency levels are made to correspond to human hearing, they are referred to as being A-weighted or A-filtered. With A-weighting, sound

energy at frequencies below 1 kHz and above 6 kHz are de-emphasized and approximates the human ear's response to sounds below 55 dB. C-weighting is often used in the analysis of high-amplitude noises like explosions, and corresponds to the relative response to the human ear to sound levels above 85 dB. C-weighting de-emphasizes ear frequency components of less than about 50 Hz. C-weight scaling is also useful for analyses of sounds having predominantly low-frequency sounds, such as sonic booms. For continuous noise like rocket launches, the important variables relevant to assessing auditory impacts or behavioral responses are intensity, frequency spectrum, and duration. In this document, whenever possible sound levels have been provided with A-weighting.

Description of the Activity

To date there have been six rocket launches from the KLC; however, the KLC facility is licensed to launch up to nine rockets per year. The first two launches used composite vehicles built from several stages taken from a decommissioned USAF Minuteman II launch vehicle, and were part of the U.S. Air Force (USAF) atmospheric interceptor technology (ait) program. The third and the sixth launches (March 2001 and April 2002) were part of the USAF Quick Reaction Launch Vehicle

[[Page 63116]]

(QRLV) program, and comprised of single stage M-56 motors taken from a decommissioned USAF Minuteman II launch vehicle. The fourth launch (September 2001) was a commercial Lockheed/Martin Athena rocket, which is the largest vehicle to be launched from KLC, and it placed four satellites into polar orbit. The fifth launch (November 2001) was a Department of Defense (DoD) Strategic Target System (STARS) vehicle.

Launches from the KLC are expected to be high inclination with launch azimuths ranging from 125 to 225 degrees in direction (AADC and AST, 1996). At the easternmost azimuth launch vehicle paths would pass over the eastern edge of Ugak Island; at the westernmost azimuth the vehicle would pass along the southeastern edge of the Kodiak Archipelago. Approximately 70 seconds after launch, a typical launch vehicle would be more than 8 miles high. Spent first-stage rocket motors and fuel casings would impact the ocean's surface from 11 to 314 nautical miles downrange, depending on the launch vehicle (AADC and AST 1996). Rocket motor sonic booms are predicted to reach the ocean surface over 20 miles downrange beyond the outer continental shelf over deep ocean.

Launch operations are a major source of noise on Kodiak Island, as the operation of launch vehicle engines produces significant sound levels. Generally, four types of noise occur during a launch. They are: (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. The principal objective of the KLC rocket motor noise monitoring task within the NRMP was to measure SPLs at the Ugak Island Steller sea lion haulout. A secondary objective was to monitor sound levels on Narrow Cape close to bald eagle and/or Steller's eider nests when present. SPLs were successfully recorded for the first four launches from KLC at the Ugak Island Steller sea lion haulout and on Narrow Cape by the University of Alaska Anchorage's Environment and

Natural Resources Institute (ENRI). The Ugak Island haulout is located approximately 2 miles (3.2 km) from Narrow Cape and about 3.5 miles (5.6 km) from the KLC launch pad on a narrow sand spit on the north side of the Island. The data gathered were weighted toward lower frequencies and showed a wide variation in sound pressures among rocket motors, with the highest levels being associated with the largest launch vehicle flown. Variations in the KLC sound pressure record are likely due to such variables as engine size, engine bell shape, and local atmospheric conditions. Summaries of the findings for each of the rockets launched to date are described below.

ait-1

The first launch from KLC occurred in November 1998, and was the first of the USAF ait program. Sound measurements from the ait-1 launch were collected using two sound level monitors (SLMs) that were deployed 26 hours before launch on Ugak Island at the base of the spit used as a haulout by Steller sea lions. The SLMs were set to highlight sounds exceeding 65 dB, which was done after checking real-time sound levels in the field at each site prior to setting them to record data. If the exceedance levels were set too low, the SLMs would be deluged with data, and if they were set too high the SLMs would miss the event of interest. A digital audio tape (DAT) recorder was used to provide redundancy in recording noise frequencies and was placed about 0.75 mi (1.2 km) from the KLC launch pad.

Recorded maximum SPLs of rocket motor noise for the ait-1 at the Ugak Island haulout site were 78.2 dB re 20 [micro]Pa with a peak level of 97 dB. The SEL at the Ugak Island haulout site was 88.4 dB. In addition, the SEL at the nearest location measured by the DAT recorder was 110 dB for a duration of 59 seconds. The bulk of the sound energy was at low frequencies and generally less than 4000 Hz. Most of the energy was from 100 to 500 Hz.

Of the eight noise events recorded above 65 dB at Ugak Island, ENRI determined that two are attributable to helicopter noise and one to the firing of the ait-1 rocket motor. Sounds at the Ugak Island site were above 65 dB for a total of 33 seconds at the time the rocket motor was firing. Due to the isolation of this site, the remainder of the events are most likely attributable to surf or wind action.

ait-2

USAF launched a second rocket from KLC on September 15, 1999. Based on experience from the first launch, ENRI set the SLMs to highlight sounds exceeding 70 dB and deployed them about 19 hours before the launch. Sound pressures at Ugak Island were slightly higher for the second launch than for the first launch. Recorded maximum SPLs of rocket motor noise for the ait-2 at the Ugak Island haulout site were 81.5 dB, with a peak level of 101.5 dB, and a corresponding SEL of 92.2 dB. The bulk of the sound energy was at low frequencies and generally less than 2500 Hz. Most of the energy was from 25 to 1000 Hz.

There were 15 noise events above 70 dB within the 19 hours of recording at Ugak Island, all of which can be attributed to helicopter, airplane, or rocket noise; none coincides with the stampede of Steller sea lions off the Ugak Island haulout 3.5 hours previous to the rocket launch. Sounds at the Ugak Island site were above 70 dB for a total of 30 seconds at the time the rocket motor was firing. Natural background noise levels above 70 dB were almost nonexistent during this launch.

QRLV-1

On March 22, 2001, the USAF conducted the third launch from KLC. SLMs set to highlight sounds exceeding 70 dB at the base of the Ugak Island sea lion haulout were again used by ENRI to record sound frequency and intensity, and were deployed 22 hours before the launch. The recorded sound levels at Ugak Island were significantly lower for the QRLV-1 launch than for either of the ait launches. This is likely due to the vehicle being smaller, and possibly to a different trajectory and local atmospheric condition. Recorded maximum SPLs resulting from QRLV rocket motor noise at the Ugak Island haulout site were 73.3 dB, with a peak level of 87.2 dB, and a corresponding SEL of 80.3 dB. The bulk of the sound energy was at low frequencies and generally less than 2500 Hz. Most of the energy was from 16 to 2000 Hz.

There were 17 noise events above 70 dB at Ugak Island. With the exception of the rocket launch, all can be related to helicopter noise. Sounds at the Ugak Island site were above 70 dB for a total of 10.9 seconds at the time the rocket motor was firing. Natural background noise levels above 70 dB were almost nonexistent during this launch. Rocket noise measurements for the QRLV-2 rocket launch on April 24, 2002, the sixth rocket launched from KLC, were not recorded.

Athena

The fourth launch from KLC occurred on September 29, 2001, and involved a commercial Lockheed/Martin Athena, which is the largest vehicle to be launched from KLC. SLMs were again set to highlight sounds exceeding 70 dB and were deployed by ENRI at the Ugak Island haulout four hours before the launch. The recorded sound levels at Ugak Island were significantly higher for the Athena launch than for previous launches, which is likely due to the size of the vehicle. Recorded maximum SPLs

[[Page 63117]]

resulting from Athena rocket motor noise at the Ugak Island haulout site were 90.8 dB, with a peak level of 115.9 dB, and a corresponding SEL of 101.4 dB. The bulk of the sound energy was at low frequencies and generally less than 2000 Hz.

There were three exceedance events above 70 dB at Ugak Island and Narrow Cape within the four hours of recording, two of which can be attributed to helicopter noise and the other to the rocket launch. Sounds at the Ugak Island site were above 70 dB for 49.6 seconds at the time the rocket motor was firing. Natural background noise levels above 70 dB were nonexistent during this launch.

STARS

On November 9, 2001, the Department of Defense launched a STARS vehicle from KLC; however, the rocket was deliberately destroyed over open ocean almost immediately because it lost communication with KLC. The STARS program provides ballistic missile targets to test various sensors and ground-based interceptors. STARS vehicles will include first- and second-stage Polaris A3 boosters and a third-stage Orbus-1 booster. The range of this system is 620 to 3,418 miles (998 to 5500 km). SLMs were set to record noise

events above 70 dB and were to be deployed four hours prior to launch, but safety concerns associated with inclement weather on the day of the launch precluded the helicopter from being flown from the Kodiak airport to the launch facility. Consequently, ENRI was unable to set up the SLMs prior to the rocket launch and no sound data were collected for this launch. Sound levels from this type of rocket motor would likely be similar to those recorded for the ait and ARLV missions given the size and thrust characteristics of these vehicles. Accordingly, it is expected that sound exposure levels at Ugak Island would have likely ranged from 80 to 90 dB. Sound pressure levels from future launch operations from KLC are expected to be in the range of those recorded during the first four launches.

Description of Habitat and Marine Mammals Affected by the Activity

Narrow Cape, Ugak Island, and the adjacent waters within the primary KLC study area provide habitat for sea otters (*Enhydra lutris*), harbor seals (*Phoca vitulina*), Steller sea lions (*Eumetopias jubatus*, listed as endangered), gray whales (*Eschrichtius robustus*), humpback whales (*Megaptera novaeangliae*, listed as endangered), northern fur seals (*Callorhinus ursinus*), Northern Right whales (*Eubalaena glacialis*), and minke whales (*Balaenoptera acutorostrata*). Harbor seals and sea otters are common year-round, as are killer whales (*Orcinus orca*), Dall's porpoise (*Phocoenoides dalli*), and harbor porpoise (*Phocoena phocoena*). Other species of cetaceans that may occur in the area, such as Pacific white-sided dolphins (*Lagenorhynchus obliquidens*), Risso's dolphins (*Grampus griseus*), northern right whale dolphins (*Lissodelphis borealis*), pilot whales (*Globicephala macrorhynchus*), Cuvier's beaked whales (*Ziphius cavirostris*), Baird's beaked whale (*Berardius bairdii*), Stejneger's beaked whale (*Mesoplodon stejnegeri*), sperm whales (*Physeter macrocephalus*), fin whales (*Balaenoptera physalus*), sei whales (*Balaenoptera borealis*) and blue whales (*Balaenoptera musculus*) are rare as they are primarily pelagic (ENRI, 1995-98). General information on harbor seals and other marine mammal species can be found in Caretta et al. (2001, 2002), which are available at the following URL:

http://www.nmfs.noaa.gov/prot_res/PR2/Stock_Assessment_Program/sars.htm
[1](#).

Sea otters are managed by the U.S. Fish

and Wildlife Service. Information on this species may be found at <http://www.fws.gov>. Please refer to those documents and the application for

further information on these species.

Potential Effects of Rocket Launches on Marine Mammals

As outlined in several previous NMFS documents, the effects of noise on marine mammals are highly variable, and can be categorized as follows (based on Richardson et al., 1995):

(1) The noise may be too weak to be heard at the location of the pinniped (i.e., lower than the prevailing ambient noise level, the hearing threshold of the animal at relevant frequencies, or both);

(2) The noise may be audible but not strong enough to elicit any overt behavioral response;

(3) The noise may elicit reactions of variable conspicuousness and variable relevance to the well being of the pinniped; these can range from temporary alert responses to active avoidance reactions such as stampedes into the sea from terrestrial haulout sites;

(4) Upon repeated exposure, pinnipeds may exhibit diminishing responsiveness (habituation), or disturbance effects may persist; the latter is most likely with sounds that are highly variable in characteristics, infrequent and unpredictable in occurrence (as are vehicle launches), and associated with situations that the pinniped perceives as a threat;

(5) Any anthropogenic noise that is strong enough to be heard has the potential to reduce (mask) the ability of pinnipeds to hear natural sounds at similar frequencies, including calls from conspecifics, and environmental sounds such as surf noise;

(6) If mammals remain in an area because it is important for feeding, breeding or some other biologically important purpose even though there is chronic exposure to noise, it is possible that there could be noise-induced physiological stress; this might (in turn) have negative effects on the well-being or reproduction of the animals involved; and

(7) Very strong sounds have the potential to cause temporary or permanent reduction in hearing sensitivity. In terrestrial mammals, and presumably marine mammals, received sound levels must far exceed the animal's hearing threshold for there to be any temporary threshold shift (TTS). For transient sounds, the sound level necessary to cause TTS is inversely related to the duration of the sound. Received sound levels must be even higher for there to be risk of permanent hearing impairment.

Solid rocket boosters from KLC launches will fall into the ocean away from any known or potential haul-out sites and do not pose any threat to Ugak Island. Launch noise is expected to occur over the coastal habitats of Narrow Cape and Ugak Island during every launch, while sonic booms will occur approximately 40 nautical miles (74 km) downrange over open ocean, beyond the outer continental shelf and are unlikely to affect marine mammals. Airborne launch sounds will mostly reflect or refract from the water surface and, except for sounds within a diameter of approximately 30 degrees directly below the launch vehicle, will not penetrate into the water column. The sounds that do penetrate will not persist in the water for more than a few seconds.

The Ugak Island Steller sea lion haulout is the only haul-out site within the Narrow Cape region that has the potential to be impacted by the sights and sounds of rocket launches from KLC. Harbor seals haul out on the southeast side of Ugak Island, but this area is sheltered from direct sight of and sound from KLC by a 300 ft (91.44 m) island cliff and because it receives heavy surf, it already has high ambient noise levels. Because background ambient noise often interferes with or masks the ability of an animal to detect a sound even when that sound is above

[[Page 63118]]

its absolute hearing threshold (Richardson et al., 1995), it seems unlikely that animals hauled out at this location would hear noise associated with rocket launches from KLC. In contrast, the sea lion haulout on Ugak Island is on a spit facing KLC and animals at this location would likely hear a rocket launch. Steller sea lions generally occupy this haulout from late summer to the early fall

post-breeding period (late June to early October) by up to several hundred sea lions.

ENRI was tasked under contract to the AADC to conduct environmental monitoring studies for each rocket launch from KLC. In addition to collecting rocket noise data, ENRI conducted aerial surveys over and collected real-time video footage at the seasonally occupied Ugak Island haulout site in conjunction with the three KLC launches when Steller sea lions might have been present at the haulout: ait-1 on November 5, 1998; ait-2 on September 15, 1999; and Athena on September 29, 2001. The only time Steller sea lions were observed occupying the haulout was during the ait-2 launch monitoring period. Sixty to seventy animals were on the haulout about five hours pre-launch. Due to below freezing temperatures, the video system shut off about four hours prior to the ait-2 launch. The video data show Steller sea lions fighting or sleeping on the haulout just minutes before the system stopped recording. The animals are then seen stampeding into the water and milling about immediately offshore. The cause of the stampede is not apparent in the video and no stimulus could be linked to the response. When, or if, any of the Steller sea lions returned to the haulout before the ait-2 launch is unknown. Although rocket noise might have caused the sea lions to flee the haulout, a clear-cut stimulus response of sea lion behavior to rocket noise cannot be postulated without video data from the time of the launch. Approximately one hour after the rocket was launched, no sea lions were seen hauled out and fifty to sixty sea lions were observed in the water immediately offshore. The day after the launch, sixty to seventy animals were seen hauled out, indicating that sea lions were not significantly affected by the launch. This finding parallels that from other spaceports, where sea lions have been shown to accommodate to disturbance from rocket launches (Thorson and Francine, 1997).

Because no Steller sea lions were present at the Ugak Island haulout during the ait-1 and Athena launches, it is not possible to relate any behavioral responses to the recorded noise levels. For all launches, however, launch noises recorded at the haulout site were within the audible ranges of pinnipeds (Richardson et al., 1995) and Steller sea lions would have heard them had they been present. Further, recorded sound pressures were at, and sometimes above, levels known to occasionally induce startle responses in pinnipeds (Richardson et al., 1995). Rocket launches will present Steller sea lions with novel visual and possibly tactile stimuli as well as unusually loud sounds and bright lights from the burning rocket and white exhaust plume. This potential for startle responses and stampede/evacuation of the haulout led the AADC to submit a request to NMFS for authorization for the incidental take of Steller sea lions during launches from KLC. The AADC recognizes in their application that despite the lack of direct stimulus-response data tying sea lion behavior to rocket launches from KLC, the unusual, high-intensity stimuli resulting from brief launch-related sights and sounds means that evacuation of the Ugak haul-out site by sea lions could reasonably be expected.

The behavioral data record for Steller sea lions is small throughout the North Pacific range and typically is focused on reproductive behaviors. In general, studies have shown that responses of pinnipeds on beaches to acoustic disturbance arising from rocket and target missile launches are highly variable. This variability may be due to many factors, including species, age class, and time of year.

Porter (1997) observed Steller sea lions fleeing into the water for a wide variety of reasons such as helicopter overflights, bird flybys, and the presence of nearby humans. He also noted sea lions stampedes into the water that could not be correlated with any observed stimulus. There is also evidence that both time of day and temperature alter the probability of entry into the water (animals are more likely to enter the water when already overheated) (Bowles, 2000). Steller sea lions have been seen to mill about just offshore with their heads up in a heightened state of watchfulness (Porter, 1997) and remain close to the haulout until they sense it is safe to go back ashore (Lockheed Martin Environmental Services, 1999).

Noise generated from aircraft and helicopter activities associated with the launches may provide a potential secondary source of incidental harassment, and the physical presence of aircraft or biologists could also lead to non-acoustic effects on marine mammals involving visual or other cues. However, other disturbance-related data collected during the ait-2 study (ENRI, 2000) does not fit well with stimulus response data from other sources. Sea lions are widely thought to be intolerant of helicopter noise (Porter, 1997), yet the animals in question did not appear to respond to multiple exposures of more intense helicopter noise at Ugak Island than that from the rocket (ENRI, 2000). They are also thought to be intolerant of humans on foot, yet a video from the ait-2 study shows hauled-out sea lions on Ugak Island undisturbed by biologists actively engaged in work within 328 ft (100 m) of them. The Ugak Island haulout is also regularly exposed to disturbances from aircraft and fishing vessels transiting Narrow Strait.

Recent studies (Lawson et al., 2002, and NAWS, 2002) show that Level B harassment, as evidenced by beach flushing, will sometimes occur upon exposure to launch sounds with SEL's of 100 dBA (re 20 micro-Pa² -sec) or higher. It is expected that most received noise levels at Ugak Island would be below levels which are likely to cause disturbance. The infrequent and brief nature of these sounds would cause masking for not more than a very small fraction of the time during any single launch day and it is unlikely that pinnipeds will become habituated to launch sounds. In addition, the extremely rapid departure of the rockets means that pinnipeds would be exposed to increased sound levels for very short time intervals, and because launches are conducted relatively infrequently, neither physiological stress nor hearing related injuries are likely. Therefore, AADC anticipates that the effects of rocket launches from KLC would have no significant effects on the abilities of pinnipeds to hear one another or to detect natural environmental sounds, and would have no more than a negligible impact on pinniped populations.

Numbers of Marine Mammals Expected to Be Taken by Harassment

The Steller sea lion is described by two stocks - those west of 144[deg] west longitude listed as endangered, and the eastern stock listed as threatened. Sea lions present hauled out on Ugak Island are of the western stock. The most recent comprehensive estimate (pups and non-pups) of Steller sea lion abundance in Alaska is based on aerial surveys and ground based pup counts in June and July 1998 from Southeast Alaska to the western Aleutian Islands (Sease and Loughlin 1999). In addition, surveys of all non-pup trend sites, haulout sites, and rookeries were conducted during 2000 (Sease et al.,

2001). The best available population estimate for the western stock of Steller sea lions is the sum of the total number of non-pups counted in 2000 (25,384) and the number of pups counted in 1998 (9,211). The 2000 count of non-pups (25,384) plus the number of pups in 1998 (9,211) is 34,595, which will be used as the minimum population estimate for the western U. S. stock of Steller sea lion (Wade and Angliss 1997). This is considered a minimum estimate because it has not been corrected to account for animals which were at sea during the surveys.

The numbers of individual Steller sea lions that might stampede or otherwise shift position on the Ugak Island spit in response to an AADC generated disturbance are difficult to estimate. Because this haulout is occupied primarily from late June to early October, the possible number of animals taken would depend upon the timing of rocket launches. If a launch were to occur outside of this time frame, it is likely that no animals would be exposed to noise resulting from rocket launches. The highest count of sea lions at the Ugak Island haulout was 177 in July 1997 (ENRI 1995-98); this then represents the highest number of animals that could be disturbed by a rocket launch during the season of haulout occupancy.

Effects of Rocket Launches on Subsistence Needs

There are no subsistence uses of pinniped species in Alaska waters within the KLC primary study area, and, thus, there are no anticipated effects on subsistence needs.

Effects of Rocket Launches on Marine Mammal Habitat

Solid rocket boosters would fall into the ocean away from any known or potential haulouts. All sonic booms that reach the earth's surface would be expected to be over open ocean beyond the outer continental shelf. Airborne launch sounds would mostly reflect or refract from the water surface and, except for sounds within a diameter of approximately 30 degrees directly below the launch vehicle, would not penetrate into the water column. The sounds that do penetrate would not persist in the water for more than a few seconds. Overall, rocket launch activities from KLC would not be expected to cause any impacts to habitats used by marine mammals, including pinniped haulouts, or to their food sources.

Mitigation

Based on data collected from previous launches from KLC, there is no evidence of a direct stimulus-response relationship between Steller sea lion behavior and rocket launches. At this time, because of the absence of a significant response by Steller sea lions and because this is not a rookery with pups, NMFS believes there is no need for the implementation of any specific mitigation measures other than the monitoring requirements described below, which includes immediately notifying NMFS if indications of a disturbance to Steller sea lions are recorded, if noise levels are observed above 100 dBA, and in the unanticipated event that any cases of pinniped mortality are judged to result from launch activities at any time during the period covered by these regulations. If data from the monitoring program collected during future launches show the need for additional mitigation, specific

measures would be developed by the AADC in cooperation with NMFS and implemented through the LOAs.

Monitoring

Environmental monitoring studies for rocket launches are modeled after those outlined in the KLC Environmental Monitoring Plan (EMP), which is an integral part of the NRMP (discussed previously). The EMP was reviewed and approved by the federal and state agencies having oversight of the various natural resources in and around KLC, and addresses stipulations in the FONSI for the EA for construction of KLC, KLC development permits, and NRMP goals and objectives. The primary KLC environmental monitoring study area was set in September 1996 at a meeting between AADC and representatives of the U.S. Fish and Wildlife Service, NMFS, the FAA, and ENRI. It includes the lands and waters within a 6-mile (9.7 km) radius extending out from the KLC launchpad. The EMP requires that monitoring of Steller sea lions be done at the seasonally occupied (late June to early October), non-breeding haulout on Ugak Island. The EMP also requires monitoring of rocket noise, bald eagle nests, Steller's Eiders, and other environmental quality parameters such as water chemistry, macroinvertebrates, stream sediment, and vegetation.

It was determined in September of 1996 that this monitoring plan would be limited to the first five rocket launches from KLC, provided that at least one of the launches represented the largest class of rocket that could be flown from the facility. ENRI prepared individual monitoring reports for each launch. The fifth rocket was launched from KLC in November of 2001, and a Lockheed/Martin Athena (the largest vehicle that can currently be flown from KLC) was launched in September 2001. This meant that the studies required in the EMP were complete. ENRI also monitored the 6th launch using the same protocols as in previous launches.

In a summary document of the monitoring reports for the first five launches (ENRI, 2002), ENRI and AADC recommended that KLC environmental monitoring activities involving rocket launches include the continuation of Steller sea lion monitoring and the collection of rocket noise data when sea lions are present at the Ugak Island haulout. Even though no apparent behavioral responses of Steller sea lions to rocket launches were observed, sound pressure levels are within the audible range of Steller sea lions and the potential for disruption of behavioral patterns exists. NMFS agrees with this finding, and in addition to any other applicable state and federal permits, regulations, and environmental monitoring agreements that AADC has with other agencies, NMFS proposes to include in its regulations issued for rocket launches from KLC the continuation of rocket motor noise data collection and Steller sea lion monitoring as laid out within the KLC EMP.

Steller Sea Lion Monitoring

The objective of monitoring Steller sea lions is to detect any indications of disturbance that result from KLC rocket launches to individuals at the seasonally occupied Ugak Island haulout site. Monitoring would be conducted for launches that take place from June through October, the only time sea lions are likely to occupy the Ugak Island haulout. The haulout area would be monitored before, during, and after launch operations to document and characterize any observed

responses. Monitoring would be designed to determine the type of disturbance reactions and their relationship to noises associated with rocket launches. Fixed-wing aerial surveys would be flown for any launches taking place from June through October using a minimum flight altitude of 152.5 m (500 ft) ASL to be flown at low tide or, with consultation, toward evening. The aircraft would come no closer than one-quarter mile to the haulout. Depending on aircraft availability, one or two biologist observers would accompany the pilot. Data would be gathered both visually and on 35-mm color film with a camera having a zoom lens. A total of five surveys would be flown, if weather conditions permit. The first would occur the day prior to a scheduled launch and the second as

[[Page 63120]]

soon after the launch as possible. Replicate surveys would be flown the following three successive days to determine post-launch haulout-use patterns.

For any launches that occur from June through October, a real-time video record would be made of sea lions reactions to launch-related noises. This would be accomplished by the installation of a remote custom-designed, closed-circuit, weatherproof, time-lapse video camera system at the base of the Ugak Island sea lion haulout before a launch, which would be retrieved post-launch. Results of the aerial and video surveys would be compared, providing information on startle effects and durations. In addition, video data would be time-correlated with rocket motor noise measurements to provide objective information on any startle responses or indications of disturbance reactions that may occur resulting from rocket launches. Comparisons would also be made with baseline data assembled by AADC to help gauge any natural trends that may be occurring.

Acoustical Measurements

Rocket motor noise monitoring would be done concurrently with video monitoring at the Ugak Island haulout. These data would be synchronized to the video data to document correlations between noise signatures and pinniped responses. Sound intensity and frequency metrics would be recorded before, during, and after a launch by an SLM mounted on a permanent stanchion upon the Ugak Island haulout one day or more before a launch and retrieved within one day post-launch. The SLM would be set to highlight sounds greater than 70 dBA.

Reporting

If indications of a disturbance to Steller sea lions are recorded, and/or if noise levels are observed above 100 dBA, AADC would contact NMFS with such information. In the unanticipated event that any cases of pinniped mortality are judged to result from launch activities at any time during the period covered by these regulations, this event would be reported to NMFS immediately.

Data from monitoring activities would be reduced, analyzed, and reported to NMFS within 90 calendar days following cessation of field activities for each launch. The report would summarize the timing and nature of launch operations, summarize sea lion behavioral observations, and estimate the amount and nature of take by harassment.

AADC would also include this information in its Annual Environmental Monitoring and Natural Resources Management Report.

An interim technical report is proposed to be submitted to NMFS 60 days prior to the expiration of each annual LOA issued under these regulations, along with any request for a subsequent annual LOA. This interim technical report would provide full documentation of methods, results, and interpretation pertaining to all monitoring tasks for launches during the period covered by the LOA. However, only preliminary information would be available to be included for any launches during the 60-day period immediately preceding submission of the interim report to NMFS.

In addition to annual interim LOA reports, NMFS proposes to require AADC to submit a draft comprehensive final technical report to NMFS 180 days prior to the expiration of the regulations. This draft technical report would provide full documentation of methods, results, and interpretation of all monitoring tasks for launches during the first four LOA's, plus preliminary information for launches during the first 6 months of the final LOA.

National Environmental Policy Act (NEPA)

The FAA prepared an Environmental Assessment (EA) (June 1996) to evaluate the AADC's proposal to construct and operate a launch site at Narrow Cape on Kodiak Island, Alaska. After reviewing and analyzing currently available data and information on existing conditions, project impacts, and measures to mitigate those impacts, and after considering public comments, the Office of the Associate Administrator for Commercial Space Transportation (AST) issued a Finding of No Significant Impact (FONSI) based on the determination that licensing the operation of the proposed launch site is not a major Federal action that would significantly affect the quality of the human environment, and that preparation of an Environmental Impact Statement (EIS) is not required (61 FR 54248). NMFS is reviewing this EA and will either adopt it or perform its own NEPA analysis before making a determination on the issuance of an LOA.

Endangered Species Act (ESA)

Under section 7 of the ESA, NMFS has begun consultation on the proposed issuance of an incidental take authorization and regulations under section 101(a)(5)(A) of the MMPA for this activity. Consultation will be concluded prior to promulgation of a final rule. The final rule and LOAs issued thereunder will comply with the requirements of section 7(a)(2) of the ESA and the implementing regulations.

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. The rule would apply only to AADC, which may in turn use a small number of contractors to provide services related to the proposed reporting requirements. The rule would have no effect, directly or indirectly, on small businesses. Because of this certification, a regulatory

flexibility analysis is not required.

Notwithstanding any other provision of law, no person is required to respond to nor shall a person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act (PRA) unless that collection of information displays a currently valid OMB control number. This proposed rule contains collection-of-information requirements subject to the provisions of the PRA. This collection has been approved previously by OMB under section 3504(b) of the PRA issued under OMB control number 0648-0151, and includes applications for LOAs and reports.

Information Solicited

Regulations, if issued, would authorize NMFS to issue annual LOAs for the taking of small numbers of Steller sea lions incidental to rocket launches associated with the ait, QRLV, STARS, and other commercial space launch programs from KLC. NMFS requests interested persons and organizations to submit comments, information, and suggestions concerning the request and the content of the proposed regulations to authorize taking. NMFS will consider this information in developing proposed regulations to authorize the taking. All commenters are encouraged to review the application prior to submitting comments.

List of Subjects in 50 CFR Part 216

Exports, Fish, Imports, Indians, Labeling, Marine mammals, Penalties, Reporting and record-keeping requirements, Seafood, Transportation.

[[Page 63121]]

Dated: October 22, 2004.

Rebecca Lent,
Deputy Assistant Administrator for Regulatory Programs, 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.

2. Subpart S is added and reserved.

3. Subpart T is added and reserved.

4. Subpart U is proposed to be added to read as follows:

Subpart U--Taking of Marine Mammals Incidental to Rocket Launches From the Kodiak Launch Complex, Kodiak Island, AK

Sec.

216.230 Specified activity and specified geographical region.

216.231 Effective dates.
216.232 Permissible methods of taking.
216.233 Prohibitions.
216.234 Mitigation, monitoring and reporting.
216.235 Letter of Authorization.
216.236 Renewal of a Letter of Authorization.
216.237 Modifications to a Letter of Authorization.

Subpart U--Taking of Marine Mammals Incidental to Rocket Launches
From the Kodiak Launch Complex, Kodiak Island, AK

Sec. 216.230 Specified activity and specified geographical region.

(a) Regulations in this subpart apply only to the incidental taking of marine mammals specified in paragraph (b) of this section by U.S. citizens engaged in rocket launch activities at the Kodiak Launch Complex on Kodiak Island, Alaska.

(b) The incidental take of marine mammals under the activity identified in paragraph (a) of this section is limited to Steller sea lions (*Eumetopius jubatus*).

Sec. 216.231 Effective dates.

Regulations in this subpart are effective from December 1, 2004, through November 30, 2009.

Sec. 216.232 Permissible methods of taking.

(a) Under a Letter of Authorization issued pursuant to Sec. 216.106, the Alaska Aerospace Development Corporation and its contractors, may incidentally, but not intentionally, take those marine mammals specified in Sec. 216.230(b) by Level B harassment, in the course of conducting missile launch activities within the area described in Sec. 216.230(a), provided all terms, conditions, and requirements of these regulations and such Letter of Authorization are complied with.

(b) The activities identified in Sec. 216.230(a) must be conducted in a manner that minimizes, to the greatest extent practicable, adverse impacts on marine mammals and their habitat.

Sec. 216.233 Prohibitions.

The following activities are prohibited:

(a) The taking of a marine mammal that is other than unintentional.

(b) The violation of, or failure to comply with, the terms, conditions, and requirements of this subpart or a Letter of Authorization issued under Sec. 216.106.

(c) The incidental taking of any marine mammal of a species not specified, or in a manner not authorized, in this subpart.

Sec. 216.234 Mitigation, monitoring and reporting.

(a) The holder of the Letter of Authorization must implement the following measures for all launches occurring from June through October:

(1) Conduct five replicate fixed-wing aerial surveys of Steller sea lions hauled out at Ugak Island, each flown at low tide (weather permitting), using a minimum flight altitude of 500 feet ASL, with an approach no closer than one-quarter mile to the haulout, and conducted a day prior to, directly following, and for three consecutive days after a launch.

(2) At least one biologist observer will accompany the pilot during aerial all surveys.

(3) Data gathered during aerial surveys will be gathered visually and on color film through the use of a 35 mm camera with a zoom lens.

(4) A real-time video record of Steller sea lion reactions to launch noise will be made using a video camera system placed upon the Ugak Island haulout before a scheduled launch and then retrieved after the launch.

(5) Sound intensities and frequencies of rocket motor noise will be recorded before, during, and after a launch by a sound level monitor set to highlight sounds greater than 70 dBA that is mounted upon the Ugak Island haulout one day or more before a launch and retrieved within one day post-launch.

(b) The holder of the Letter of Authorization is required to cooperate with the National Marine Fisheries Service and any other Federal, state or local agency monitoring the impacts of the activity on marine mammals. Unless agreed to in writing otherwise, the holder must notify the Alaska Regional Administrator at least 2 weeks prior to commencing monitoring activities.

(c) Activities related to the monitoring described in paragraph (a) of this section, or in the Letter of Authorization issued under Sec. Sec. 216.106 and 216.236 may be conducted without a separate scientific research permit.

(d) In coordination and compliance with the Alaska Aerospace Development Corporation, at its discretion, the National Marine Fisheries Service may place an observer on Kodiak or Ugak Islands for any marine mammal monitoring activity prior to, during, or after a missile launch to monitor impacts on marine mammals.

(e) The holder of the Letter of Authorization must comply with any other applicable state or federal permits, regulations, and environmental monitoring agreements set up with other agencies.

(f) The National Marine Fisheries Service must be informed immediately of any proposed changes or deletions to any portions of the monitoring requirements.

(g) The holder of the Letter of Authorization must implement the following reporting requirements:

(1) If indications of a disturbance or injurious or lethal take are recorded, and/or if recorded noise levels are above 100 dBA, the Alaska Regional Administrator, National Marine Fisheries Service, or his/her designee, will be contacted within 48 hours and, in cooperation with the National Marine Fisheries Service, launch procedure, mitigation measures, and monitoring methods must be reviewed and appropriate changes made prior to the next launch.

(2) Data from monitoring activities will be reported to the National Marine Fisheries Service within 90 days following cessation of field activities for each launch.

(3) An interim technical report must be submitted to the Office of Protected Resources and the Alaska Regional Office at least 60 days

prior to the expiration of each annual Letter of Authorization. This report must contain the following information:

- (i) Timing and nature of launch operations;
- (ii) Summary of pinniped behavioral observations;
- (iii) Estimate of the amount and nature of all takes by harassment or by other means.

(4) A draft comprehensive technical report will be submitted to the Office of

[[Page 63122]]

Protected Resources and Alaska Regional Office, National Marine Fisheries Service, 180 days prior to the expiration of these regulations with full documentation of the methods, results, and interpretation of all monitoring tasks for launches during all expired Letters of Authorization, plus preliminary information for launches during the first 6 months of the final Letter of Authorization.

(5) A revised final technical report, including all monitoring results during the entire period of the Letter of Authorization will be due 90 days after the end of the period of effectiveness of these regulations.

(6) Both the interim and draft comprehensive reports will be subject to review and comment by the National Marine Fisheries Service. Any recommendations made by the National Marine Fisheries Service must be addressed in the final comprehensive report prior to acceptance by the National Marine Fisheries Service.

Sec. 216.235 Letter of Authorization.

(a) A Letter of Authorization, unless suspended or revoked, will be valid for a period of time specified in the Letter of Authorization, but a Letter of Authorization may not be valid beyond the effective period of the regulations.

(b) A Letter of Authorization with a period of validity less than the effective period of the regulations in this subpart may be renewed subject to renewal conditions in Sec. 216.236.

(c) A Letter of Authorization will set forth:

- (1) Species of marine mammals authorized to be taken;
- (2) Permissible methods of incidental taking;
- (3) Specified geographical region;
- (4) Means of effecting the least practicable adverse impact on the species of marine mammals authorized for taking and its habitat; and
- (5) Requirements for monitoring and reporting incidental takes.

(d) Issuance of a Letter of Authorization will be based on a determination that the number of marine mammals taken by the activity will be small, and that the total taking by the activity as a whole will have no more than a negligible impact on the affected species or stocks of marine mammal(s).

(e) Notice of issuance or denial of a Letter of Authorization will be published in the Federal Register within 30 days of a determination.

Sec. 216.236 Renewal of a Letter of Authorization.

(a) A Letter of Authorization for the activity identified in Sec. 216.230(a) will be renewed upon:

(1) Notification to the National Marine Fisheries Service that the activity described in the application for a Letter of Authorization submitted under Sec. 216.235 will be undertaken and that there will not be a substantial modification to the described activity, mitigation or monitoring undertaken during the upcoming season;

(2) Timely receipt of and acceptance by the National Marine Fisheries Service of the monitoring reports required under Sec. 216.234;

(3) A determination by the National Marine Fisheries Service that the mitigation, monitoring and reporting measures required under Sec. 216.232 and 216.234 and the Letter of Authorization were undertaken and will be undertaken during the upcoming period of validity of a renewed Letter of Authorization; and

(4) A determination that the number of marine mammals taken by the activity will be small and that the total taking by the activity will have no more than a negligible impact on the affected species or stocks of marine mammal(s), and that the level of taking will be consistent with the findings made for the total taking allowable under these regulations.

(b) A notice of issuance or denial of a renewal of a Letter of Authorization will be published in the Federal Register within 30 days of a determination.

Sec. 216.237 Modifications to a Letter of Authorization.

(a) Except as provided in paragraph (b) of this section, no substantive modification (including withdrawal or suspension) to a Letter of Authorization issued pursuant to the provisions of this subpart shall be made by the National Marine Fisheries Service until after notification and an opportunity for public comment has been provided. A renewal of a Letter of Authorization under Sec. 216.236 without modification is not considered a substantive modification.

(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 Sec. 216.230(b), a Letter of Authorization may be substantively modified without prior notification and an opportunity for public comment. Notification will be published in the Federal Register within 30 days subsequent to the action.

[FR Doc. 04-24234 Filed 10-28-04; 8:45 am]

BILLING CODE 3510-22-S