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**DEPARTMENT OF COMMERCE**

**National Oceanic and Atmospheric Administration**

**50 CFR Part 217**

**[Docket No. 160809705-7102-02]**

**RIN 0648-BG25**

**Takes of Marine Mammals Incidental to Specified Activities; Taking Marine Mammals Incidental to Space Vehicle and Missile Launch Operations**

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

**ACTION:** Final rule.

**SUMMARY:** NMFS, upon request from the Alaska Aerospace Corporation (AAC), hereby issues regulations to govern the incidental taking of marine mammals incidental to space vehicle and missile launch operations at the Pacific Spaceport Complex Alaska (PSCA) on Kodiak Island, Alaska, over the course of five years (2017-2022). These regulations, which allow for the issuance of Letters of Authorization (LOA) for the incidental take of marine mammals during the described activities and specified timeframes, prescribe the permissible methods of taking and other means of effecting the least practicable adverse impact on marine mammal species or stocks and their habitat, and establish requirements pertaining to the monitoring and reporting of such taking.

**DATES:** Effective from April 24, 2017, through April 25, 2022.

**ADDRESSES:** A copy of AAC's application and supporting documents, as well as a list of the references cited in this document, may be obtained online at:

[www.nmfs.noaa.gov/pr/permits/incidental/research.htm](http://www.nmfs.noaa.gov/pr/permits/incidental/research.htm). In case of problems accessing these documents, please call the contact listed below (see **FOR FURTHER INFORMATION CONTACT**).

**FOR FURTHER INFORMATION CONTACT:** Stephanie Egger, Office of Protected Resources, NMFS, (301) 427-8401.

**SUPPLEMENTARY INFORMATION:**

**Purpose and Need for Regulatory Action**

These regulations, issued under the authority of the Marine Mammal Protection Act (MMPA) (16 U.S.C. 1361 *et seq.*), establish a framework for authorizing the take of marine mammals incidental to space vehicle and missile launch operations at the PSCA. We received an application from AAC requesting five-year regulations and authorization to take one species of marine mammal. Take may occur by Level B harassment only, incidental to the space vehicle and missile launches (also referred to as rocket launches). The regulations are valid for five years from the date of issuance. Please see “Background” below for definitions of harassment.

*Legal Authority for the Regulatory Action*

Section 101(a)(5)(A) of the MMPA (16 U.S.C. 1371(a)(5)(A)) directs the Secretary of Commerce to allow, upon request, the incidental, but not intentional taking of small numbers of marine mammals by U.S. citizens who engage in a specified activity (other than commercial fishing) within a specified geographical region for up to five years if, after notice and public comment, the agency makes certain findings and issues regulations that set forth permissible methods of taking pursuant to that activity, as well as monitoring and reporting requirements. Section 101(a)(5)(A) of the MMPA and the implementing regulations at 50 CFR part 216, subpart I provide the legal basis for issuing this final rule containing five-year regulations, and

for any subsequent Letters of Authorization. As directed by this legal authority, this final rule contains mitigation, monitoring, and reporting requirements.

#### *Summary of Major Provisions within the Regulations*

The following provides a summary of some of the major provisions within the rulemaking for AAC's rocket launch activities. We have determined that AAC's adherence to the planned mitigation, monitoring, and reporting measures listed below will achieve the least practicable adverse impact on the affected marine mammals. They include:

- Required monitoring of Ugak Island to detect the presence and abundance of marine mammals before and after deployment of space vehicle and missile launch operations.
- Required monitoring of Ugak Island to survey the presence and abundance of marine mammals quarterly (space vehicle and missile launch operations).
- Required mitigation using time-lapsed photography to determine the immediate response impacts to marine mammals during space vehicle and missile launch operations, particularly during the pupping season (should space vehicle and missile launch operations occur during that time).

#### **Background**

Sections 101(a)(5)(A) and (D) of the MMPA (16 U.S.C. 1361 *et seq.*) direct the Secretary of Commerce to allow, upon request, the incidental, but not intentional, taking of small numbers 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 either regulations

are issued or, if the taking is limited to harassment, a notice of a proposed authorization is provided to the public for review.

An authorization for incidental takings shall be granted if NMFS finds that the 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 (where relevant), and if the permissible methods of taking and requirements pertaining to the mitigation, monitoring and reporting of such takings are set forth. 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.”

NMFS has defined “unmitigable adverse impact” in 50 CFR 216.103 as an impact resulting from the specified activity:

- 1) That is likely to reduce the availability of the species to a level insufficient for a harvest to meet subsistence needs by: (i) causing the marine mammals to abandon or avoid hunting areas; (ii) directly displacing subsistence users; or (iii) placing physical barriers between the marine mammals and the subsistence hunters; and
- 2) That cannot be sufficiently mitigated by other measures to increase the availability of marine mammals to allow subsistence needs to be met.

Except with respect to certain activities not pertinent here, section 3(18) of 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 April 25, 2016, NMFS received a request for regulations from AAC for the taking of small numbers of marine mammals incidental to space vehicle and missile launch operations at the PSCA. We received revised drafts on June 20, 2016, and September 19, 2016. On September 27, 2016, we published a notice of receipt of AAC's application in the **Federal Register** (81 FR 66264), requesting comments and information for 30 days related to AAC's request. On November 10, 2016, we received a revised final application. We received comments from the Marine Mammal Commission (MMC), which we considered during development of the proposed rulemaking (82 FR 6456; January 19, 2017) and which are available online at: [www.nmfs.noaa.gov/pr/permits/incidental/research.htm](http://www.nmfs.noaa.gov/pr/permits/incidental/research.htm).

AAC requests taking of small numbers of marine mammals incidental to space vehicle and missile launch operations; such operations produce noise that may result in the Level B harassment of harbor seals (*Phoca vitulina richardii*). NMFS has previously issued regulations and subsequent LOAs to AAC authorizing the taking of marine mammals incidental to launches at PSCA (76 FR 16311, March 23, 2011; and 71 FR 4297, January 26, 2006). These regulations are valid for five years from the date of issuance.

### **Description of the Specified Activity**

#### *Overview*

PSCA is located on the Narrow Cape Peninsula, on Kodiak Island in the Gulf of Alaska. Kodiak Island is approximately 99 miles (mi) long and 10 to 60 mi wide. PSCA is approximately 22 air mi from the City of Kodiak, which is the largest settlement on Kodiak Island. The land

area occupied by PSCA is owned by the State of Alaska and is administered by AAC under terms of an Interagency Land Management Assignment issued by AAC's sister agency, the Alaska Department of Natural Resources. AAC conducts space vehicle and missile launches from the PSCA. Launch operations are authorized under license from the Federal Aviation Administration (FAA), Office of the Associate Administrator for Space Transportation.

There are several marine mammals present in the waters offshore, however, the only marine mammals anticipated to be affected by the specified activities are pinnipeds hauled out on Ugak Island.

#### *Dates and Duration*

The specified activity may occur at any time during the five-year period of validity of the regulations. Dates and duration of individual rocket launches are inherently uncertain. Launch timing is not determined by AAC, but is driven by customer needs that include variables ranging from: 1) availability of down range assets necessary to support launch, 2) orbital parameters, and 3) exigencies requiring rapid response to requests for replacement of lost assets, or to augment existing ones to support vital defense, humanitarian, or commercial needs. Launches can, and do, occur year round. Typical launches will be spread out in time; however, some of these launches may occur in clusters to meet a customer's need.

AAC estimates the total number of vehicles that might be launched from PSCA over the course of the 5-year period covered by the requested rulemaking is 45, with an average of nine launches per year. However, in previous years, AAC did not launch the estimated number, but fewer or none in some years. Few launches are on contract at this time, so a specific distribution cannot be given. The first anticipated launch is estimated to occur in May 2017. Generally, the frequency will be separated by months or years; however, there may be limited instances of a

rapid succession of launches in the course of hours, or days. Any disturbances to pinnipeds from space vehicle and missile launch operations will span only a few seconds tapering off to inaudible in a few minutes.

### *Specified Geographical Region*

The PSCA facility occupies 3,717 acres of state-owned lands on the eastern side of Kodiak Island. Ugak Island lies approximately three to four mi to the south/southeast of the launch pads on Kodiak Island. Ugak Island is about two mi long by about one mi wide. The land slopes steeply upward from a spit on the island's northern most point, which has previously been (although not consistently in recent years) used by Steller sea lions (*Eumetopias jubatus*) as a haulout, to the southwest, culminating in cliffs that are approximately 1,000 feet (ft) in elevation. These cliffs run the entire length of the island's long axis. Eastward, the narrow Outer Continental Shelf (OCS) ends about 20 mi offshore, where it plunges precipitously to the North Pacific abyss. Near shore water depths to the immediate south and west of the island range to several hundred feet. Harbor seal haulouts are present mainly on Ugak Island's eastern shores, but also in smaller numbers at the northern end of the island (see Figure 3 in AAC's application).

### *Detailed Description of Activities*

A detailed description of AAC's planned activities was provided in our notice of proposed rulemaking (82 FR 6456; January 19, 2017) and is not repeated here. No changes have been made to the specified activities described therein.

Table 1 provides motor diameters and representative sound pressures for various launch vehicles, some of which have been launched previously from PSCA. The listed vehicles include various ballistic launch vehicles and the small lift Castor 120 space launch vehicle, as well as smaller target/interceptor systems and tactical rocket systems. All PSCA sound measurements

reported in Table 1 were taken at a distance of 3.5 mi from the launch pad at the nearest point of Ugak Island. It is important to note that the Castor 120 (previously launched from PSCA) is the loudest launch vehicle motor expected to be launched from PSCA over the 5-year period covered by these regulations.

**Table 1. Past and Anticipated Launch Vehicles.**

Previously Launched & Recorded at PSCA (also Potentially Launched in Future)							
Launch Designator	Launch Vehicle	Date	Distance to Haulout	Motor Diameter (ft) <sup>1</sup>	SEL (dBA)	Lmax (dBA)	LPeak (dBA)
QRLV		11/5/98	3.5 mi <sup>2</sup>	4.3	88.4	78.2	97.0
QRLV		9/15/99	3.5 mi <sup>2</sup>	4.3	92.2	81.5	101.5
QRLV		3/22/01	3.5 mi <sup>2</sup>	4.3	80.3	73.3	87.2
Athena	Castor 120	9/29/01	3.5 mi <sup>2</sup>	7.75	101.4	90.8	115.9
FT-04-1	Polaris A-3 STARS	2/23/06	4.1 mi	4.5	92.3	86.0	109.0
FTG-02	Polaris A-3 STARS	9/01/06	4.1 mi	4.5	90.1	83.1	105.6
FTG-03a	Polaris A-3 STARS	9/28/07	4.1 mi	4.5	91.4	84.2	107.3
FTX-03	Polaris A-3 STARS	7/18/08	4.1 mi	4.5	89.6	83.0	108.3
-	Minotaur I	-	-	4.5	90+ <sup>2</sup>	-	-
-	C-4 Trident I	-	-	6.1	-	-	-
-	Castor I	-	-	2.6	-	-	-
-	SR19/SR773	-	-	4.3	-	-	-
-	SR19/SR19	-	-	4.3	-	-	-
-	Castor IVB	-	-	3.3	-	-	-
Tactical Vehicles	-	-	-	<1.5	-	-	-

**NOTES:**

1. Motor sound pressures from solid fueled motors, roughly, correlate to motor diameter.
2. Estimated.

**Comments and Responses**

We published a notice of proposed rulemaking in the **Federal Register** on January 19, 2017 (82 FR 6456) and requested comments and information from the public. During the thirty-day comment period, we received one letter from the Marine Mammal Commission (Commission). The comments and our responses are provided here, and the comments have been

posted on the Internet at: [www.nmfs.noaa.gov/pr/permits/incidental/research.htm](http://www.nmfs.noaa.gov/pr/permits/incidental/research.htm). Please see the comment letter for the full rationale behind the recommendations we respond to below.

*Comment 1:* The Commission recommends that NMFS require AAC to avoid conducting launches during the harbor seal pupping season from May 15 through June 30, except when launches are necessary for human safety or national security purposes or are necessary to achieve space vehicle launch trajectories to meet mission objectives.

*Response:* It is unlikely that infrequent disturbance resulting from AAC's rocket launches will interrupt the brief mother-pup bonding period within which disturbance could result in separation. NMFS recognizes the critical bonding time needed between a harbor seal mother and her pup to ensure pup survival and maximize pup health. Harbor seal pups are weaned from their mother within approximately four weeks; however, the most critical bonding time is immediately (minutes) after birth. Lawson and Renouf (1987) conducted an in-depth study to investigate harbor seal mother/pup bonds in response to natural and anthropogenic disturbance. In summary, they found that a mutual bond is developed within five minutes of birth, and both the mother and pup play a role in maintaining contact with each other. The study showed a bilateral bond, both on land and in the water, and that mothers would often wait for or return to a pup if it did not follow her. Pups would follow or not move away from their mother as she approached. Most notably, mothers demonstrated overt attention to their pups while in the water and during times of disturbance on the nursery. Increased involvement by the mothers in keeping the pairs together during disturbances became obvious as they would wait for, or return to, their young if the pups fell behind.

In addition, there is no potential for large-scale flushing events that will lead to serious injury or mortality for the harbor seals at the northern end of Ugak Island because, historically,

the number of harbor seals hauled out near the site is less than 30 individuals, and these animals do not stampede, but flush into the water. Harbor seals are a species that does not cause accidental mortality of their pups when the adults flush into the water even during the pupping season.

Given the infrequent (approximately nine times per year) and brief (approximately one minute as heard from Ugak Island) nature of these sounds, as well as the characteristics of mother/pup bonding as described above and the absence of potential for mortality during flushing events (if they occur), NMFS believes that a measure to restrict launches during the pupping season is unnecessary to reach the least practicable adverse impact on the affected marine mammals, when considered in context of practicability for the applicant. The applicant could potentially be forced to schedule their client to another time period that may result in additional costs for both the client and applicant if they have to avoid the pupping season. Should launch monitoring or quarterly aerial surveys indicate that unanticipated impacts to harbor seal pups or impacts to the distribution, size, or productivity of pinniped populations are occurring, the adaptive management component of this rulemaking can allow for adjustments to be made to the required mitigation measures.

### **Description of the Sound Sources**

A detailed description of sound sources was provided in our notice of proposed rulemaking (82 FR 6456; January 19, 2017) and is not repeated here. No changes have been made to the specified activities described therein.

## **Description of Marine Mammals in the Area of the Specified Activity**

We previously reviewed AAC's species descriptions – which summarized available information regarding status, trends, and distribution of the potentially affected species – for accuracy and completeness and referred readers to Sections 4 and 5 of AAC's application, as well as to NMFS's Stock Assessment Reports (SARs; [www.nmfs.noaa.gov/pr/sars/](http://www.nmfs.noaa.gov/pr/sars/)). We also provided information related to all species with expected potential for take around Kodiak and Ugak Islands where AAC plans to conduct the specified activities, summarizing information related to the population or stock. Please see Tables 2 and 3 in our notice of proposed rulemaking (82 FR 6456; January 19, 2017) for that information, which is not reprinted here.

The only marine mammals anticipated to be affected by the specified activities, and for which take by Level B harassment is authorized, are harbor seals hauled out on Ugak Island. Therefore, they are the only marine mammal discussed further in these regulations.

## **Potential Effects of the Specified Activity on Marine Mammals**

A detailed description of the specified activity on marine mammals was provided in our notice of proposed rulemaking (82 FR 6456; January 19, 2017) and is not repeated here. No changes have been made to the specified activities described therein.

NMFS does not anticipate a significant impact on any of the species or stocks of marine mammals from launches from PSCA. The effects of the activities are expected to be limited to short-term startle responses and localized behavioral changes. In general, if the received level of the noise stimulus exceeds both the background (ambient) noise level and the auditory threshold of the animals, and especially if the stimulus is novel to them, there may be a behavioral response. The probability and degree of response will also depend on the season, the group composition of the pinnipeds, and the type of activity in which they are engaged. Minor and brief

responses, such as short-duration startle or alert reactions, are not likely to constitute disruption of behavioral patterns, such as migration, nursing, breeding, feeding, or sheltering and will not cause injury or mortality to marine mammals. On the other hand, startle and alert reactions accompanied by large-scale movements, such as stampedes into the water of hundreds of animals, may rise to the degree of Level A harassment because they could result in injury of individuals. In addition, such large-scale movements by dense aggregations of marine mammals or at pupping sites could potentially lead to takes by injury or death. However, there is no potential for large-scale movements leading to serious injury or mortality for the harbor seals at the northern end of Ugak Island because, historically, the number of harbor seals hauled out near the site is less than 30 individuals, and these animals do not stampede, but flush into the water. Based on similar observational data (at VAFB) and for the largest launch vehicle, the Castor 120 (Lmax measured at 90.8 dBA), NMFS anticipates that if seals are disturbed there may be a startle response and flush into the water. Harbor seals will likely return to haulout sites on Ugak Island within 2 to 55 minutes of the launch disturbance. Based on AAC's measurements as described for the Castor 120 above, any response that will occur will be behavioral. No permanent threshold shift (PTS) or temporary threshold shift (TTS) is anticipated. In addition, because aircraft will fly at altitudes greater than 305 m (1,000 ft) around pinniped haulouts and rookeries, animals are not anticipated to react to security overflights.

The potential effects to marine mammals described in this section of the document do not take into consideration the monitoring and mitigation measures described later in this document (see the "Mitigation" and "Monitoring and Reporting" sections) which, as noted, should effect the least adverse impact practicable on affected marine mammal species and stocks.

## **Anticipated Effects on Marine Mammal Habitat**

Solid fuel rocket boosters will fall into the ocean away from any known or potential haulouts. All sonic booms that reach the earth's surface will be expected to occur over open ocean beyond the OCS. Airborne launch sounds will mostly reflect or refract from the water surface and, except for sounds within a cone of approximately 26 degrees directly below the launch vehicle, will not penetrate into the water column. The sounds that will penetrate will not persist in the water for more than a few seconds. Overall, NMFS does not expect rocket launch activities from PSCA to cause any impacts to habitats used by marine mammals, including pinniped haulouts, or to their food sources.

## **Mitigation**

In order to issue an incidental take authorization (ITA) under section 101(a)(5)(A) of the MMPA, NMFS must set forth the permissible methods of taking pursuant to such activity and other means of effecting the least practicable adverse impact on such species or stock and its habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance, and on the availability of such species or stock for subsistence uses. NMFS's implementing regulations require applicants for ITAs to include information about the availability and feasibility (economic and technological) of equipment, methods, and manner of conducting such activity or other means of effecting the least practicable adverse impact upon the affected species or stocks and their habitat (50 CFR 216.104(a)(11)).

To minimize impacts on pinnipeds at haulout sites, the AAC will continue the following mitigation measures, as implemented during the previous ITAs, designed to minimize impact to affected species and stocks: (1) security overflights immediately associated with the launch will not approach pinniped haulouts on Ugak Island by closer than 0.25 mi (0.4 km), and will

maintain a vertical distance of 1,000 ft (305 m) from the haulouts when within 0.5 mi (0.8 km), unless indications of human presence or activity warrant closer inspection of the area to assure that national security interests are protected in accordance with law; and (2) All Castor 120-equivalent launches (*i.e.*, the loudest rocket used by AAC) will be conducted at a launch pad equipped with a concrete and water-filled flame trench in order to direct smoke away from the launch pad, but also to absorb light and noise at their respective peaks (*i.e.*, lift-off).

NMFS has carefully evaluated AAC's mitigation measures and considered their effectiveness in past implementation to determine whether they are likely to effect the least practicable adverse impact on the affected marine mammal species and stocks and their habitat. Our evaluation of potential measures included consideration of the following factors in relation to one another: (1) the manner and the degree to which the successful implementation of the measure is expected to minimize adverse impacts to marine mammals; (2) the proven or likely efficacy of the specific measure to minimize adverse impacts as planned; and (3) the practicability of the measure for applicant implementation, including consideration of personnel safety, and practicality of implementation. The mitigation measures take scientific studies (Richardson *et al.*, 2005) of overflight effects on pinnipeds into consideration. Lastly, the adaptive nature of the mitigation measures allows for adjustments to be made if launch monitoring or quarterly aerial surveys indicate that impacts to the distribution, size, or productivity of pinniped populations are occurring.

Based on our evaluation of the applicant's measures, as well as other measures considered by NMFS, NMFS has determined that the mitigation measures provide the means of effecting the least adverse impacts practicable on marine mammals species or stocks and their

habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance.

### **Monitoring and Reporting**

In order to issue an ITA for an activity, section 101(a)(5)(A) of the MMPA states that NMFS must set forth “requirements pertaining to the monitoring and reporting of such taking.” The MMPA implementing regulations at 50 CFR 216.104(a)(13) indicate that requests for ITAs must include the suggested means of accomplishing the necessary monitoring and reporting that will result in increased knowledge of the species and of the level of taking or impacts on populations of marine mammals that are expected to be present in the planned action area.

Any monitoring requirement we prescribe should improve our understanding of one or more of the following:

- Occurrence of marine mammal species in action area (*e.g.*, presence, abundance, distribution, density).
- Nature, scope, or context of likely marine mammal exposure to potential stressors/impacts (individual or cumulative, acute or chronic), through better understanding of: (1) action or environment (*e.g.*, source characterization, propagation, ambient noise); (2) affected species (*e.g.*, life history, dive patterns); (3) co-occurrence of marine mammal species with the action; or (4) biological or behavioral context of exposure (*e.g.*, age, calving, or feeding areas).
- Individual responses to acute stressors, or impacts of chronic exposures (behavioral or physiological).
- How anticipated responses to stressors impact either: (1) long-term

fitness and survival of an individual; or (2) population, species, or stock.

- Effects on marine mammal habitat and resultant impacts to marine mammals.
- Mitigation and monitoring effectiveness.

AAC will implement the following for monitoring and reporting:

- Install time-lapsed photography systems designed to monitor pinniped abundance and detect pinniped responses to rocket launches at all pinniped haulout locations around Ugak Island. The number of camera systems, equipment capabilities, placement of the systems to be used, and the daily photo frequency will be determined through a cooperative effort between AAC, NMFS, and the technical experts (qualified, on-site experts who have implemented time-lapsed photography technology for wildlife studies);
  - Ensure the time-lapsed photography systems will be in place and operating in locations that allow for visual monitoring of all pinniped haulouts during launches;
  - Relocate the time-lapsed photography systems in cooperation with NMFS after five launches if the system is not accurately capturing all pinniped haulouts and total pinniped abundance during the launches;
  - Monitor and review the effectiveness of these systems, comparing the results to aerial surveys for pinniped presence, abundance, behavior, and re-occupation time from the data obtained from the time-lapsed photography systems

for the first five launches and report results to NMFS within 90 days (after the 5<sup>th</sup> launch);

- Conduct a study in coordination with NMFS to evaluate the effectiveness of the time-lapsed photography systems (specifically, the accuracy of the photography systems compared with aerial count surveys). The results of this study will determine the need to continue aerial surveys. The study will be conducted through a minimum of five launches;

- Conduct one pre-launch aerial survey and one post-launch aerial survey for each launch to obtain data on pinniped presence, abundance, and behavior capturing all pinniped haulouts;

- Conduct quarterly aerial surveys, ideally during mid-day coinciding with low tide, to obtain data on pinniped presence, abundance, and behavior within the action area to determine long-term trends in pinniped haulout use capturing all pinniped haulouts. Results of these quarterly surveys will be reported once as part of the year-end summary report;

- Conduct quarterly surveys in the event no launch occurs during a calendar year; and

- If launch monitoring or quarterly aerial surveys indicate that the distribution, size, or productivity of the potentially affected pinniped populations has been affected due to the specified activity, the launch procedures and the monitoring methods will be reviewed, in cooperation with NMFS, and, if

necessary, appropriate changes may be made through modifications to a given LOA, prior to conducting the next launch of the same vehicle under that LOA.

Data collected and reported will, at a minimum, include number of seals per haulout, by age class when possible, noting if any disturbance behavior is noted from aircraft presence.

If a freshly dead or seriously injured pinniped is found during post-launch monitoring, the incident must be reported within 48 hours to the NMFS Office of Protected Resources and the NMFS Alaska Regional Office.

### **Previous Monitoring**

A detailed description of AAC's previous monitoring was provided in our notice of proposed rulemaking (82 FR 6456; January 19, 2017) and is not repeated here. No changes have been made to the specified activities described therein.

### **Estimated Take by Incidental Harassment**

The following text describes the potential range of takes possible of harbor seals on PSCA during launches. AAC estimates that up to 45 launches may occur from PSCA over the course of the five-year period covered by these regulations. Annually, AAC requests nine launches to be authorized. AAC estimates that no more than one launch will occur over a 4-week period, and it is likely the frequency of launches will be less than this estimate.

Harbor seals of all age classes hauled out on the northern shores of Ugak Island may become alert or flush into the water in response to rocket launches from PSCA. The total number of harbor seals present on Ugak Island ranges up to a maximum of approximately 1,500 seals in the last ten years, and 1,150 seals in the last five years. However, approximately 97 percent of harbor seals are found at the eastern shore haulout where they are sheltered from launch effects by the 1,000 ft cliffs that stand between this haulout and PSCA. Only about three percent of

harbor seals use the northern haulout across from PSCA because of the lack of suitable beaches. When present, the majority of counts at the northern haulout were of less than 25 individuals. An exceptional one-time high count of about 125 seals occurred within the last 10 years. The mean number of harbor seals present at the northern haulout is 10 seals with a standard deviation of 25 seals. Therefore, a representative harbor seal population at the northern haulout of 35 seals (the mean plus one standard deviation) is used for the following take estimate.

Assuming that all 35 harbor seals at the northern haulout are expected to be present and taken by Level B Harassment during a launch, and that all 9 launches are of the Castor 120 (loudest space vehicle), a maximum of 315 harbor seals annually could be taken by Level B harassment with 1,575 harbor seals taken over the 5-year effective period of the regulations. Launches may occur at any time of the year, so any age classes and gender may be taken.

The Lmax from the loudest launch (Castor 120) may reach approximately 90.8 dBA at the traditional Steller sea lion haulout (approximately 3.5 mi from the launch site) which is a similar distance to the northern beaches where harbor seals haul out (approximately 4 mi from the launch site). Based on this recorded level and the fact that audible launch noise will be very short in duration, any response will be behavioral in nature and harbor seals are not expected to incur PTS or TTS. No injury or mortality of harbor seals is anticipated, nor is any authorized. Therefore, NMFS plans to authorize harbor seal take, by Level B harassment only, incidental to launches from PSCA.

As discussed above, security overflights associated with a launch will not closely approach or circle any pinniped. Therefore, incidental take from this activity is not anticipated. Should the pilot or crew on the plane observe pinnipeds reacting to their presence, the plane will

increase altitude and note the number of animals reacting to the plane. These data will be included in AAC's marine mammal reports.

### **Changes to the Proposed Regulations**

As a result of clarifying discussions with AAC we made certain changes to the proposed regulations as described here. These changes are considered minor and do not affect any of our preliminary determinations. Mitigation Measures 2, 3, and 4 were moved into the "Monitoring and Reporting" section and combined with relevant monitoring measures. In the "Monitoring and Reporting" section, we clarified that AAC will only conduct quarterly surveys, and not five surveys, in the event that no launch occurs during a calendar year. The proposed rule may have implied that AAC would conduct an additional survey if no launches occurred that year.

However, AAC is already conducting quarterly surveys regardless of the numbers of launches each year at PSCA. It was determined that an additional (or fifth survey) was not necessary as the biological monitoring would be adequately covered under quarterly surveys.

The proposed rule stated that AAC would monitor "three" of the pinniped haulouts. However, the specific number of haulout locations was removed to ensure that all pinniped haulouts would be monitored during the five-year period covered by these regulations if haulout dynamics change (*i.e.*, there are additional or fewer haulouts documented in the future).

For reporting purposes, we eliminated the need for AAC to send reports 90 days after each launch. After further consideration, NMFS believes annual reports and a five-year report adequately provide the necessary biological monitoring data, and requiring an additional report 90 days after each launch would be excessive. NMFS also eliminated the need for AAC to contact the NMFS's Alaska Regional Office two weeks prior to each launch. After coordinating

with NMFS's Alaska Regional Office, it was agreed upon that it was unnecessary for AAC as they already have methods for informing the public of launches.

## **Analyses and Determinations**

### *Negligible Impact Analysis*

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." A negligible impact finding is based on the lack of likely adverse effects on annual rates of recruitment or survival (*i.e.*, population-level effects). An estimate of the number of Level B harassment takes alone is not enough information on which to base an impact determination. In addition to considering estimates of the number of marine mammals that might be "taken" through behavioral harassment, we consider other factors, such as the likely nature of any responses (*e.g.*, intensity, duration), the context of any responses (*e.g.*, critical reproductive time or location, migration), as well as the number and nature of estimated Level A harassment takes, the number of estimated mortalities, and effects on habitat. In making a negligible impact determination, NMFS considers (and should explicitly address whenever possible) the following:

- (1) The number of anticipated injuries, serious injuries, or mortalities;
- (2) The number, nature, and intensity, and duration of Level B harassment (all relatively limited);
- (3) The context in which the takes occur (*i.e.*, impacts to areas of significance, impacts to local populations, and cumulative impacts when taking into account successive/contemporaneous actions when added to baseline data);
- (4) The status of stock or species of marine mammals (*i.e.*, depleted, not depleted,

decreasing, increasing, stable, impact relative to the size of the population);

(5) Impacts on habitat affecting rates of recruitment/survival; and

(6) The effectiveness of monitoring and mitigation measures.

For reasons stated previously in this document, the specified activities are not likely to cause long-term behavioral disturbance, abandonment of the haulout area, injury, serious injury, or mortality because:

(1) The considerable evidence, based on over 10 years of monitoring data, suggesting no long-term changes in the use by harbor seal haulouts in the project area as a result of launch operations. Launches will not occur more than a maximum of nine times per year over the next five years;

(2) Based on aerial survey data, the harbor seal population on Ugak Island has increased and is stable. As discussed previously, the population of harbor seals on Ugak Island has increased steadily from several hundred in the 1990s (ENRI 1995-1998) to a peak of about 1,500 in 2008 (R&M 2007a, 2007b, 2008, 2009). Therefore, NMFS does not believe there will be any long-term impact on the health of the population. Given harbor seals are considered a species that is easily disturbed, their resilience to launch effects suggest impacts from launches are short-term and negligible;

(3) Overall, rocket launch activities from PSCA are not be expected to cause any impacts to habitats used by marine mammals, including pinniped haulouts, or to their food sources or impact their survival, and;

(4) Mitigation measures to reduce noise from launches once in the air are virtually impossible; however, the noise generated on the launch pad during ignition moves through a

deep trench (called a flame trench or flame bucket) that diverts the noise/exhaust toward the northwest (away from Ugak Island).

Based on the analysis contained herein of the likely effects of the specified activity on marine mammals and their habitat, and taking into consideration the implementation of the mitigation and monitoring measures, NMFS finds that space vehicle and missile launch operations at the PSCA will have a negligible impact on the affected marine mammal species or stock.

#### *Small Numbers Analysis*

The number of authorized takes is considered small relative to the relevant stocks or populations, eight percent for harbor seals. However, it is important to note that the number of expected takes does not necessarily represent the number of individual animals expected to be taken. Our small numbers analysis accounts for this fact. Multiple exposures to Level B harassment can accrue to the same individuals over the course of an activity that occurs multiple times in the same area (such as AAC's planned activity). This is especially likely in the case of species that have limited ranges and that have site fidelity to a location within the project area, as is the case with harbor seals.

As described above, harbor seals are non-migratory, rarely traveling more than 50 km from their haulout sites. Thus, while the estimated abundance of the South Kodiak stock of harbor seals is 19,199 (Muto *et al.*, 2015), a substantially smaller number of individual harbor seals is expected to occur within the project area. We expect that, because of harbor seals' site fidelity to locations at Ugak Island, and because of their limited ranges, the same individuals are likely to be taken repeatedly over the course of the planned activities. Therefore, the number of exposures to Level B harassment over the course of the authorization (the total number of takes

described in the Estimated Take by Incidental Harassment section) is expected to accrue to a much smaller number of individuals. The maximum number of incidents of harassment of harbor seals during the period of validity of the 5-year regulations is expected to be 1,575. We therefore use this estimate of 1,575 incidents of harassment for the purposes of estimating the percentage of the stock abundance likely to be taken.

Based on the analysis contained herein of the likely effects of the specified activity on marine mammals and their habitat, and taking into consideration the implementation of the mitigation and monitoring measures, we find that small numbers of marine mammals will be taken relative to the populations of the affected species or stocks.

#### **Impact on Availability of Affected Species for Taking for Subsistence Uses**

Several communities on Kodiak Island use harbor seals (and Steller sea lions) for subsistence uses. The communities closest to Ugak Island are Old Harbor and Kodiak City; each is over 35 miles from Ugak Island. The Alaska Native Harbor Seal Commission quantified the Kodiak area subsistence take of harbor seals (and Steller sea lions) in a report issued in 2011. Within the last ten years, 2011, 2008, 2007, and 2006 were surveyed. On average, during the years surveyed in the last 10 years, Kodiak city took 35.3 harbor seals and Old Harbor took 35.2 harbor seals annually. Specific locations of take are not mentioned in this document.

Based on the distance of Ugak Island from each community and the opportunities closer to each community, either a small fraction of the averages provided, or no take can be estimated from each community. It is possible that some fraction of the average number of harbor seals listed above were taken from Ugak Island specifically, but there is no documentation to support that conclusion.

There is no expectation that harbor seals will abandon sealing grounds, based on AAC's launches or the launches at other launch sites (*e.g.*, VAFB). In addition, no permanent barriers will be placed between the subsistence hunter and pinnipeds on Ugak Island. There are temporary closures of Ugak Island for a portion of a 24-hour day during each launch.

AAC consulted (as they have for previous regulations) with the Alaska Native Harbor Seal Commission as well as the Kodiak communities for the issuance of final regulations to ensure project activities do not impact relevant subsistence uses of marine mammals implicated by this action. AAC met with the Kodiak Tribal Council in October 2016 during their quarterly meeting and briefed them on AAC's activity and AAC's request for their concurrence on the lack of impact on subsistence activities from space and vehicle launch operations. The Kodiak Regional Subsistence Director concurred there would not be negative impact to subsistence uses from AAC's project activities.

Based on the analysis contained herein of the likely effects of the specified activity on marine mammals and their habitat, and taking into consideration the implementation of the mitigation and monitoring measures, we have determined that the total taking of affected species or stocks will not have an unmitigable adverse impact on the availability of such species or stocks for taking for subsistence purposes.

### **Adaptive Management**

The regulations governing the take of marine mammals incidental to space and vehicle launch operations contain an adaptive management component.

The reporting requirements associated with this rule are designed to provide NMFS with monitoring data from the previous year to allow consideration of whether any changes are appropriate. The use of adaptive management allows NMFS to consider new information from

different sources to determine (with input from AAC regarding practicability) on an annual basis if mitigation or monitoring measures should be modified (including additions or deletions).

Mitigation measures could be modified if new data suggests that such modifications would have a reasonable likelihood of reducing adverse effects to marine mammals and if the measures are practicable.

AAC's monitoring program (see "Monitoring and Reporting") will be managed adaptively. Changes to the monitoring program may be adopted if they are reasonably likely to better accomplish the MMPA monitoring goals described previously or may better answer the specific questions associated with the AAC's monitoring plan.

The following are some of the possible sources of applicable data to be considered through the adaptive management process: (1) results from monitoring reports, as required by MMPA authorizations; (2) results from time-lapsed photography systems; and (3) any information which reveals that marine mammals may have been taken in a manner, extent, or number not authorized by these regulations or subsequent LOAs.

In addition, improved monitoring will better enable AAC and NMFS to determine if impacts from space vehicle and missile launch operations are having short-term and long-term impacts on the present day pinniped populations on Ugak Island. The time-lapse photography system will be able to detect impacts (takes) from launch exposure, including the number of pinnipeds flushing at the haulout sites, while quarterly aerial surveys will aid in determining long-term trends of pinniped abundance.

### **Endangered Species Act**

There is one marine mammal species under NMFS's jurisdiction that is listed as endangered under the Endangered Species Act (ESA) with confirmed or possible occurrence in

the action area, the Steller sea lion. NMFS and AAC consulted internally with NMFS's Alaska Regional Office under the ESA on its issuance of regulations and subsequent LOAs to AAC. It was determined that the planned activities will not affect Steller sea lions; therefore, ESA consultation is not required.

### **National Environmental Policy Act**

In the proposed rule, we described our plan to adopt FAA's 2016 EA as necessary for the final issuance of the regulations and subsequent LOA(s). However, in compliance with NOAA policy, the National Environmental Policy Act (NEPA), and the Council on Environmental Quality Regulations (40 CFR parts 1500-1508), NMFS has now determined the issuance of the regulations and subsequent LOA(s) qualifies to be categorically excluded from NEPA review. This action is consistent with categories of activities identified in CE B4 of the Companion Manual for NOAA Administrative Order 216-6A, which do not individually or cumulatively have the potential for significant impacts on the quality of the human environment and we have not identified any extraordinary circumstances that will preclude this categorical exclusion.

### **Classification**

Pursuant to the procedures established to implement Executive Order 12866, the Office of Management and Budget has determined that this rule is not significant.

Pursuant to section 605(b) of the Regulatory Flexibility Act (RFA), the Chief Counsel for Regulation of the Department of Commerce certified to the Chief Counsel for Advocacy of the Small Business Administration at the proposed rule stage that this rule will not have a significant economic impact on a substantial number of small entities. The factual basis for the certification was published in the proposed rule and is not repeated here. No comments were received

regarding this certification. As a result, a regulatory flexibility analysis is not required and none has been prepared.

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 (COI) subject to the requirements of the Paperwork Reduction Act (PRA) unless that COI displays a currently valid OMB control number. These requirements have been approved by OMB under control number 0648-0151 and include applications for regulations, subsequent LOAs, and reports.

**List of Subjects in 50 CFR Part 217**

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

Dated: March 17, 2017.

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Alan D. Risenhoover,

Acting Deputy Assistant Administrator for Regulatory Programs,  
National Marine Fisheries Service.

For reasons set forth in the preamble, NMFS amends 50 CFR part 217 as follows:

**PART 217 – REGULATIONS GOVERNING THE TAKE OF MARINE MAMMALS  
INCIDENTAL TO SPECIFIED ACTIVITIES**

1. The authority citation for part 217 continues to read as follows:

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

2. Add subpart H to read as follows:

**Subpart H – Taking of Marine Mammals Incidental to Space Vehicle and Missile Launches**

Sec.

217.70 Specified activity and specified geographical region.

217.71 Effective dates.

217.72 Permissible methods of taking.

217.73 Prohibitions.

217.74 Mitigation.

217.75 Requirements for monitoring and reporting.

217.76 Letters of Authorization.

217.77 Renewals and modifications of Letters of Authorization.

217.78 [Reserved]

217.79 [Reserved]

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

(a) Regulations in this subpart apply only to the Alaska Aerospace Corporation (AAC) and those persons it authorizes to conduct activities on its behalf for the taking of marine mammals that occurs in the area identified in paragraph (b) of this section and that occurs incidental to conducting up to nine space vehicle launches each year from PSCA, for a total of 45 launches over the period of these regulations.

(b) The taking of marine mammals by AAC may be authorized in a Letter of Authorization (LOA) only if it occurs at the Pacific Spaceport Alaska Complex (PSCA) on Kodiak Island, AK.

**§ 217.71 Effective dates.**

Regulations in this subpart are effective from April 24, 2017, through April 25, 2022.

**§ 217.72 Permissible methods of taking.**

Under an LOA issued pursuant to § 216.106 of this chapter and § 217.70, the Holder of the LOA (hereinafter “AAC”) and its contractors may incidentally, but not intentionally, take

harbor seals (*Phoca vitulina*) by Level B harassment in the course of conducting space vehicle and missile launch operations within the area described in § 217.70(b), provided the activity is in compliance with all terms, conditions, and requirements of the regulations in this subpart and the applicable LOA.

**§ 217.73 Prohibitions.**

Notwithstanding authorization under these regulations and any LOA issued under § 216.106 of this chapter and § 217.76, no person conducting the activities described in § 217.70 may:

- (a) Violate, or fail to comply with, the terms, conditions, and requirements of this subpart or an LOA issued under § 216.106 of this chapter and § 217.76;
- (b) Take any marine mammal not specified in such LOA;
- (c) Take any marine mammal specified in such LOA in any manner other than as specified;
- (d) Take a marine mammal specified in such LOA if NMFS determines such taking results in more than a negligible impact on the species or stocks of such marine mammal; or
- (e) Take a marine mammal specified in such LOA if NMFS determines such taking results in an unmitigable adverse impact on the species or stock of such marine mammal for taking for subsistence uses.

**§ 217.74 Mitigation.**

(a) When conducting operations identified in § 217.70(a), the mitigation measures contained in any LOA issued under § 216.106 of this chapter and § 217.76 must be implemented. These mitigation measures include:

(1) Security overflights immediately associated with the launch shall not approach pinniped haulouts on Ugak Island by closer than 0.25 mi (0.4 km), and shall maintain a vertical distance of 1,000 ft (305 m) from the haulouts when within 0.5 mi (0.8 km), unless indications of human presence or activity warrant closer inspection of the area to assure that national security interests are protected in accordance with law; and

(2) All Castor 120 equivalent launches shall be conducted at LP1.

(b) [Reserved]

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

(a) If the authorized activity identified in § 217.70(a) is thought to have resulted in the mortality or injury of any marine mammals or take of marine mammals not identified in § 217.70(b), then the Holder of the LOA must notify NMFS Office of Protected Resources and NMFS Alaska Regional Office, within 48 hours of the injury or death.

(b) Holders of LOAs must designate qualified, on-site individuals, technical experts who have implemented time-lapsed photography technology for wildlife studies, approved in advance by NMFS Office of Protected Resources to:

(1) Install time-lapsed photography systems designed to monitor pinniped abundance and detect pinniped responses to rocket launches at each of the pinniped haulout locations around Ugak Island. The number of camera systems, equipment capabilities, placement of the systems to be used, and the daily photo frequency shall be determined through a cooperative effort between AAC, NMFS Office of Protected Resources, and the technical experts;

(2) Ensure the time-lapsed photography systems shall be in place and operating in locations that allow for visual monitoring of all pinniped haulouts during launches;

(3) Relocate the time-lapsed photography systems in cooperation with NMFS after five launches if the system is not accurately capturing all pinniped haulouts and total pinniped abundance during the launches;

(4) Monitor and review the effectiveness of these systems, comparing the results to aerial surveys for pinniped presence, abundance, behavior, and re-occupation time from the data obtained from the time-lapsed photography systems for the first five launches and report results to NMFS Office of Protected Resources within 90 days (after the 5<sup>th</sup> launch); and

(5) Conduct a study in coordination with NMFS Office of Protected Resources to evaluate the effectiveness of the time-lapsed photography systems (specifically, the accuracy of the photography systems compared with aerial count surveys). The results of this study shall determine the need to continue aerial surveys. The study shall be conducted through a minimum of five launches.

(c) AAC shall conduct one pre-launch aerial survey and one post-launch aerial survey for each launch to obtain data on pinniped presence, abundance, and behavior at all pinniped haulouts. Results of these pre- and post-launch surveys shall be reported to NMFS Office of Protected Resources once as part of the year-end summary report required under paragraph (e) of this section.

(d) AAC shall conduct quarterly aerial surveys, ideally during mid-day coinciding with low tide, to obtain data on pinniped presence, abundance, and behavior within the action area to determine long-term trends in pinniped haulout use capturing all pinniped haulouts. Results of these quarterly surveys shall be reported to NMFS Office of Protected Resources once as part of the year-end summary report required under paragraph (e) of this section.

(e) A year-end summary report must be submitted on March 1 of each year to NMFS Office of Protected Resources that shall include results of the pre- and post-launch aerial surveys, quarterly aerial survey trend counts of pinnipeds, and comparison of the results using the time-lapsed photography systems on Ugak Island. Future aerial surveys may be reduced if the time-lapsed photography systems capture similar or better data than aerial surveys. This report must contain the following information:

- (1) Date(s) and time(s) of the launches;
- (2) Locations of the time-lapsed photography systems;
- (3) Design of the monitoring program for the time-lapsed photography systems and a description of how data is stored and analyzed; and
- (4) Results of the monitoring program for pre- and post-launch aerial surveys, quarterly aerial surveys, and the time-lapsed photography systems, including, but not necessarily limited to:
  - (i) Numbers of pinnipeds, by species and age class (if possible), present on the haulout prior to commencement of the launch;
  - (ii) Numbers of pinnipeds, by species and age class (if possible), that may have been harassed, including the number that entered the water as a result of launch noise;
  - (iii) The length of time pinnipeds remained off the haulout during post-launch monitoring;
  - (iv) Number of harbor seal pups that may have been injured or killed as a result of the launch; and
  - (v) Other behavioral modifications by pinnipeds that were likely the result of launch noise.

(f) A final 5-year report must be submitted to NMFS Office of Protected Resources at least 90 days prior to expiration of these regulations if new regulations are sought or 180 days after expiration of regulations. This report shall:

(1) Summarize the activities undertaken and the results reported in all previous reports;

(2) Assess the impacts of launch activities on pinnipeds within the action area, including potential for pup injury and mortality;

(3) Assess the cumulative impacts on pinnipeds and other marine mammals from multiple rocket launches; and

(4) State the date(s), location(s), and findings of any research activities related to monitoring using time-lapsed photography systems on marine mammal populations

(g) AAC shall conduct quarterly aerial surveys in the event no launch occurs during a calendar year. These quarterly surveys shall be reported in the year-end summary report as described in paragraph (e) of this section; and

(h) If NMFS believes that launch monitoring or quarterly aerial surveys indicate that the distribution, size, or productivity of the potentially affected pinniped populations has been affected due to the specified activity, the launch procedures and the monitoring methods shall be reviewed in cooperation with NMFS, and, if necessary, appropriate changes may be made through modifications to a given LOA, prior to conducting the next launch of the same vehicle under that LOA.

**§ 217.76 Letters of Authorization.**

(a) To incidentally take marine mammals pursuant to these regulations, AAC must apply for and obtain an LOA.

(b) An LOA, unless suspended or revoked, may be effective for a period of time not to exceed the expiration date of these regulations.

(c) If an LOA expires prior to the expiration date of these regulations, AAC must apply for and obtain a renewal of the LOA.

(d) In the event of projected changes to the activity or to mitigation and monitoring measures required by an LOA, AAC must apply for and obtain a modification of the LOA as described in § 217.77.

(e) The LOA shall set forth:

(1) The number of marine mammals, by species, authorized to be taken;

(2) Permissible methods of incidental taking;

(3) Means of effecting the least practicable adverse impact (*i.e.*, mitigation) on the species of marine mammals authorized for taking, its habitat, and on the availability of the species for subsistence uses; and

(4) Requirements for monitoring and reporting.

(f) Issuance of an LOA shall be based on a determination that the level of taking shall be consistent with the findings made for the total taking allowable under these regulations.

(g) Notice of issuance or denial of an LOA shall be published in the **Federal Register** within 30 days of a determination.

#### **§ 217.77 Renewals and modifications of Letters of Authorization.**

(a) An LOA issued under § 216.106 of this chapter and § 217.76 for the activity identified in § 217.70(a) shall be renewed or modified upon request by the applicant, provided that:

(1) The specified activity and mitigation, monitoring, and reporting measures, as well as the anticipated impacts, are the same as those described and analyzed for these regulations (excluding changes made pursuant to the adaptive management provision in paragraph (c)(1) of this section), and

(2) NMFS determines that the mitigation, monitoring, and reporting measures required by the previous LOA under these regulations were implemented.

(b) For an LOA modification or renewal request by the applicant that includes changes to the activity or the mitigation, monitoring, or reporting (excluding changes made pursuant to the adaptive management provision in paragraph (c)(1) of this section) that do not change the findings made for the regulations or result in no more than a minor change in the total estimated number of takes (or distribution by species or years), NMFS may publish a notice of proposed LOA in the **Federal Register**, including the associated analysis of the change, and solicit public comment before issuing the LOA.

(c) An LOA issued under § 216.106 of this chapter and § 217.76 for the activity identified in § 217.70(a) may be modified by NMFS under the following circumstances:

(1) Adaptive Management – NMFS may modify (including augment) the existing mitigation, monitoring, or reporting measures (after consulting with AAC regarding the practicability of the modifications) if doing so creates a reasonable likelihood of more effectively accomplishing the goals of the mitigation and monitoring set forth in the preamble for these regulations:

(i) Possible sources of data that could contribute to the decision to modify the mitigation, monitoring, or reporting measures in an LOA:

(A) Results from AAC's monitoring from the previous year(s);

(B) Results from other marine mammal and/or sound research or studies; and

(C) Any information that reveals marine mammals may have been taken in a manner, extent or number not authorized by these regulations or any LOA issued under §§ 216.106 and 217.76 of this chapter.

(ii) If, through adaptive management, the modifications to the mitigation, monitoring, or reporting measures are substantial, NMFS shall publish a notice of proposed LOA in the **Federal Register** and solicit public comment.

(2) Emergencies - If NMFS determines that an emergency exists that poses a significant risk to the well-being of the species or stocks of marine mammals specified in §§ 217.70(b) and 217.72(a), an LOA may be modified without prior notice or opportunity for public comment. A notice shall be published in the **Federal Register** within 30 days of the action.

§ 217.78 [Reserved]

§ 217.79 [Reserved]

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