



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Silver Spring, MD 20910

Letter of Authorization

The Alaska Aerospace Corporation (AAC) is hereby authorized under section 101(a)(5)(A) of the Marine Mammal Protection Act (16 U.S.C. 1371 (a)(5)(A); MMPA) to take marine mammals incidental to space vehicle and missile launch operations from the Pacific Spaceport Complex Alaska (PSCA) on Kodiak Island, Alaska subject to the provisions of the MMPA and the Regulations Governing Small Taking of Marine Mammals Incidental to Space Vehicle and Missile Launches (50 CFR Part 217, Subpart H) (the Regulations).

1. This Authorization is valid from the date of issuance through April 25, 2022.
2. This Authorization is valid only for take of marine mammals incidental to activities associated with a maximum of nine rocket launches annually from the PSCA on Kodiak Island, Alaska, as described in the preamble to the Regulations.
3. AAC is hereby authorized to incidentally take, by Level B harassment only, 315 harbor seals (*Phoca vitulina richardii*). This number represent the annual take authorization for five years.
4. Taking of this species that exceeds the number and/or intensity indicated in 3 or any taking of any other species of marine mammal is prohibited and may result in the modification, suspension, or revocation of this Authorization.
5. Mitigation Requirements:

The Holder of this Authorization is required to implement the following mitigation measures:

- (a) Security overflights immediately associated with the launch shall not approach pinniped haulouts on Ugak Island by closer than 0.25 mile (mi) (0.4 kilometer (km)), and shall maintain a vertical distance of 1,000 feet (ft) (305 meter (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
- (b) All Castor 120 equivalent launches shall be conducted at LP1.

6. Monitoring and Reporting

The Holder of this Authorization must implement the following monitoring measures:

- (a) If the specified activity is thought to have resulted in unauthorized take, including the mortality or injury of any marine mammals, then the Holder of the Authorization must



notify NMFS Office of Protected Resources at (301) 427-8401 and NMFS Alaska Regional Office at (907) 586-7235, within 48 hours of the incident.

(b) The Holder of the Authorization 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 5th 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;

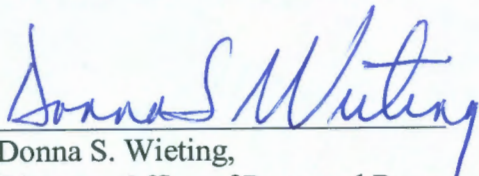
- (2) Assess the impacts of launch activities on pinnipeds within the action area, including potential for pup injury and mortality;
 - (3) Assess the cumulative impacts on pinnipeds and other marine mammals from multiple rocket launches; and
 - (4) State the date(s), location(s), and findings of any 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 (e) above; 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 this LOA, prior to conducting the next launch of the same vehicle.

7. In the event that AAC discovers an injured or dead marine mammal, and the marine mammal observer determines that the cause of the injury or death is unknown and the death is relatively recent (*i.e.*, in less than a moderate state of decomposition as we describe in the next paragraph), AAC shall immediately report the incident to the Office of Protected Resources, NMFS at (301) 427-8401 and the Alaska Regional Stranding Coordinator at (907) 586-7235. The report must include the same information identified in the paragraph above this section. Activities may continue while NMFS reviews the circumstances of the incident. NMFS would work with AAC to determine whether modifications in the activities are appropriate.

8. In the event that AAC discovers an injured or dead marine mammal, and the lead visual observer determines that the injury or death is not associated with or related to the authorized activities (*e.g.*, previously wounded animal, carcass with moderate to advanced decomposition, or scavenger damage), AAC shall report the incident to the Office of Protected Resources, NMFS (301) 427-8401 and the Alaska Regional Stranding Coordinator at (907) 586-7235 within 24 hours of the discovery. AAC personnel shall provide photographs or video footage or other documentation of the stranded animal sighting to us. AAC can continue their survey activities while NMFS reviews the circumstances of the incident.

9. This Authorization may be modified, suspended or withdrawn if the holder fails to abide by the conditions prescribed herein, or if NMFS determines that the authorized taking is having a more than a negligible impact on the stock of affected marine mammals or is having an unmitigable adverse impact on the availability of the stock for subsistence uses.

10. A copy of this Authorization must be in the possession of each observer or group operating under the authority of this Letter of Authorization.



Donna S. Wieting,
Director, Office of Protected Resources,
National Marine Fisheries Service.

MAY 11 2017

Date

