



United States Department of the Interior



U.S. FISH AND WILDLIFE SERVICE
1011 East Tudor Road
Anchorage, Alaska 99503-6199

IN REPLY REFER TO:

AFES/MMM

APR 20 2015

Ms. Julie Lina
Caelus Natural Resources Alaska, LLC
3700 Centerpoint Drive, Suite 500
Anchorage, Alaska 99503

Dear Ms. Lina:

We have received your letter, dated November 25, 2014, requesting a Letter of Authorization (LOA) for the incidental take of polar bears and Pacific walruses in association with the Caelus Natural Resources Alaska, LLC (Caelus) 2015 Nuna Development Project and associated field studies on the North Slope of Alaska. In response, and in accordance with regulations listed at 76 FR 47010, dated August 3, 2011, enclosed is LOA 15-09. This LOA authorizes Caelus to take small numbers of polar bears and Pacific walruses incidental to the proposed 2015 Nuna Development Project activities. A detailed description of the proposed activities is provided in Caelus's *Request for Letter of Authorization for the Incidental Take of Marine Mammals, Nuna Project, North Slope, Alaska* (November 25, 2013).

If you have any questions, please contact Mr. Michael Hendrick or Mr. Christopher Putnam of our Marine Mammals Management Office, at (907) 786-3479 or (907) 786-3844, respectively.

Sincerely,

Chief, Marine Mammals Management

Enclosure

Email cc: Mr. Richard Shideler, Alaska Department of Fish and Game
U.S. Fish and Wildlife Service, Fairbanks Fish and Wildlife Field Office
U.S. Fish and Wildlife Service, Office of Law Enforcement
North Slope Borough, Department of Law



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U.S. FISH AND WILDLIFE SERVICE
1011 East Tudor Road
Anchorage, Alaska 99503-6199

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LETTER OF AUTHORIZATION
Incidental Take
(15-09)

ISSUED: April 20, 2015
EXPIRES: April 20, 2016

In accordance with Incidental Take Regulations listed at 76 FR 47010, dated August 3, 2011, Caelus Natural Resources Alaska, LCC (Caelus) is authorized to take small numbers of polar bears and Pacific walruses incidental to activities associated with the 2015 Nuna Development Project and associated field studies on the North Slope of Alaska.

Caelus proposes to conduct an expansion of the Oooguruk Development Project. The project includes construction of the onshore production drillsite Nuna Drillsite 1 (NDS 1), expansion and modification of the existing Oooguruk Tie-in Pad (OTP), and associated construction of an access road, and flowlines and power and communication lines elevated on vertical support members (VSMs). A detailed description of the proposed activities is provided in Caelus's *Request for Letter of Authorization for the Incidental Take of Marine Mammals, Nuna Project, North Slope, Alaska* (November 25, 2013).

As a condition of this Letter of Authorization (LOA), Caelus shall conduct a polar bear den detection survey prior to the start of project activities near polar bear denning habitat during the maternal denning period (November to mid-April). The U.S. Fish and Wildlife Service (Service) seeks to limit disturbance of polar bear maternal dens and denning habitat. All personnel must use caution when operating near polar bear denning habitat during the maternal denning period. Service Marine Mammals Management Office (MMM) biologists are available at the phone numbers listed below if questions or concerns arise.

This LOA and the required conditions below apply to all Caelus employees, contractors, and personnel performing Caelus-approved work for the project described above. This LOA stipulates the following conditions:

- 1) This LOA authorizes incidental take only.
- 2) Caelus must comply with all requirements listed at 76 FR 47010, dated August 3, 2011, and 50 CFR §18.128.
- 3) Caelus shall report all polar bear sightings, signs of polar bears (e.g., tracks or excavations), and any potential dens to the Service MMM using the polar bear observation report, within 24 hours via email to fw7_mmm_reports@fws.gov.

- 4) Project field camps and personnel shall limit encounters with polar bears by being observant of approaching bears (e.g., the use of polar bear guards) and by allowing bears to pass unhindered when possible.
- 5) Project operations managers, or designees, must understand, be fully aware of, and be capable of implementing the conditions of this LOA.
- 6) If changes develop in the project during the period approved under this LOA, such as activities, location, or methods, the Service MMM must be notified prior to the implementation of such changes.
- 7) Caelus must conduct the following mitigation, monitoring, and reporting.
 - (a) Mitigation: Holders of a LOA must use methods and conduct activities in a manner that minimizes to the greatest extent practicable adverse impacts on walruses and polar bears, their habitat, and on the availability of these marine mammals for subsistence uses. Dynamic management approaches, such as temporal or spatial limitations in response to the presence of marine mammals in a particular place or time or the occurrence of marine mammals engaged in a particularly sensitive activity (such as feeding), must be used to avoid or minimize interactions with polar bears, walruses, and subsistence users of these resources.
 - (1) All applicants:
 - (i) Holders of a LOA must cooperate with the Service and other Federal, State, and local agencies to monitor the impacts of oil and gas industry (Industry) activities on polar bears and Pacific walruses.
 - (ii) Holders of a LOA must designate a qualified individual or individuals to observe, record, and report on the effects of Industry activities on polar bears and Pacific walruses.
 - (iii) Holders of a LOA must have an approved polar bear and/or walrus interaction plan on file with the Service and at work sites and polar bear awareness training must be provided to personnel. The *Caelus Oooguruk Development Project Bear and Pacific Walrus Avoidance and Human Interaction/Encounter Plan* (Interaction Plan; Revision 4-August 2014) and all associated addenda including the following are incorporated by reference into this LOA: *Addendum D, Nuna Development Activities* (August 2011); *Addendum E, Nuna Environmental Studies* (February 2012); *Addendum F, 2013 Oooguruk Project Modifications: OTP Expansion, Oooguruk Seawater Flowline & Tie-in Pad, and ODS Expansion*; and *Addendum G, Oooguruk Tie-in Pad Southern Expansion* (2014). All provisions must be complied with unless specifically noted otherwise in this LOA.
 - (iv) Holders of a LOA must contact affected subsistence communities to discuss potential conflicts caused by location, timing, and methods of proposed operations and submit to the Service a record of communication that documents these discussions. Documentation of communication is provided in *Caelus's Request for Letter of Authorization for the Incidental Take of Marine Mammals, Nuna Project, North Slope, Alaska* (November 25, 2013).

- (v) If deemed appropriate by the Service, holders of a LOA will be required to hire and train polar bear monitors to alert crew of the presence of polar bears and initiate adaptive mitigation responses.

(2) Onshore activities:

- (i) Holders of a LOA must make efforts to limit disturbance around known polar bear dens.
- (ii) Holders of a LOA seeking to carry out onshore exploration activities in known or suspected polar bear denning habitat during the denning season (November–April) must make efforts to locate occupied polar bear dens within and near proposed areas of operation, utilizing appropriate tools, such as, forward-looking infrared (FLIR) imagery and/or polar bear scent-trained dogs. All observed or suspected polar bear dens must be reported to the Service prior to the initiation of activities.
- (iii) Holders of a LOA must observe a 1.6-km (1-mi) operational exclusion zone around all known polar bear dens during the denning season (November–April, or until the female and cubs leave the areas). Should previously unknown occupied dens be discovered within 1.6 km (1 mi) of activities, work must cease and the Service contacted for guidance. The Service will evaluate these instances on a case-by-case basis to determine the appropriate action. Potential actions may range from cessation or modification of work to conducting additional monitoring, and the holder of the LOA must comply with any additional measures specified.
- (iv) A map of potential coastal polar bear denning habitat can be found at: http://alaska.usgs.gov/science/biology/polar_bears/products.html. This measure ensures that the location of potential polar bear dens is considered when conducting activities in the coastal areas of the Beaufort Sea.
- (v) Holders of a LOA must restrict the timing of their activity to limit disturbance around dens.

(3) Operating conditions for operational and support vessels:

- (i) Operational and support vessels must be staffed with dedicated marine mammal observers to alert crew of the presence of walrus and polar bears and initiate adaptive mitigation responses.
- (ii) At all times, vessels must maintain the maximum distance possible from concentrations of walrus or polar bears. Under no circumstances, other than an emergency, should any vessel approach within an 805-m (0.5-mi) radius of walrus or polar bears observed on land or ice.
- (iii) Vessel operators must take every precaution to avoid harassment of concentrations of feeding walrus when a vessel is operating near these animals. Vessels should reduce speed and maintain a minimum 805-m (0.5-mi) operational exclusion zone around feeding walrus groups. Vessels may not be operated in such a way as to separate members of a group of walrus from other members of the group. When weather conditions require, such

as when visibility drops, vessels should adjust speed accordingly to avoid the likelihood of injury to walrus.

- (iv) All vessels shall avoid areas of active or anticipated walrus or polar bear hunting activity as determined through community consultations.
- (v) The Service may require the use of trained marine mammal monitors on the site of the activity or on board drill ships, drill rigs, aircraft, icebreakers, or other support vessels or vehicles to monitor the impacts of Industry's activity on polar bear and Pacific walrus.

(4) Operating conditions for aircraft:

- (i) Operators of support aircraft should, at all times, conduct their activities at the maximum distance possible from concentrations of walrus or polar bears.
- (ii) Under no circumstances, other than an emergency, should aircraft operate at an altitude lower than 457 m (1,500 ft) within 805 m (0.5 mi) of walrus or polar bears observed on ice or land. Helicopters may not hover or circle above such areas or within 805 m (0.5 mile) of such areas. When weather conditions do not allow a 457-m (1,500- ft) flying altitude, such as during severe storms or when cloud cover is low, aircraft may be operated below the 457- m (1,500-ft) altitude stipulated above. However, when aircraft are operated at altitudes below 457 m (1,500 ft) because of weather conditions, the operator must avoid areas of known walrus and polar bear concentrations and should take precautions to avoid flying directly over or within 805 m (0.5 mile) of these areas.
- (iii) Plan all aircraft routes to minimize any potential conflict with active or anticipated walrus or polar bear subsistence hunting activity as determined through community consultations.

(5) Additional mitigation measures for offshore seismic surveys. Offshore seismic surveys are not proposed for this project.

(6) Holders of a LOA must conduct their activities in a manner that, to the greatest extent practicable, minimizes adverse impacts on the availability of Pacific walrus and polar bears for subsistence uses.

(b) Monitoring: Depending on the location, timing, and nature of proposed activities, holders of a LOA will be required to do the following.

(1) Maintain trained, Service-approved, onsite observers to carry out monitoring programs for polar bears and walrus necessary for initiating adaptive mitigation responses.

- (i) For offshore activities, Marine Mammal Observers (MMOs) will be required on board all operational and support vessels to alert crew of the presence of walrus and polar bears and initiate adaptive mitigation responses, and to carry out specified monitoring activities identified in the marine mammal monitoring and mitigation plan necessary to evaluate the impact of authorized activities

on walruses, polar bears, and the subsistence use of these subsistence resources. The MMOs must have completed a MMO training course approved by the Service.

- (ii) Polar bear monitors: Polar bear monitors will be required under the monitoring plan if polar bears are known to frequent the area or known polar bear dens are present in the area. Monitors will act as an early detection system for polar bear activity near Industry activity.
- (2) Develop and implement a site specific, Service-approved, marine mammal monitoring and mitigation plan to monitor and evaluate the effects of authorized activities on polar bears, walruses, and the subsistence use of these resources. The marine mammal monitoring and mitigation plan must enumerate the number of walruses and polar bears encountered during specified activities, estimate the number of incidental takes that occurred during specified exploration activities, and evaluate the effectiveness of prescribed mitigation measures. The Caelus Interaction Plan cited 7(a)(1)(iii) of this LOA satisfies this requirement.
- (3) Cooperate with the Service and other designated Federal, State, and local agencies to monitor the impacts of oil and gas activities in the Beaufort Sea on walruses or polar bears. Where insufficient information exists to evaluate the potential effects of proposed activities on walruses, polar bears, and the subsistence use of these resources, holders of a LOA may be required to participate in joint monitoring and/or research efforts to address these information needs and insure the least practicable impact to these resources. Information needs in the Beaufort Sea include, but are not limited to:
- (i) Distribution, abundance, and habitat use patterns of polar bears, and to a lesser extent walruses in offshore environments; and
 - (ii) Cumulative effects of multiple simultaneous operations on polar bears and to a lesser extent walruses.
- (c) Reporting requirements: Holders of a LOA must report the results of specified monitoring activities to the Service MMM reporting email at fw7_mmm_reports@fws.gov.
- (1) For exploratory and development activities, holders of a LOA must submit a report to the Service MMM within 90 days after completion of activities. For production activities, holders of a LOA must submit a report to the Service MMM by January 15 each year, for the preceding year's activities. Reports must include, at a minimum, the following information:
- (i) Dates and times of activity;
 - (ii) Dates and locations of polar bear or Pacific walrus activity as related to the monitoring activity; and
 - (iii) Results of the required monitoring activities, including an estimated level of take.

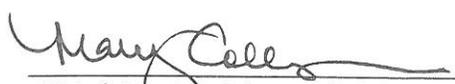
- (iv) Monitoring requirements include, but are not limited to:
For all activities, all sightings of polar bears must be recorded. Information within the sighting report will include, but is not limited to:
 - (A) Date, time, and location of observation;
 - (B) Number of bears, and their sex and age (if known);
 - (C) Observer name and contact information;
 - (D) Weather, visibility, and ice conditions at the time of observation;
 - (E) Estimated closest point of approach for bears from personnel and facilities;
 - (F) Industry activity at time of sighting, possible attractants present;
 - (G) Bear behavior;
 - (H) Description of the encounter;
 - (I) Duration of the encounter; and
 - (J) Actions taken.
 - (v) Activities along the coast of the geographic region may incorporate daily polar bear watch logs.
- (2) In-season monitoring reports for offshore exploration activities.
- (i) Holders of a LOA must keep the Service informed on the progress of authorized activities by:
 - (A) Notifying the Service at least 48 hours prior to the onset of activities;
 - (B) Providing weekly progress reports of authorized activities noting any significant changes in operating state and or location; and
 - (C) Notifying the Service within 48 hours of ending activity.
 - (ii) Walrus observation reports: The operator must report, on a weekly basis, all observations of walruses during any Industry operation. Information within the observation report will include, but is not limited to:
 - (A) Date, time, and location of each walrus sighting;
 - (B) Number of walruses, and their sex and age (if known);
 - (C) Observer name and contact information;
 - (D) Weather, visibility, and ice conditions at the time of observation;
 - (E) Estimated range at closest approach;
 - (F) Industry activity at time of sighting;
 - (G) Behavior of animals sighted;
 - (H) Description of the encounter;
 - (I) Duration of the encounter; and
 - (J) Actions taken.
 - (iii) Polar bear observation reports: The operator must report, within 24 hours, all observations of polar bears during any Industry activity. Information within the observation report will include, but is not limited to:
 - (A) Date, time, and location of observation;
 - (B) Number of bears, and their sex and age (if known);
 - (C) Observer name and contact information;
 - (D) Weather, visibility, and ice conditions at the time of observation;
 - (E) Estimated closest point of approach for bears from personnel and facilities;
 - (F) Industry activity at time of sighting, possible attractants present;

- (G) Bear behavior;
 - (H) Description of the encounter;
 - (I) Duration of the encounter; and
 - (J) Actions taken.
- (iv) Notification of incident report: Reports should include all information specified under the species observation report, as well as a full written description of the encounter and actions taken by the operator. The operator must report:
- (A) Any incidental lethal take or injury of a polar bear or walrus immediately; and
 - (B) Observations of walruses or polar bears within prescribed mitigation monitoring zones to the Service within 24 hours.
- (3) After-action monitoring reports: The results of monitoring efforts identified in the marine mammal monitoring and mitigation plan must be submitted to the Service for review within 90 days of completing the year's activities. Results must include, but are not limited to, the following information:
- (i) A summary of monitoring effort including: total hours, total distances, and distribution through study period;
 - (ii) Analysis of factors affecting the visibility and detectability of polar bears and walruses by specified monitoring;
 - (iii) Analysis of the distribution, abundance, and behavior of polar bear and walrus sightings in relation to date, location, ice conditions and operational state; and
 - (iv) Estimates of take based on density estimates derived from monitoring and survey efforts.

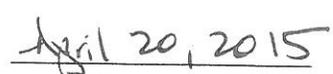
If a polar bear interaction escalates into a life threatening situation, section 101 (c) of the Marine Mammal Protection Act allows, without specific authorization, the take (including lethal take) of a polar bear if such taking is necessary for self-defense or to save the life of a person in immediate danger, and such taking is reported to the Service within 48 hours.

The Service has completed intra-Service consultation under the Endangered Species Act of 1973, as amended (ESA), and has determined that the issuance this LOA is not likely to jeopardize the continuing existence of polar bears. No additional authorization under the ESA is required.

If you have any questions, please contact Mr. Michael Hendrick or Mr. Christopher Putnam at (907) 786-3479 or (907) 786-3844, respectively.



Chief, Marine Mammals Management



Date