



IN REPLY REFER TO

United States Department of the Interior

FISH AND WILDLIFE SERVICE

1011 E. Tudor Road
Anchorage, Alaska 99503-6199



AFES/MMM

JUN 26 2013

Ms. Suzan Simonds
Permits and Regulatory Manager
SAExploration, Inc.
82040 Sandlewood Place, Suite 102
Anchorage, Alaska 99507

Dear Ms. Simonds:

We have received your request dated April 3, 2013, for a Letter of Authorization (LOA) for the incidental take of polar bears in association with the SAExploration, Inc., LLC (SAE) 2013 Summer Open Water 3D-Seismic Survey in the Beaufort Sea.

In response, enclosed is LOA 13-11 that will allow SAE to take small numbers of polar bears and Pacific walrus incidental to activities at the location identified in your LOA request. The proposed time period for this project is approximately 60 days from July 1, 2013 through October 15, 2013, depending on weather conditions. All provisions contained within SAE's *Wildlife Interaction Plan (2013)*, *Colville River 3D-Seismic Survey Offshore Project Description/Plan of Operations (2013)*, *2013 Open Water Season Programmatic Conflict Avoidance Agreement (March 1, 2013)*, are incorporated by reference into this LOA.

This LOA requires SAE to provide observational data of polar bears and Pacific walrus throughout the project and a complete report of all observations at the conclusion of the project to document take. The final report will be provided to the U.S. Fish and Wildlife Service (Service) Marine Mammals Management Office (MMM) no later than 90 days after the completion of the project. The final report meets the tracking and reporting requirements relative to the documentation of take as required by the Marine Mammals Protection Act (MMPA) and the Endangered Species Act (ESA).

Polar bear and Pacific walrus conservation has benefited from monitoring programs associated with the Incidental Take program since 1993. Monitoring serves to assess the effect of industrial activities on polar bears by evaluating bear encounter rates, take frequency, as well as the location and timing of encounters.

If any changes develop in your project, such as activities or location, the MMM must be notified prior to the planned operation. This will allow us to evaluate the activity and, if appropriate, amend the appropriate LOA. If questions or concerns arise during the project period, MMM

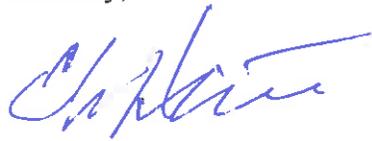


biologists are available for consultation at the phone numbers listed below and noted in your Interaction Plan.

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

This authorization is issued in accordance with MMPA Incidental Take Regulations published in the *Federal Register* (76 FR 47010), dated August 3, 2011. Please review these regulations. If you should have any further questions, please contact Mr. Craig Perham, at (907) 786-3810, or Mr. Christopher Putnam, at (907) 786-3844, of our Marine Mammals Management Office.

Sincerely,



Chief, Marine Mammals Management

Acting

Enclosure

cc: Mr. Richard Shideler, Alaska Department of Fish and Game (email)
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

LETTER OF AUTHORIZATION (13-11)

ISSUED: July 1, 2013
EXPIRES: October 31, 2013

SAExploration, Inc., LLC (SAE) is hereby authorized to take small numbers of polar bears and Pacific walrus incidental to activities occurring during SAE's 2013 Summer Open Water 3D-Seismic Survey in the Beaufort Sea. SAE plans to conduct a three dimensional (3D) ocean bottom seismic survey in the Colville River Delta area of the Alaskan Beaufort Sea during the 2013 Beaufort Sea open water season. The survey will be conducted over a period of approximately 60 days within the time period of July 1 to October 15, 2013. This time period includes all activities; mobilization, land and marine layout activities, marine data acquisition and demobilization of equipment and crews. A detailed description of proposed activities is provided in the SAE *Colville River 3D-Seismic Survey Offshore Project Description/Plan of Operations (2013)*.

This U.S. Fish & Wildlife Service (Service) Letter of Authorization (LOA) and the required conditions below apply to all employees, contractors, and personnel performing SAE approved work under the scope of operations to be conducted. This authorization stipulates the following conditions:

1. Intentional take of polar bears and walrus is prohibited under this LOA.
2. The SAE *Wildlife Interaction Plan (2013)*, *Colville River 3D-Seismic Survey Offshore Project Description/Plan of Operations (2013)*, *2013 Open Water Season Programmatic Conflict Avoidance Agreement (March 1, 2013)* are approved and all provisions must be complied with unless specifically noted otherwise in this LOA.
3. A copy of this LOA and the approved interaction and avoidance plans listed above must be posted and available for all personnel and in the possession of the operators of all vessels and aircraft engaging in the activities approved under the authority of this LOA.
4. SAE operations managers, or designates, must be fully aware, understand and be capable of implementing the conditions of this LOA.

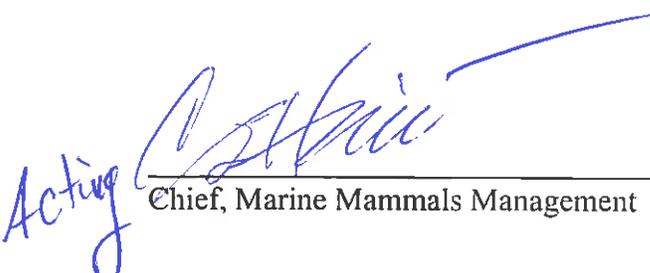


- i. Visually monitor the exclusion zone and adjacent waters for the absence of polar bears and walrus for at least 30 minutes before initiating ramp-up procedures. If no polar bears or walrus are detected, you may initiate ramp-up procedures. Do not initiate ramp-up procedures at night or when you cannot visually monitor the exclusion zone for marine mammals.
 - ii. Initiate ramp-up procedures by firing a single airgun. The preferred airgun to begin with should be the smallest airgun, in terms of energy output (dB) and volume (in ³).
 - iii. Continue ramp-up by gradually activating additional airguns over a period of at least 20 minutes, but no longer than 40 minutes, until the desired operating level of the airgun array is obtained.
- c. Power down/Shut down. Immediately power down or shut down the seismic airgun array and/or other acoustic sources whenever any walrus are sighted approaching close to or within the area delineated by the 180-dB re 1 μ Pa walrus exclusion zone, or polar bears are sighted approaching close to or within the area delineated by the 190-dB re 1 μ Pa polar bear exclusion zone. If the power down operation cannot reduce the received sound pressure level to 180-dB re 1 μ Pa (walrus) or 190-dB re 1 μ Pa (polar bears), the operator must immediately shut down the seismic airgun array and/or other acoustic sources.
- d. Emergency shut down. If observations are made or credible reports are received that one or more walrus and/or polar bears are within the area of the seismic survey and are in an injured or mortal state, or are indicating acute distress due to seismic noise, the seismic airgun array will be immediately shut down and the Service contacted. The airgun array will not be restarted until review and approval has been given by the Service. The ramp-up procedures provided in paragraph (a)(5)(ii) of this section must be followed when restarting.
- e. Adaptive response for walrus aggregations. Whenever an aggregation of 12 or more walrus are detected within an acoustically verified 160-dB re 1 μ Pa disturbance zone ahead of or perpendicular to the seismic vessel track, the holder of this Authorization must:
- i. Immediately power down or shutdown the seismic airgun array and/or other acoustic sources to ensure sound pressure levels at the shortest distance to the aggregation do not exceed 160-dB re 1 μ Pa; and
 - ii. Not proceed with powering up the seismic airgun array until it can be established that there are no walrus aggregations within the 160-dB zone based upon ship course, direction, and distance from last sighting. If shutdown was required, the ramp-up procedures provided in paragraph (a)(5)(ii) of this section must be followed when restarting.

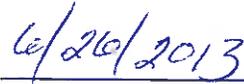
8. Any incidental lethal take or injury of a polar bears or walruses must be reported to the Service immediately.
9. All evidence of polar bears and walruses, such as tracks, carcasses, dens or haul out sites, if applicable, will also be reported.
10. At the discretion of the Service, SAE must allow the Service to place an observer on site, including any facilities, vessels, aircraft or vehicles, to monitor the impacts of the activity on marine mammals, when requested.
11. SAE must submit an annual monitoring report to the Service, MMM as required under 50 CFR 18.128(f), a draft of which will be received by MMM no later than 90 days after completion of the project. The draft report will be subject to review and comment by the Service. Any recommendations made by the Service must be addressed in the final report prior to acceptance by the Service. The draft report will be considered the final report for this activity under this LOA if the Service has not provided comments and recommendations within 90 days of receipt of the report. The report will describe in detail:
 - a. The operations that were conducted;
 - b. The methods, results, and interpretation pertaining to all monitoring tasks;
 - c. The results of the 2011 shipboard marine mammal monitoring;
 - d. Marine mammal sightings (species, numbers, dates, times and locations, age/size/gender, environmental correlates, activities, associated survey activities);
 - e. Estimates of the amount and type of potential take (exposure) of walruses and polar bears (by species) to project activities;
 - f. An analysis of the effects of operations (e.g., on sighting rates, sighting distances, behaviors, movement patterns of walruses and polar bears);
 - g. An analysis of factors influencing detectability of walruses and polar bears during project operations. and
 - h. Summaries of communications with hunters and potential effects on subsistence uses.

Activities related to the monitoring described in this LOA do not require a separate scientific research permit issued under Section 104 of the Marine Mammal Protection Act.

This Letter of Authorization is valid for the period indicated on this authorization, unless extended or terminated in writing by the U.S. Fish and Wildlife Service, Marine Mammals Management Office.



Acting Chief, Marine Mammals Management



Date