



IN REPLY REFER TO:

AFES/MMM

# United States Department of the Interior

## FISH AND WILDLIFE SERVICE

1011 E. Tudor Road  
Anchorage, Alaska 99503-6199



14 JAN 2012

Ms. Susan Childs  
Shell Exploration & Production Company  
3601 C Street, Suite 1314  
Anchorage, Alaska 99503

Dear Ms. Childs:

Thank you for your October 28, 2011, request for Letters of Authorization (LOA) for the incidental and intentional take of polar bears in regards to the Shell Exploration & Production (Shell) 2012 Ice Observation Program in the Beaufort Sea and the incidental and intentional take of polar bears associated with sea ice observation flights in the Chukchi Sea.

Enclosed is an LOA (12-01) granting Shell authority to take small numbers of polar bears incidental to oil and gas industry exploration activities identified in your Beaufort Sea LOA request. The proposed start date for this project is January 2012. Shell plans to conduct up to two ice observation reconnaissance flights, including data buoy deployment, in its Beaufort Sea Outer Continental Shelf (OCS) leases north of Deadhorse and in Harrison and Camden Bays. The flights will deploy three to six Argos buoys to be used to track ice flow directions. Due to their importance as polar bear denning habitat, the larger barrier islands, such as the Jones Island group, and Cross, Tigvariak and Flaxman Islands, are areas where the U.S. Fish and Wildlife Service (Service) seeks to minimize disturbance to possible denning bears. The flight paths for the buoy deployment (as described in Shell's Figures 2 and 3) are adequate for minimizing disturbance of potential bear dens on those islands. All provisions contained within Shell's Polar Bear Interaction Plan are incorporated by reference into this LOA. This authorization is issued in accordance with Marine Mammal Protection Act (MMPA) Incidental Take Regulations published in the *Federal Register* (76 FR 47010), dated August 3, 2011. Please review these regulations.

In addition, also enclosed is an LOA (12-01-CS) granting Shell authority to take small numbers of polar bears incidental to oil and gas industry exploration activities at the location identified in your Chukchi Sea LOA request. The proposed start date for this project is February 2012. Shell plans to conduct up to two ice observation reconnaissance flights in its Chukchi Sea OCS leases. All provisions contained within Shell's Polar Bear Interaction Plan are incorporated by reference into this LOA. This authorization is issued in accordance with MMPA Incidental Take Regulations published in the *Federal Register* (73 FR 33212), dated June 11, 2008.

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If any changes develop in your projects during the 2012 winter season, such as flight paths, activities or location, please notify the Service's Marine Mammals Management Office prior to the planned operation. This will allow us to evaluate the activity and, if appropriate, amend your LOA.

Polar bear 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. The Service believes that monitoring and protection measures for marine mammals described in Shell's *Polar Bear, Pacific Walrus, and Grizzly Bear Avoidance and Human Encounter/Interaction Plan 2011 to 2016 Program Activity, Beaufort Sea and Adjacent Northern Coast of Alaska, October 2011* are appropriate. If questions or concerns arise during the project period, Service biologists are available for consultation at the phone numbers listed below and noted in your Interaction Plan.

In addition to the two incidental take LOAs mentioned above, this letter includes an LOA for an Intentional Take Authorization (12-INT-03) for Shell and its representatives to take polar bears by harassment (deterrent activities) for the protection of both human life and polar bears while conducting activities in polar bear habitat during the 2012 Beaufort Sea Ice Observation and On-Ice Argos Data Buoy Deployment Program and the 2012 Chukchi Sea Ice Observation flights. This LOA is issued specifically to Shell employees who are responsible for ensuring that trained and qualified personnel are assigned the task of harassing (detering) polar bears. Included, are the Service-approved protocols for deterring polar bears using a helicopter. It is the responsibility of Shell personnel to report all polar bear harassment events to the Marine Mammals Management Office within 24 hours. This LOA is effective from the date of issuance to June 30, 2012. Intentional take is authorized under Sections 101 (a)(4)(A), 109(h), and 112(c) of the MMPA.

If a polar bear interaction escalates into a life threatening situation, Section 101(c) of the MMPA 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 24 hours.

Issuance of this LOA also fulfills the requirements for Tier 2 Consultation of the Programmatic Biological Opinion (BO) for the activities described herein and consequently fulfills the requirements of Section 7 of the Endangered Species Act of 1973 (ESA), as amended. In the "Programmatic Biological Opinion for Polar Bears (*Ursus maritimus*) on Beaufort Sea Incidental Take Regulations" (Regulations) (June 2008; Tier 1 BO) and the "Programmatic Biological Opinion for Polar Bears (*Ursus maritimus*) on Chukchi Sea Incidental Take Regulations" (June 2008; Tier 1 BO), the Service determined that the total take anticipated as a result of the issuance of the Regulations was not likely to result in jeopardy to the polar bear. In order for the Tier 2 BO to be consistent with the "no jeopardy" conclusion of the Tier 1 BO and for an ESA Incidental Take Statement (ITS) to be provided: (1) the proposed activity must provide the required information, as described in §18.124 of the Regulations, (2) the LOA must include any mitigation measures that the Marine Mammals Management Office believes appropriate for the

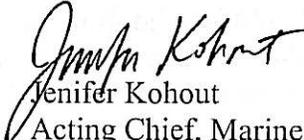
specific activity and location, as described in §18.128 of the Regulations, and (3) the Marine Mammals Management Office must determine that the incidental take for the specific activity will be consistent with the negligible impact finding for the total take allowed under the Regulations.

Reasonable and prudent mitigation measures, as well as implementing terms and conditions were included by the Marine Mammals Management Office in the Tier 1 BO and have been incorporated into the LOA process. Issuance of this ITS, with an LOA completes ESA requirements for authorization of incidental take of the polar bear. Compliance with the terms and conditions of these LOAs insures that the LOA holder is also in compliance with the ESA.

An additional requirement of these LOAs is for Shell to provide observational data of polar bears throughout the project and a complete report of all observations at the conclusion of the project to document take. This final report must be provided to the Marine Mammals Management Office within 90 days after completion of the project. This report meets the tracking and reporting requirements relative to the documentation of take as required by the MMPA and the ESA.

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,

  
Jennifer Kohout  
Acting Chief, Marine Mammals Management

Enclosure

cc: Mr. Walt Sandel, Shell Exploration and Production Company  
Mr. Richard Shideler, Alaska Department of Fish and Game  
Fairbanks Fish and Wildlife Field Office (FFWFO)  
Office of Law Enforcement (OLE)  
North Slope Borough Department of Law



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AFES/MMM

# United States Department of the Interior

## FISH AND WILDLIFE SERVICE

1011 E. Tudor Road  
Anchorage, Alaska 99503-6199



### U.S. Fish and Wildlife

## LETTER OF AUTHORIZATION (12-01)

ISSUED: January 10, 2012

EXPIRES: June 30, 2012

Shell Exploration & Production (Shell) is hereby authorized to take small numbers of polar bears incidental to activities occurring during the 2012 Beaufort Sea Ice Observation and On-Ice Argos Data Buoy Deployment Program. Shell plans to make up to two reconnaissance flights in Harrison and Camden Bays. The flights will deploy three to six Argos buoys to be used to track ice flow directions.

The Letter of Authorization (LOA) is valid from the date of issuance to June 30, 2012. This LOA and the required conditions below include contractors of Shell performing Shell-approved work under the scope of operations to be conducted. The LOA is subject to the following conditions:

1. *The Polar Bear, Pacific Walrus, and Grizzly Bear Avoidance and Human Encounter/Interaction Plan 2011 to 2016 Program Activity, Beaufort Sea and Adjacent Northern Coast of Alaska, October 2011, and Addendum 2012-01, are approved. All provisions must be complied with unless specifically noted otherwise in this LOA. A copy of the Polar Bear Interaction Plans must be available on site for all personnel.*
2. Shell Operations Managers, or designees, must be fully aware, understand, and be capable of implementing the conditions of this LOA.
3. Intentional take is prohibited under this LOA.
4. This authorization is valid only for those activities identified in the request for a Letter of Authorization dated October 28, 2011, and outlined in the *Request for Letter of Authorization Application for the Incidental Take of Polar Bears Winter/Spring 2012 Beaufort Sea Ice Observations and On-Ice Data Buoy Deployment.*

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5. Polar bear monitoring, reporting, and survey activities must be conducted in accordance with 50 CFR Section 18.128. In addition, Shell must comply with the following monitoring, mitigation, and reporting requirements:
- Shell must cooperate with the U.S. Fish and Wildlife Service (Service), and other designated Federal, State, or local agencies to monitor the impacts of oil and gas exploration activities on polar bears.
  - Shell must not conduct activities that operate nor pass within one mile (1.6 km.) of known polar bear dens, and all observed dens must be reported to the Service's Marine Mammals Management Office immediately. Should occupied dens be identified within one mile of activities, Shell must cease work in the immediate area and contact the Marine Mammals Management Office for guidance. The Marine Mammals Management Office 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 Shell must comply with any additional measures specified.
  - Due to their importance as polar bear denning habitat, flight paths for the surveys will be offset from the coastline of Beaufort Sea barrier islands (including the Jones Island group, and Cross, Flaxman and Tigvariak Islands) by at least ½ mile (800 meters) and 1,500 feet (457 meters) above ground level (AGL).
  - If requested, Shell must make flight paths of the reconnaissance surveys available to the Service.
  - If any changes develop in Shell's project during the 2012 winter season, such as flight paths, activities or location, Shell must notify the Service prior to the planned operation.
  - Shell must designate a qualified individual or individuals to observe, record, and report the effects of the activity on polar bears to the Service within 24 hours of visual observation.
  - Every polar bear observed must be recorded on a Polar Bear Observation Form. The observation report must include, but is not limited to:
    - a. Date.
    - b. Time.
    - c. Observer name.
    - d. Contact number/email.
    - e. Location, with latitude, longitude, and datum, if applicable.
    - f. Weather conditions at time of observation.
    - g. Temperature.
    - h. Visibility.

- i. Number of bears: sex and age.
  - j. Estimated closest point of bears from personnel and facilities.
  - k. Possible attractants present.
  - l. Bear behavior.
  - m. A description of the encounter.
  - n. Duration of the encounter.
  - o. Type of deterrents used and distance from bear when used.
  - p. Agency/Contacts.
- Evidence of polar bears, such as tracks, carcass, or dens, must also be reported.
  - At the discretion of the Service, Shell must allow the Service to have an observer on the site to monitor the impacts of the activity on polar bears.
  - Shell must submit a monitoring report to the Marine Mammals Management Office as required under 18 CFR 18.128(f), which will be received within 90 days after completion of the project.
6. In the *Programmatic Biological Opinion for Polar Bears, Pacific Walrus, and Polar Bear Critical Habitat on Beaufort Sea Incidental Take Regulations (Regulations) (July 2011)*, the Service determined the total incidental take anticipated as a result of the issuance of the Regulations was not likely to result in jeopardy to the polar bear or Pacific walrus, and would not adversely modify polar bear critical habitat. In order for an Incidental Take Statement (ITS) to be provided: (1) the proposed activity must provide the required information, as described in the §18.124 of the Regulations; (2) the LOA must include mitigation measures appropriate for the specific activity and location, as described in §18.128 of the Regulations; and (3) the incidental take for the specific activity must be consistent with the negligible impact finding for the total take allowed under the Regulations.

The Service has determined that the proposed actions meet these three requirements. Therefore, issuance of this LOA also satisfies Endangered Species Act (ESA) of 1973, as amended, requirements. Compliance with the terms and conditions of the above LOA ensures that the LOA holder is also in compliance with the ESA.

7. This LOA 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

1/11/12  
\_\_\_\_\_  
Date



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## United States Department of the Interior

### FISH AND WILDLIFE SERVICE

1011 E. Tudor Road  
Anchorage, Alaska 99503-6199



### U.S. Fish and Wildlife

## LETTER OF AUTHORIZATION (12-01-CS)

ISSUED: January 10, 2012

EXPIRES: June 30, 2012

Shell Exploration & Production (Shell) is hereby authorized to take small numbers of polar bears incidental to activities occurring during the 2012 Chukchi Sea Ice Observation Program. Shell plans to make up to two reconnaissance ice flights in its Chukchi Sea Outer Continental Shelf (OCS) leases.

The Letter of Authorization (LOA) is valid from the date of issuance to June 30, 2012. This LOA and the required conditions below include contractors of Shell performing Shell-approved work under the scope of operations to be conducted. The LOA is subject to the following conditions:

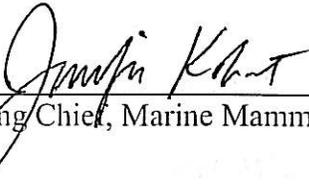
1. The *Polar Bear, Pacific Walrus, and Grizzly Bear Avoidance and Human Encounter/Interaction Plan 2011 to 2016 Program Activity, Beaufort Sea and Adjacent Northern Coast of Alaska, October 2011, and Addendum 2012-01*, are approved. All provisions must be complied with unless specifically noted otherwise in this LOA. A copy of the Polar Bear Interaction Plans must be available on site for all personnel.
2. Shell Operations Managers, or designees, must be fully aware, understand, and be capable of implementing the conditions of this LOA.
3. Intentional take is prohibited under this LOA.
4. This authorization is valid only for those activities identified in the request for a Letter of Authorization dated October 28, 2011, and outlined in the *Request for Letter of Authorization for the Incidental Take of Polar Bears and the Intentional Take of Polar Bears by Harassment; Chukchi Sea Ice Observation Flights Within the Outer Continental Shelf of the Chukchi Sea, Alaska, Winter/Spring 2012*.

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5. Polar bear monitoring, reporting, and survey activities must be conducted in accordance with 50 CFR Section 18.128. In addition, Shell must comply with the following monitoring, mitigation, and reporting requirements:

- Shell must cooperate with the U.S. Fish and Wildlife Service (Service), and other designated Federal, State, or local agencies to monitor the impacts of oil and gas exploration activities on polar bears.
- Shell must not conduct activities that operate nor pass within one mile (1.6 km.) of known polar bear dens, and all observed dens must be reported to the Service's Marine Mammals Management Office immediately. Should occupied dens be identified within one mile of activities, Shell must cease work in the immediate area and contact the Marine Mammals Management Office for guidance. The Marine Mammals Management Office 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 Shell must comply with any additional measures specified.
- Due to the importance of some coastal bluffs as polar bear denning habitat, flight paths for the surveys will be offset from the coastline of the Chukchi Sea by at least ½ mile (800 meters) and 1,500 feet (457 meters) above ground level (AGL).
- If requested, Shell must make flight paths of the reconnaissance surveys available to the Service.
- If any changes develop in Shell's project during the 2012 winter season, such as flight paths, activities or location, Shell must notify the Service prior to the planned operation.
- Shell must designate a qualified individual or individuals to observe, record, and report the effects of the activity on polar bears to the Service within 24 hours of visual observation.
- Every polar bear observed must be recorded on a Polar Bear Observation Form. The observation report should include, but is not limited to:
  - a. Date.
  - b. Time.
  - c. Observer name.
  - d. Contact number/email.
  - e. Location, with latitude, longitude, and datum, if applicable.
  - f. Weather conditions at time of observation.
  - g. Temperature.
  - h. Visibility.
  - i. Number of bears: sex and age.

- j. Estimated closest point of bears from personnel and facilities.
  - k. Possible attractants present.
  - l. Bear behavior.
  - m. A description of the encounter.
  - n. Duration of the encounter.
  - o. Type of deterrents used and distance from bear when used.
  - p. Agency/Contacts.
- Evidence of polar bears, such as tracks, carcass, or dens, must also be reported.
  - At the discretion of the Service, Shell must allow the Service to have an observer on the site to monitor the impacts of the activity on polar bears.
  - Shell must submit a monitoring report to the Marine Mammals Management Office as required under 18 CFR 18.128(f), which will be received within 90 days after completion of the project.
6. Per the "Programmatic Biological Opinion for the Chukchi Sea Incidental Take Regulations for Polar Bear (June 2008)", your request also triggers the second of the two-tiered programmatic process. In order for incidental take of the polar bear to be exempted from the prohibitions of the ESA, the LOA also serves as an "Incidental Take Statement" (ITS), required under Section 7 of the Endangered Species Act of 1973 (ESA). Issuance of the LOA/ITS, fulfills the requirements for Tier 2 Consultation of the Programmatic Biological Opinion for the activities described in this letter.
7. This LOA 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

1/11/12  
\_\_\_\_\_  
Date



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## United States Department of the Interior

### FISH AND WILDLIFE SERVICE

1011 E. Tudor Road  
Anchorage, Alaska 99503-6199



### U.S. Fish and Wildlife Service

#### **AUTHORIZATION TO TAKE, BY HARASSMENT, POLAR BEARS (12-INT-03)**

ISSUED: January 10, 2012

EXPIRES: June 30, 2012

Under Sections 101 (a)(4)(A), 109(h), and 112(c) of the Marine Mammal Protection Act of 1972 (MMPA), as amended, Shell Offshore, Inc. (Shell) is authorized to take, by harassment, polar bears during the 2012 Beaufort Sea Ice Observation and On-Ice Argos Data Buoy Deployment Program. Shell plans to make up to two reconnaissance flights in Harrison and Camden Bays. The flights will deploy three to six Argos buoys to be used to track ice flow directions. In addition, this authorization also covers activities associated with the 2012 Chukchi Sea Ice Observation flights, where two flights will conduct winter ice pack observations out of Barrow.

The purpose of authorizing taking by harassment, or deterrence, is to maintain human and bear safety and welfare in the North Slope oilfields. Authorizing Level B harassment take reduces the likelihood of death or injury of polar bears. This is accomplished by the following objectives:

1. Prevent bears from associating food with humans and facilities.
2. "Condition" bears to avoid people (avoidance conditioning).
3. Allow bears to use travel routes (natural and man-made) to move along the coast.
4. Prevent bears from extended use of areas around facilities.
5. Prevent bears from entering the developed parts of the oilfield.

This harassment authorization is subject to the following conditions:

1. The *Polar Bear, Pacific Walrus, and Grizzly Bear Avoidance and Human Encounter/Interaction Plan 2011 to 2016 Program Activity, Beaufort Sea and Adjacent Northern Coast of Alaska, October 2011, and Addendum 2012-01* are approved. All provisions must be complied with unless specifically noted otherwise in this LOA. A copy of the Polar Bear Interaction Plans must be available on site for all personnel.
2. Shell Operations Managers, or designees, must be fully aware, understand, and be capable of implementing the conditions of this LOA.

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3. This authorization is valid only for those activities identified in the request for a Letter of Authorization dated October 28, 2011, and outlined in the *Request for Letter of Authorization Application for the Incidental Take of Polar Bears Winter/Spring 2012 Beaufort Sea Ice Observations and On-Ice Data Buoy Deployment* and *Request for Letter of Authorization for the Incidental Take of Polar Bears and the Intentional Take of Polar Bears by Harassment; Chukchi Sea Ice Observation Flights Within the Outer Continental Shelf of the Chukchi Sea, Alaska, Winter/Spring 2012*.
4. This authorization to take is restricted to harassment activities.
5. Authorized individuals are responsible for documenting and reporting to the U.S. Fish and Wildlife Service, Marine Mammals Management Office, at (907) 786-3800, all instances involving harassment activities as soon as possible and not later than 24 hours after the occurrence.
6. Shell will not operate nor pass within one mile (1.6 km.) of known polar bear dens, and all observed dens will be reported to the Marine Mammals Management Office immediately. Should occupied dens be identified within one mile of activities, Shell must cease work in the immediate area and contact the Marine Mammals Management Office for guidance. The Marine Mammals Management Office will evaluate these instances on a case-by-case basis to determine the appropriate action. Potential responses may range from cessation or modification of work to conducting additional monitoring. Shell must comply with any additional measures specified.
7. Shell is responsible for ensuring that trained and qualified personnel are assigned the task to deter polar bears. If firearms are to be used for bear deterrence, Shell is solely responsible for ensuring that their personnel meet Federal and State laws and regulations regarding the use and carry of firearms.
8. A final report of all encounters and hazing events must be submitted to the Marine Mammals Management Office within 60 days from the expiration date of this LOA.
9. Hazing techniques must not cause the injury or death of a bear. Types of hazing techniques may include, but are not limited to:
  - Bear Monitors.
  - Air horns.
  - Electric fences.
  - Chemical repellents.
  - Acoustic recordings.
  - Vehicles, including helicopters, using Service-approved protocols (included).
  - Projectiles, such as cracker shells, bean bags, rubber bullets, and screamers.
10. Prior to conducting a harassment activity, operators must:
  - Make a reasonable effort to reduce or eliminate attractants.

- Secure site; notify supervisor; move personnel to safety.
- Ensure bear has escape route(s).
- Ensure communication with all personnel.

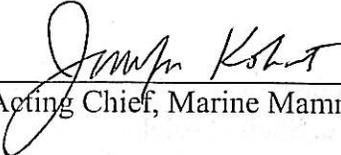
11. When conducting a harassment activity, operators must:

- Chose the method that will have the least effect on the bear and increase the intensity of the method or use additional methods only if necessary.
- Shout at the bear before using projectile (avoidance conditioning).
- Move bear in proper direction; continue with minimally necessary deterrents to receive desired result.

12. After a harassment event has occurred, operators must:

- Monitor bears movement (to ensure no return).
- Notify supervisor and personnel when it is appropriate to resume work.
- Report to the Service as required under condition five, above (within 24 hours).

13. This LOA 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

1/11/12  
\_\_\_\_\_  
Date