



IN REPLY REFER TO:

AFES/MMM

United States Department of the Interior

FISH AND WILDLIFE SERVICE

1011 E. Tudor Road
Anchorage, Alaska 99503-6199



FEB 24 2009

Mr. Bryan Lund
Project Manager
Marsh Creek, LLC
2000 East 88th Avenue, Suite 100
Anchorage, Alaska 99507

Dear Mr. Lund:

This responds to your February 4, 2009 and February 13, 2009, requests for Letters of Authorization (LOA) for the Incidental and Intentional Take of polar bears in association with the corrective action activities at the Umiat Test Well No. 9 site and the Atigaru Point Test Well No. 1 location. Enclosed are LOAs (09-17 and 09-18) that allow Marsh Creek to take small numbers of polar bears incidental to oil and gas industry remediation activities identified in your LOA requests.

Our Incidental Take regulations authorize incidental takes within 25 miles of the Beaufort Sea coast. Although the majority of the Umiat project activities are located outside the 25-mile area identified in our regulations, past experiences at sites, such as Umiat, which are located at farther distances from the coast, indicate that it is unlikely that polar bears will be encountered in the area of your exploration. Regardless, please use caution and report any polar bear sightings to this office. LOA 09-17 will allow Marsh Creek to take small numbers of polar bears incidental to that portion of the Umiat Test Well No. 9 project that will traverse through the geographic area (25 miles inland from the Arctic coast) of the Incidental Take Regulations as it applies to this LOA. This includes the use of a rolligon route to access the Umiat project site and the return route to Deadhorse.

If any changes develop in your project during the 2009 project season, such as barge schedules or traffic, activities or location, please notify the Marine Mammals Management Office (MMM) prior to the planned operation. This would allow us to evaluate the activity and, if appropriate, amend your LOA.

Historic polar bear denning activity reveals that polar bear denning habitat occurs along coastal and river bluffs. For example, polar bears have denned near Atigaru Point and the Eskimo Islands (Figure 1). Disturbance during denning could lead to abandonment of dens and possible mortality to cubs. Rolligon and ice road activities occurring in these areas near preferred denning habitat may encounter denning polar bears. The U.S. Fish and Wildlife Service (Service) seeks to limit disturbance to maternal polar bear den sites, both known dens and those

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areas that could possibly be preferred by denning polar bears. With this in mind, use caution when operating near these areas, such as the Eskimo Islands, during the maternal denning period (mid November to mid April).

The Service believes that protection measures for polar bears described in Marsh Creek's Polar Bear and Wildlife Interaction Plan contain appropriate safeguards to limit human/polar bear interactions. Marsh Creek field camps and personnel can limit encounters of polar bears by being observant of approaching animals (i.e., the use of polar bear guards) and where practicable, by allowing the animals to pass unhindered. Marsh Creek will provide copies of the polar bear observation form to all Marsh Creek contractors operating under the LOA. Report any polar bear sightings, or signs of polar bears, such as tracks, scat, or diggings, to this office by phone or using the polar bear observation form. Report any possible den locations that are found during work activities immediately to our office. Service biologists are available for consultation if questions or concerns arise during the project period at the phone numbers listed below and noted in your interaction plan.

In addition, this letter includes a harassment authorization (enclosed), for Marsh Creek 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 for all Spring 2009 Activities. This authorization is issued specifically to Marsh Creek employees who are responsible for ensuring that trained and qualified personnel are assigned the task to harass (deter) polar bears. It is the responsibility of Marsh Creek personnel to report all polar bear harassment events to MMM within 24 hours. Intentional take is authorized under sections 101(a)(4)(A), 109(h), and 112(c) of the Marine Mammal Protection Act (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 imminently necessary in self-defense or to save the life of a person in immediate danger, and such taking is reported to the U.S. Fish and Wildlife Service, Marine Mammal Management Office within 24 hours.

Furthermore, in accordance with section 7 of the Endangered Species Act of 1973, as amended (ESA), issuance of this LOA also fulfills the requirements for Tier 2 Consultation of the Programmatic Biological Opinion for the activities described herein. In the "Programmatic Biological Opinion for Polar Bears (*Ursus maritimus*) on Beaufort 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 is not likely to result in jeopardy to the polar bear, in accordance with section 7 of the ESA. 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 MMM believes appropriate for the specific activity and location, as described in §18.128 of the Regulations, and (3) the MMM 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 for MMM in the Tier 1 BO and have been incorporated into the LOA process. Issuance of this ITS with the LOA completes ESA requirements for authorization of incidental take of the polar bear. Compliance with the terms and conditions of this LOA insures that the LOA holder is also in compliance with the ESA.

An additional requirement of this LOA is 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 will be provided to the MMM. This report meets the tracking and reporting requirements relative to the documentation of take as required by the MMPA and the ESA.

If you have any questions, please contact Mr. Craig Perham, of our Marine Mammals Management Office, at (907) 786-3800.

Sincerely,

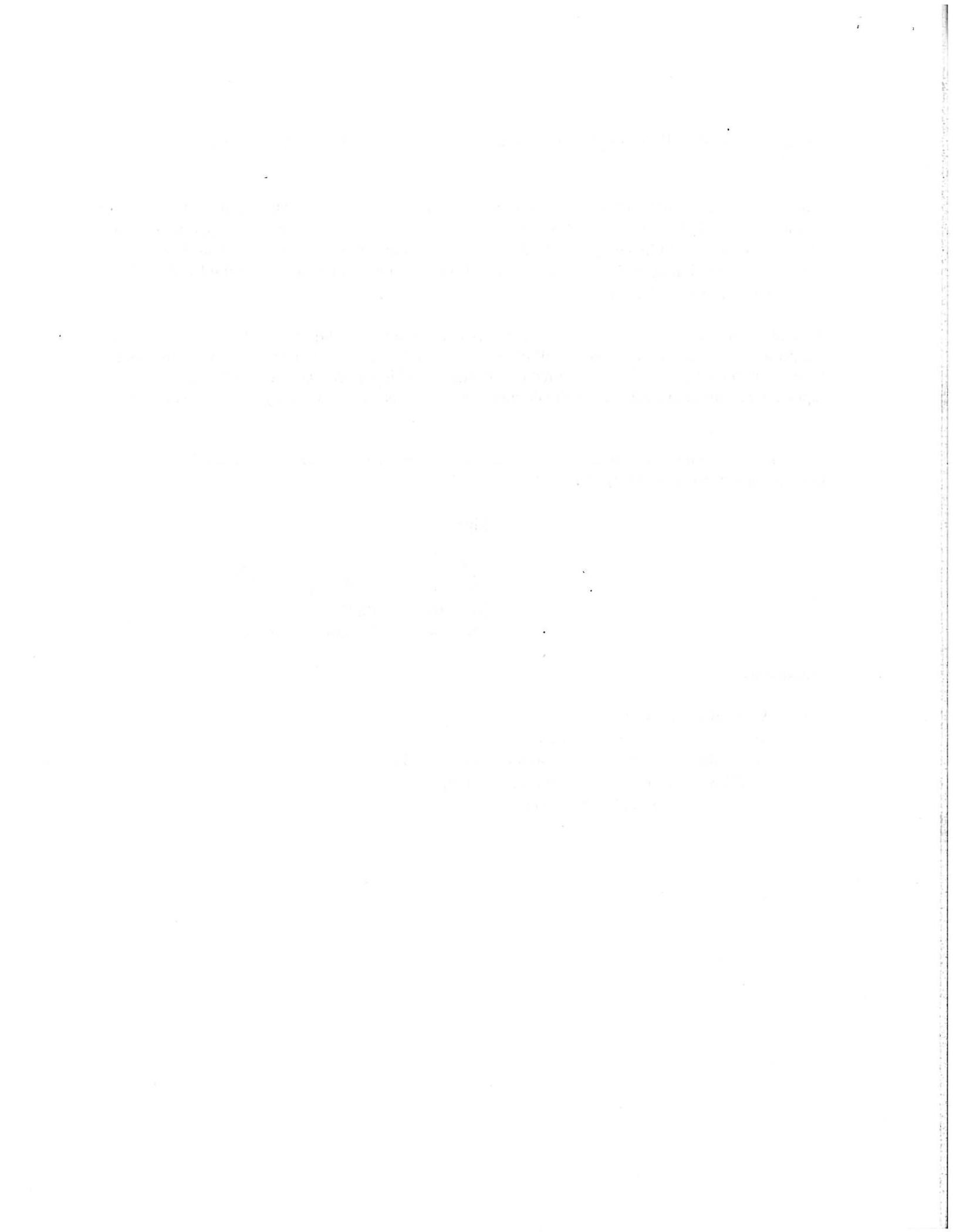
A handwritten signature in cursive script that reads "Rosa Meehan".

Rosa Meehan, Ph.D.

Chief, Marine Mammals Management

Enclosures

cc: Ms Debbie Nigro, BLM
Mr. Richard Schideler, ADF&G
Fairbanks Fish and Wildlife Field Office (FWFO)
USFWS Office of Law Enforcement (OLE)
North Slope Borough Department of Law





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FISH AND WILDLIFE SERVICE

1011 E. Tudor Road
Anchorage, Alaska 99503-6199



AFES/MMM

ISSUED: February 20, 2009

EXPIRES: June 30, 2009

LETTER OF AUTHORIZATION (09-17)

Kuukpik/Marsh Creek (Marsh Creek) is hereby authorized to take small numbers of polar bears incidental to activities occurring during the 2009 Corrective Action activities at the Umiat Test Well No. 9. This LOA will allow Marsh Creek to take small numbers of polar bears incidental to that portion of the Umiat Test Well No. 9 project that will traverse through the geographic area (25 miles inland from the Arctic coast) of the Incidental Take Regulations as it applies to this LOA. This includes the use of a rolligon route to access the Umiat project site and the return route to Deadhorse as described in Marsh Creek's application packet dated February 4, 2009.

The LOA is valid from the date of issuance to June 30, 2009. This authorization and the required conditions below include contractors of Marsh Creek performing Marsh Creek-approved work under the scope of operations to be conducted. Authorization is subject to the following conditions:

1. The polar bear interaction plan (Polar Bear and Wildlife Interaction Plan, Umiat Test Well No. 9, Contaminated Soil Removal, Umiat, Alaska; contract No. W911KB-08-C-0024, February 2009) is approved and all provisions, unless noted specifically, are incorporated into this Letter of Authorization by reference. A copy of the polar bear interaction plan must be available on site for all personnel.
2. Marsh Creek Operations Managers, or their designates, must be fully aware, understand, and capable of implementing the conditions of this authorization.
3. Intentional take is prohibited under this authorization.
4. This authorization is valid only for those activities identified in the request for a Letter of Authorization dated February 4, 2009, that are located within the geographical region of the Beaufort Sea Incidental Take Regulations. Marsh

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Creek will be responsible for any takes that occur outside the geographic region of the Beaufort Sea Incidental Take Regulations.

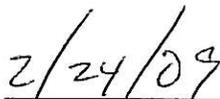
5. Polar bear monitoring, reporting, and survey activities must be conducted in accordance with 50 CFR section 18.128. In addition, Marsh Creek must comply with the following monitoring, mitigation, and reporting requirements:
 - Marsh Creek must cooperate with the Service, and other designated Federal, State, or local agencies to monitor the impacts of oil and gas exploration activities on polar bears;
 - Marsh Creek must not conduct activities that operate nor pass within 1 mile of known polar bear dens (including those encountered in the field), and all observed dens must be reported to the U.S. Fish and Wildlife Service, Marine Mammals Management Office immediately. Should occupied dens be identified within one mile of activities, work in the immediate area will cease and USFWS must be 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 Marsh Creek must comply with any additional measures specified;
 - Marsh Creek 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. Evidence of polar bears, such as tracks, carcass, or dens, will also be reported;
 - Every polar bear observed will be recorded on a Polar Bear Observation Form. Information within the observation report will include, but is not limited to:
 1. Date
 2. Time
 3. Observer name
 4. Contact number/email
 5. Location, with latitude, longitude, and datum, if applicable
 6. Weather conditions at time of observation
 7. Temperature
 8. Visibility
 9. Number of bears: sex and age
 10. Estimated closest point of bears from personnel and facilities
 11. Possible attractants present
 12. Bear behavior

13. A description of the encounter
14. Duration of the encounter
15. Type of Deterrents used and distance from bear when used
16. Agency/Contacts

- Marsh Creek must allow the Fish and Wildlife Service to allow an observer on the site to monitor the impacts of the activity on polar bears, at the discretion of the Fish and Wildlife Service;
 - Marsh Creek must submit an annual monitoring report to the Marine Mammals Management Office as required under 18 CFR 18.128(f), which will be received up to 90 days after the expiration date of the LOA.
6. Per the “Programmatic Biological Opinion for the Beaufort Sea Incidental Take Regulations for Polar Bear (June 2008)”, your request also initiates 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 authorization expires June 30, 2009.



Chief, Marine Mammals Management



Date

1912

Dear Sir,

I have the honor to acknowledge the receipt of your letter of the 15th inst.

Yours faithfully,

[Faint, illegible text]



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United States Department of the Interior

FISH AND WILDLIFE SERVICE

1011 E. Tudor Road
Anchorage, Alaska 99503-6199



AFES/MMM

ISSUED: February 20, 2009

EXPIRES: June 30, 2009

LETTER OF AUTHORIZATION (09-18)

Kuukpik/Marsh Creek (Marsh Creek) is hereby authorized to take small numbers of polar bears incidental to activities occurring during the 2009 Corrective Action activities at the Atigaru point Test Well No. 1 site. A detailed description of the authorized activities can be found in the, "Project Description, Well Plug and Abandonment Atigaru Test Well #1, BLM," from an email dated January 14, 2009.

The LOA is valid from the date of issuance to June 30, 2009. This authorization and the required conditions below include contractors of Marsh Creek performing Marsh Creek-approved work under the scope of operations to be conducted. Authorization is subject to the following conditions:

1. The Marsh Creek polar bear interaction plan is approved and all provisions, unless noted specifically, are incorporated into this Letter of Authorization by reference. A copy of the polar bear interaction plan must be available on site for all personnel.
2. Marsh Creek Operations Managers, or their designates, must be fully aware, understand, and capable of implementing the conditions of this authorization.
3. Intentional take is prohibited under this authorization.
4. This authorization is valid only for those activities identified in the request for a Letter of Authorization dated February 13, 2009, that are located within the geographical region of the Beaufort Sea Incidental Take Regulations.
5. Polar bear monitoring, reporting, and survey activities must be conducted in accordance with 50 CFR section 18.128. In addition, Marsh Creek must comply with the following monitoring, mitigation, and reporting requirements:

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- Marsh Creek must cooperate with the Service, and other designated Federal, State, or local agencies to monitor the impacts of oil and gas exploration activities on polar bears;
- Marsh Creek must not conduct activities that operate nor pass within 1 mile of known polar bear dens (including those encountered in the field), and all observed dens must be reported to the U.S. Fish and Wildlife Service, Marine Mammals Management Office immediately. Should occupied dens be identified within one mile of activities, work in the immediate area will cease and Service must be 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 Marsh Creek must comply with any additional measures specified;
- Marsh Creek 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. Evidence of polar bears, such as tracks, carcass, or dens, will also be reported;
- Every polar bear observed will be recorded on a Polar Bear Observation Form. Information within the observation report will include, but is not limited to:
 1. Date
 2. Time
 3. Observer name
 4. Contact number/email
 5. Location, with latitude, longitude, and datum, if applicable
 6. Weather conditions at time of observation
 7. Temperature
 8. Visibility
 9. Number of bears: sex and age
 10. Estimated closest point of bears from personnel and facilities
 11. Possible attractants present
 12. Bear behavior
 13. A description of the encounter
 14. Duration of the encounter
 15. Type of Deterrents used and distance from bear when used
 16. Agency/Contacts

- Marsh Creek must allow the Fish and Wildlife Service an observer on the site to monitor the impacts of the activity on polar bears, at the discretion of the Fish and Wildlife Service;
 - Marsh Creek must submit an annual monitoring report to the Marine Mammals Management Office as required under 18 CFR 18.128(f), which will be received up to 90 days after the expiration date of the LOA.
6. Specific mitigation measures for the transportation corridor will include:
- To mitigate potential den disturbance, a polar bear den detection survey will be conducted along the coastline of the planned 20-mile ice road alignment on the southern edge of the Kogru River from Atigaru Point to the tundra “jump-off” near North Kalikpik prior to the commencement of remediation of the site.
 - A set-back of ½ mile (approximately 800 meters) from coastal bluff habitat on shorefast ice is imposed to limit the disturbance of possible denned polar bears along the transportation corridor from the initial staging area to Atigaru Point. If necessary, the route may be placed closer to the coast, up to 1,000 feet (320 meters) meters from coastline. This stipulation will be removed April 1, 2009.
 - All travel along the coast will be restricted to designated areas that have been previously surveyed for polar bear den sites or those areas with mitigation measures in place to reduce disturbance to denning bears.
7. Per the “Programmatic Biological Opinion for the Beaufort Sea Incidental Take Regulations for Polar Bear (June 2008)”, your request also initiates 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.

8. This authorization expires June 30, 2009.

Rosa Mueh
Chief, Marine Mammals Management

2/24/09
Date



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United States Department of the Interior

FISH AND WILDLIFE SERVICE

1011 E. Tudor Road
Anchorage, Alaska 99503-6199



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U.S. Fish and Wildlife Service

AUTHORIZATION TO TAKE, BY HARASSMENT, POLAR BEARS

ISSUED: February 20, 2009

EXPIRES: December 31, 2009

By Sections 101(a)(4)(A), 109(h), and 112(c) of the Marine Mammal Protection Act of 1972, as amended, Marsh Creek, LLC (Marsh Creek) is authorized to take, by harassment, polar bears during their corrective action activities within the Beaufort Sea region (Umiat Test Well No. 9 and Atigaru Point Test Well No. 1). This authorization is restricted to harassment activities. Authorized individuals are responsible for documenting and reporting to the U.S. Fish and Wildlife Service, Marine Mammals Management Office, (907) 786-3800, instances involving harassment activities as soon as possible and not later than 24 hours from the occurrence. A final report of all encounters and hazing events is due 60 days from the expiration of this authorization. This Authorization is valid from the date of issuance to December 31, 2009, unless terminated in writing.

Section 101(a)(4)(A) states that, "Except as provided in subparagraphs (B) and (C), the provisions of this chapter shall not apply to the use of measures:

- (i) by the owner of fishing gear or catch, or an employee or agent of such owner, to deter a marine mammal from damaging the gear or catch;
- (ii) by the owner of other private property, or an agent, bailee, or employee of such owner, to deter a marine mammal from damaging private property;
- (iii) by any person, to deter a marine mammal from endangering personal safety; or
- (iv) by a government employee, to deter a marine mammal from damaging public property, so long as such measures do not result in the death or serious injury of a marine mammal.

Section 109(h)(1) states that "nothing in this title (Conservation and Protection of Marine Mammals) shall prevent a Federal, State, or local government official or employee or a person

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designated under Section 112(c) from taking, in the course of his or her duties as an official, employee, or designee, a marine mammal in a humane manner (including euthanasia) if such taking is for:

- (A) the protection or welfare of the mammal,
- (B) the protection of the public health and welfare, or
- (C) the non-lethal removal of nuisance animals.”

The purpose of authorizing taking by harassment, or deterrence, is to maintain human and bear safety and welfare in polar bear habitat. 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. “Train” bears to avoid people
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

Harassment authorization is subject to the following conditions:

1. The polar bear interaction plan (Polar Bear and Wildlife Interaction Plan, Atigaru Point #1, Site Remediation, National Petroleum Reserve - Alaska; February 2009) is approved and all provisions are incorporated into this Letter of Authorization by reference. A copy of the polar bear interaction plan must be available on site for all personnel.
2. Marsh Creek Operations Managers, or their designates, must be fully aware, understand, and capable of implementing the conditions of this authorization.
3. This authorization is valid only for those activities identified in the request for a Letter of Authorization dated February 4 and February 14, 2009.
4. This authorization 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, (907) 786-3800, all instances involving harassment activities as soon as possible and not later than 24 hours after the occurrence.
6. This authorization is issued specifically to Marsh Creek who is responsible for ensuring that trained and qualified personnel are assigned the task to harass (deter) polar bears to Service standards.
7. Activities will not operate nor pass within 1 mile of known polar bear dens, and all observed dens will be reported to the Marine Mammals Management Office,

Fish and Wildlife Service immediately. Should occupied dens be identified within one mile of activities, work in the immediate area will cease and Service will be contacted for guidance. The Service 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.

8. Basic polar bear monitoring and reporting requirements follow. Marsh Creek will:
 - cooperate with the U.S. Fish and Wildlife Service to monitor the impacts of project activities on polar bears;
 - designate a qualified individual or individuals to observe, record, and report the sightings of polar bears;
 - report sightings of polar bears or polar bear sign (using the polar bear observation form) through the duration of the project within 24 hours of initial observation by FAX (907 786-3816) or email (craig_perham@fws.gov);
 - submit a report to the Marine Mammals Management Office within 60 days after the expiration of the authorization.

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
 - Projectiles: cracker shells, bean bags, rubber bullets, screamers, etc.

10. Prior to conducting a harassment activity, operators must:
 - Reduce/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 he 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 bear movement (to ensure no return)
- Notify supervisor and personnel to resume work
- Fill out report to be sent to the Service as required under condition 4 (within 24 hours)

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

Signed: Rosa Meek

Date 2/24/09