Dated: November 25, 2013.

David L. Miller,

Associate Administrator, Federal Insurance and Mitigation Administration, Department of Homeland Security, Federal Emergency Management Agency.

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DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 217

[Docket No. 100217096–1059–02]

RIN 0648–AY63

Taking and Importing Marine Mammals; Taking Marine Mammals Incidental to Operation of Offshore Oil and Gas Facilities in the U.S. Beaufort Sea

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Final rule.

SUMMARY: NMFS, upon application from BP Exploration (Alaska) Inc. (BP), is issuing regulations pursuant to the Marine Mammal Protection Act (MMPA) to govern the unintentional taking of marine mammals incidental to operation of offshore oil and gas facilities in the U.S. Beaufort Sea, Alaska, for the period January 2014–January 2019. These regulations, which allow for the issuance of Letters of Authorization (LOAs) for the incidental take of marine mammals during the described activities and specified timeframes, prescribe the permissible methods of taking and other means of effecting the least practicable adverse impact on marine mammal species or stocks and their habitat, as well as requirements pertaining to the monitoring and reporting of such taking.

DATES: Effective from January 13, 2014 through January 14, 2019.

ADDRESSES: A copy of BP's application and NMFS' Environmental Assessment (EA) and Finding of No Significant Impact (FONSI) may be obtained by writing to Michael Payne, Chief, Permits and Conservation Division, Office of Protected Resources, NMFS, 1315 East West Highway, Silver Spring, MD 20910, calling the contact listed under **FOR FURTHER INFORMATION CONTACT**, or visiting the Internet at: *http://www.nmfs.noaa.gov/pr/permits/incidental.htm*. Documents cited in this final rule may also be viewed, by appointment, during regular business hours at the above address.

FOR FURTHER INFORMATION CONTACT: Candace Nachman, Office of Protected Resources, NMFS, (301) 427–8401.

SUPPLEMENTARY INFORMATION:

Background

Sections 101(a)(5)(A) and (D) of the MMPA (16 U.S.C. 1361 *et seq.*) direct the Secretary of Commerce (Secretary) to allow, upon request, the incidental, but not intentional taking of marine mammals by U.S. citizens who engage in a specified activity (other than commercial fishing) during periods of not more than five consecutive years each if certain findings are made and regulations are issued or, if the taking is limited to harassment, notice of a proposed authorization is provided to the public for review.

Authorization shall be granted if NMFS finds that the taking will have a negligible impact on the species or stock(s), will not have an unmitigable adverse impact on the availability of the species or stock(s) for subsistence uses, and if the permissible methods of taking and requirements pertaining to the mitigation, monitoring and reporting of such taking are set forth. NMFS has defined ''negligible impact'' in 50 CFR 216.103 as: ''. . . an impact resulting from the specified activity that cannot be reasonably expected to, and is not reasonably likely to, adversely affect the species or stock through effects on annual rates of recruitment or survival.''

Except with respect to certain activities not pertinent here, the MMPA defines ''harassment'' as any act of pursuit, torment, or annoyance which (i) has the potential to injure a marine mammal or marine mammal stock in the wild [Level A harassment]; or (ii) has the potential to disturb a marine mammal or marine mammal stock in the wild by causing disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering [Level B harassment].

Summary of Request

On November 6, 2009, NMFS received an application from BP requesting authorization for the take of six marine mammal species incidental to operation of the Northstar development in the Beaufort Sea, Alaska, over the course of 5 years, which would necessitate the promulgation of new five-year regulations. Construction of Northstar was completed in 2001. The proposed activities for 2014–2019 include a continuation of drilling operations (although likely in a very limited manner), production, and emergency training operations but no construction or activities of similar intensity to those conducted between 1999 and 2001. The likely or possible impacts of the planned continuing operations at Northstar on marine mammals involve both non-acoustic and acoustic effects. Potential non-acoustic effects could result from the physical presence of personnel, structures and equipment, construction or maintenance activities, and the occurrence of oil spills. Petroleum development and associated activities in marine waters introduce sound into the environment, produced by island construction, maintenance, and drilling, as well as vehicles operating on the ice, vessels, aircraft, generators, production machinery, gas flaring, and camp operations. BP requested authorization to take individuals of three cetacean and three pinniped species by Level B Harassment. They are: bowhead, gray, and beluga whales and ringed, bearded, and spotted seals. Further, BP requested authorization to take five individual ringed seals by injury or mortality annually over the course of the 5-year rule. In this final rule, NMFS has authorized the take by Level B harassment of all six species listed here and the take by injury or mortality of ringed seals.

Description of the Specified Activity

Background on the Northstar Development Facility

BP is currently producing oil from an offshore development in the Northstar Unit (see Figure 1 in BP's application). This development is the first in the Beaufort Sea that makes use of a subsea pipeline to transport oil to shore and then into the Trans-Alaska Pipeline System. The Northstar facility was built in State of Alaska waters on the remnants of Seal Island approximately 6 mi (9.5 km) offshore from Point Storkersen, northwest of the Prudhoe Bay industrial complex, and 3 mi (5 km) seaward of the closest barrier island. It is located approximately 54 mi (87 km) northeast of Nuiqsut, an Inupiat community.

The main facilities associated with Northstar include a gravel island work surface for drilling and oil production facilities and two pipelines connecting the island to the existing infrastructure at Prudhoe Bay. One pipeline transports crude oil to shore, and the second imports gas from Prudhoe Bay for gas injection at Northstar. Permanent living quarters and supporting oil production facilities are also located on the island.

The construction of Northstar began in early 2000 and continued through 2001. BP states that activities with similar intensity to those that occurred during the construction phase between 2000 and 2001 are not planned or expected for any date within the 5-year period that would be governed by these regulations. Well drilling began on December 14, 2000, and oil production commenced on October 31, 2001. Additional background was contained in the proposed rule (76 FR 39706, July 6, 2011) and can also be found in BP's application (see **ADDRESSES**).

Expected Activities in 2014–2019

During the 5-year period from January 2014–January 2019, BP intends to continue production and emergency training operations. As mentioned previously, drilling is not specifically planned for the 2014–2019 time period but may be required at some point in the future. The activities described in the proposed rule could occur at any time during the 5-year period. Table 2 in BP's application (see **ADDRESSES**) summarizes the vehicles and machinery used during BP's Northstar activities since the development of Northstar Island. Although not all of these activities are planned to take place during the January 2014-January 2019 operational phase, some of the equipment may be required to repair or replace existing structures or infrastructure on Northstar in the future. A detailed overview of all potential activities, such as transportation, production and drilling operations, repair and maintenance activities, and emergency and oil spill response training, was provided in the proposed rule (76 FR 39706, July 6, 2011). No changes have been made to any of the proposed activities.

Northstar Sound Characteristics

During continuing production activities at Northstar, sounds and non-acoustic stimuli will be generated by vehicle traffic, vessel operations, helicopter operations, drilling, and general operations of oil and gas facilities (e.g., generator sounds and gas flaring). The sounds generated from transportation activities will be detectable underwater and/or in air some distance away from the area of activity. The distance will depend on the nature of the sound source, ambient noise conditions, and the sensitivity of the receptor. Take of marine mammals by Level B harassment incidental to the activities mentioned in this document could occur for the duration of these regulations. The type and significance of the harassment is likely to depend on the species and activity of the animal at the time of reception of the stimulus, as well as the distance from the sound source and the level of the sound relative to ambient conditions. The proposed rule (76 FR 39706, July 6, 2011) contained a detailed description of construction, operational, and transportation sounds that could be introduced into the marine and in-air environments. No changes have been made to that information.

Description of Marine Mammals in the Area of the Specified Activity

The Beaufort Sea supports a diverse assemblage of marine mammals, including: bowhead, gray, beluga, killer, minke, and humpback whales; harbor porpoises; ringed, ribbon, spotted, and bearded seals; narwhals; polar bears; and walruses. The bowhead and humpback whales and polar bear are listed as ''endangered'' under the Endangered Species Act (ESA) and as depleted under the MMPA. The ringed and bearded seals are listed as ''threatened'' under the ESA. Certain stocks or populations of gray, beluga, and killer whales and spotted seals are listed as endangered; however, none of those stocks or populations occur in the activity area. Additionally, the ribbon seal is considered a ''species of concern'' under the ESA. Both the walrus and the polar bear are managed by the U.S. Fish and Wildlife Service (USFWS) and are not considered further in this final rule.

Of the species mentioned here, the ones that are most likely to occur near the Northstar facility include: bowhead, gray, and beluga whales and ringed, bearded, and spotted seals. Ringed seals are year-round residents in the Beaufort Sea and are anticipated to be the most frequently encountered species in the project area. Bowhead whales are anticipated to be the most frequently encountered cetacean species in the project area; however, their occurrence is not anticipated to be year-round. The most common time for bowheads to occur near Northstar is during the fall migration westward through the Beaufort Sea, which typically occurs from late August through October each year.

The proposed rule contains a discussion of six species that are not considered further in the analysis because of their rarity in the project area. The ''Description of Marine Mammals in the Area of the Specified Activity'' has not changed from the proposed rule. Please refer to the proposed rule (76 FR 39706, July 6, 2011) for the complete discussion. BP's application contains information on the status, distribution, seasonal distribution, abundance, and life history functions of each of the six species under NMFS jurisdiction likely to be impacted by the proposed activities. When reviewing the application, NMFS determined that the species descriptions provided by BP correctly characterized the status, distribution, seasonal distribution, and abundance of each species. Please refer to the application for that information (see **ADDRESSES**). Additional information can also be found in the NMFS Stock Assessment Reports (SAR). The Alaska 2012 SAR is available at: *http://www.nmfs.noaa.gov/pr/sars/pdf/ak2012.pdf.*

Brief Background on Marine Mammal Hearing

When considering the influence of various kinds of sound on the marine environment, it is necessary to understand that different kinds of marine life are sensitive to different frequencies of sound. Based on available behavioral data, audiograms have been derived using auditory evoked potentials, anatomical modeling, and other data. Southall *et al.* (2007) designate ''functional hearing groups'' for marine mammals and estimate the lower and upper frequencies of functional hearing of the groups. The functional groups and the associated frequencies are indicated below (though animals are less sensitive to sounds at the outer edge of their functional range and most sensitive to sounds of frequencies within a smaller range somewhere in the middle of their functional hearing range):

- Low frequency cetaceans (13 species of mysticetes): functional hearing is estimated to occur between approximately 7 Hz and 22 kHz (however, a study by Au *et al.* (2006) of humpback whale songs indicate that the range may extend to at least 24 kHz);
- Mid-frequency cetaceans (32 species of dolphins, six species of larger toothed whales, and 19 species of beaked and bottlenose whales): functional hearing is estimated to occur between approximately 150 Hz and 160 kHz;
- High frequency cetaceans (eight species of true porpoises, six species of river dolphins, Kogia, the franciscana, and four species of cephalorhynchids): functional hearing is estimated to occur between approximately 200 Hz and 180 kHz;
- Pinnipeds in Water: functional hearing is estimated to occur between approximately 75 Hz and 75 kHz, with the greatest sensitivity between approximately 700 Hz and 20 kHz; and

• Pinnipeds in Air: functional hearing is estimated to occur between approximately 75 Hz and 30 kHz.

As mentioned previously in this document, six marine mammal species (three cetacean and three pinniped species) are likely to occur in the Northstar facility area. Of the three cetacean species likely to occur in BP's project area, two are classified as low frequency cetaceans (i.e., bowhead and gray whales) and one is classified as a mid-frequency cetacean (i.e., beluga whales) (Southall *et al.,* 2007). The proposed rule (76 FR 39706, July 6, 2011) contains a detailed discussion regarding available information on underwater audiograms and vocalizations of some of the marine mammals in the area. That information has not changed and is not repeated here.

Potential Effects of the Specified Activity on Marine Mammals

With respect to the MMPA, NMFS' effects assessment serves four primary purposes: (1) To prescribe the permissible methods of taking (i.e., Level B Harassment or mortality, including an identification of the number and types of take that could occur by Level B harassment or mortality) and to prescribe other means of effecting the least practicable adverse impact on such species or stock and its habitat (i.e., mitigation); (2) to determine whether the specified activity will have a negligible impact on the affected species or stocks of marine mammals (based on the likelihood that the activity will adversely affect the species or stock through effects on annual rates of recruitment or survival); (3) to determine whether the specified activity will have an unmitigable adverse impact on the availability of the species or stock(s) for subsistence uses; and (4) to prescribe requirements pertaining to monitoring and reporting.

The likely or possible impacts of the planned offshore oil developments at Northstar on marine mammals involve both non-acoustic and acoustic effects. Potential non-acoustic effects could result from the physical presence of personnel, structures and equipment, construction or maintenance activities, and the occurrence of oil spills. In winter, during ice road construction, and in spring, flooding on the sea ice may displace some ringed seals along the ice road corridor. There is a small chance that a seal pup might be injured or killed by on-ice construction or transportation activities. A major oil spill is unlikely and, if it occurred, its effects are difficult to predict.

Petroleum development and associated activities in marine waters introduce sound into the environment, produced by island construction, maintenance, and drilling, as well as vehicles operating on the ice, vessels, aircraft, generators, production machinery, gas flaring, and camp operations. The potential effects of sound from the activities might include one or more of the following: masking of natural sounds; behavioral disturbance and associated habituation effects; and, at least in theory, temporary or permanent hearing impairment (Richardson *et al.,* 1995b). However, for reasons discussed in the proposed rule, it is unlikely that there would be any cases of temporary, or especially permanent, hearing impairment resulting from these activities.

In the ''Potential Effects of Specified Activities on Marine Mammals'' section of the proposed rule, NMFS included a qualitative discussion of the different ways that activities at Northstar may potentially affect marine mammals, which included detailed discussions regarding the potential effects of sound and oil on cetaceans and pinnipeds. Marine mammals may experience masking and behavioral disturbance. However, some of the effects are expected to be less for cetaceans, as the higher sound levels are found close to shore, usually further inshore than the migration paths of cetaceans. Additionally, cetaceans are not found in the Northstar area during the ice-covered season; therefore, they would only be potentially impacted during certain times of the year. The information contained in the ''Potential Effects of Specified Activities on Marine Mammals'' section from the proposed rule has not changed. Please refer to the proposed rule for the full discussion (76 FR 39706, July 6, 2011).

Anticipated Effects on Marine Mammal Habitat

Potential impacts to marine mammals and their habitat as a result of operation of the Northstar facility are mainly associated with elevated sound levels. These underwater sound levels will likely cause some fish and invertebrate species to either exhibit a behavioral reaction or temporarily disperse from or avoid areas close to Northstar for a limited time. There is also the potential for impacts to marine mammal habitat from ice road construction and an oil spill (should one occur). Ringed seals build subnivean lairs in the Beaufort Sea in the spring months. The amount of habitat altered by Northstar ice road construction is minimal compared to the overall habitat available in the region. In the unlikely event of a large or very large oil spill, marine mammal prey species could be oiled, or the marine mammals themselves could be oiled. BP integrated several design features and conducts regular inspections and maintenance to reduce the potential for oil spills on the island or in the marine environment. The proposed rule contained a full discussion of the potential impacts to marine mammal habitat and prey species in the project area. No changes have been made to that discussion. Please refer to the proposed rule for the full discussion of potential impacts to marine mammal habitat (76 FR 39706, July 6, 2011), which includes a discussion of common marine mammal prey species in the area. In conclusion, NMFS has determined that BP's operation of the Northstar Development area is not expected to have any habitat-related effects that could cause significant or long-term consequences for individual marine mammals or on the food sources that they utilize.

Mitigation

In order to issue an incidental take authorization (ITA) under section 101(a)(5)(A) of the MMPA, NMFS must, where applicable, set forth the permissible methods of taking pursuant to such activity, and other means of effecting the least practicable adverse impact on such species or stock and its habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance, and on the availability of such species or stock for taking for subsistence uses (where relevant).

As part of its application, BP proposed several mitigation measures in order to ensure the least practicable adverse impact on marine mammal species that may occur in the project area. BP proposed different mitigation measures for the ice-covered season and for the open-water season. The proposed mitigation measures are described fully in BP's application (see **ADDRESSES**) and summarized here. After a review of these measures and comments from the peer review panel and public (see the ''*Monitoring Plan Peer Review*'' and ''Comments and Responses'' sections later in this document), NMFS determined that some measures should be modified or added in order to effect the least practicable adverse impact on the species or stock and its habitat. Those additions are summarized here and described in more detail later in this document.

Ice-Covered Season Mitigation Measures

In order to reduce impacts to ringed seal construction of birth lairs, BP must begin winter construction activities (e.g., ice road construction) on the sea ice as early as possible once weather and ice conditions permit such activities. Any ice road or other construction activities that are initiated after March 1 in previously undisturbed areas in waters deeper than 10 ft (3 m) must be surveyed, using trained dogs, in order to identify and avoid ringed seal structures by a minimum of 492 ft (150 m). If dog surveys are conducted, trained dogs shall search all floating sea ice for any ringed seal structures. Those surveys shall be done prior to the new proposed activity on the floating sea ice to provide information needed to prevent injury or mortality of young seals. Additionally, after March 1 of each year, activities should avoid, to the greatest extent practicable, disturbance of any located seal structure. It should be noted that since 2001, none of BP's activities took place after March 1 in previously undisturbed areas, so no on-ice searches were conducted.

Open-Water Season Mitigation Measures

All non-essential boat, hovercraft, barge, and air traffic shall be scheduled to avoid periods when whales (especially bowhead whales) are migrating through the area. Helicopter flights to support Northstar activities shall be limited to a corridor from Seal Island to the mainland, and, except when limited by weather or personnel safety, shall maintain a minimum altitude of 1,000 ft (305 m), except during takeoff and landing.

Impact hammering activities may occur at any time of year to repair sheet pile or dock damage due to ice impingement. Impact hammering is most likely to occur during the ice-covered season or break-up period and would not be scheduled during the fall bowhead migration. However, if such activities were to occur during the open-water or broken ice season, certain mitigation measures described here are required to be implemented. Based on studies by Blackwell *et al.* (2004a), it is predicted that only impact driving of sheet piles or pipes that are in the water (i.e., those on the dock) could produce received levels of 190 dB re 1 μPa (rms) and then only in immediate proximity to the pile. The impact pipe driving in June and July 2000 did not produce received levels as high as 180 dB re 1 μPa (rms) at any location in the water. This was attributable to attenuation by the gravel and sheet pile walls (Blackwell *et al.,* 2004a). BP anticipates that received levels for any pile driving that might occur within the sheet pile walls of the island in the future would also be less than 180 dB (rms) at all locations in the water around the island. If impact pile driving were planned in areas outside the sheet pile walls, it is possible that received levels underwater might exceed the 180 dB re 1 μPa (rms) level.

NMFS has established acoustic thresholds that identify the received sound levels above which hearing impairment or other injury could potentially occur, which are 180 and 190 dB re 1 μPa (rms) for cetaceans and pinnipeds, respectively (NMFS, 1995, 2000). To prevent or at least minimize exposure to sound levels that might cause hearing impairment, an exclusion zone shall be established and monitored for the presence of seals and whales. Establishment of the exclusion zone of any source predicted to result in received levels underwater above 180 dB (rms) will be analyzed using existing data collected in the waters of the Northstar facility (see the ''Monitoring and Reporting'' section later in this document or BP's application).

If observations and mitigation are required, a protected species observer stationed at an appropriate viewing location on the island will conduct watches commencing 30 minutes prior to the onset of impact hammering or other identified activity and will continue throughout the activity and for 30 minutes after the activity ends. The ''Monitoring and Reporting'' section later in this document contains a description of the observer program. If pinnipeds are seen within the 190 dB re 1 μPa radius (the ''exclusion zone''), then operations shall shut down or reduce SPLs sufficiently to ensure that received SPLs do not exceed those prescribed here (i.e., power down). If whales are observed within the 180 dB re 1 μPa (rms) radius (the ''exclusion zone''), operations shall shut down or reduce SPLs sufficiently to ensure that received SPLs do not exceed those prescribed here (i.e., power down). The shutdown or reduced SPL shall be maintained until such time as the observed marine mammal(s) has been seen to have left the applicable exclusion zone or until 15 minutes have elapsed in the case of a pinniped or odontocete or 30 minutes in the case of a mysticete without resighting, whichever occurs sooner.

In response to a recommendation from the public, a ramp-up technique shall be used at the beginning of each day's in-water pile driving activities and if pile driving resumes after it has ceased for more than 1 hour. If a vibratory driver is used, BP is required to initiate sound from vibratory hammers for 15 seconds at reduced energy followed by a 1-minute waiting period. The procedure shall be repeated two additional times before full energy may be achieved. If a non-diesel impact hammer is used, BP is required to provide an initial set of strikes from the impact hammer at reduced energy, followed by a 1-minute waiting period, then two subsequent sets. If a diesel impact hammer is used, BP is required to turn on the sound attenuation device for 15 seconds prior to initiating pile driving.

Should any new drilling into oil-bearing strata be required during the effective period of these regulations, the drilling shall not take place during either open-water or spring-time broken ice conditions.

Oil Spill Contingency Plan

The taking by harassment, injury, or mortality of any marine mammal species incidental to an oil spill is prohibited. However, in the unlikely event of an oil spill, BP expects to be able to contain oil through its oil spill response and cleanup protocols. An oil spill prevention and contingency response plan was developed and approved by the Alaska Department of Environmental Conservation, U.S. Department of Transportation, U.S. Coast Guard, and Bureau of Safety and Environmental Enforcement (BSEE; formerly MMS). The plan is reviewed annually and revised and updated when changes occur. BP's plan has been amended several times since its initial approval, with the last revision occurring in March 2012. Major changes since 1999 include the following: Seasonal drilling restrictions from June 1 to July 20 and from October 1 until ice becomes 18 in (46 cm) thick; changes to the response planning standard for a well blowout as a result of reductions in well production rates; and deletion of ice auguring for monitoring potential sub-sea oil pipeline leaks during winter following demonstration of the LEOS leak detection system. Many of the most recent changes were made in response to new BSEE regulations relating to updated safety standards and practices. Future changes to the response planning standards may be expected in response to declines in well production rates and pipeline throughput. The proposed rule (76 FR 39706, July 6, 2011) contained a summary of the plan's components. Please refer to that document. Additionally, the March 2012 version of BP's oil spill contingency plan can be viewed on the Internet at: *http://*

www.nmfs.noaa.gov/pr/permits/incidental.htm.

Mitigation Conclusions

NMFS has carefully evaluated the applicant's proposed mitigation measures and considered a range of other measures in the context of ensuring that NMFS prescribes the means of effecting the least practicable adverse impact on the affected marine mammal species and stocks and their habitat. Our evaluation of potential measures included consideration of the following factors in relation to one another:

- The manner in which, and the degree to which, the successful implementation of the measure is expected to minimize adverse impacts to marine mammals;
- The proven or likely efficacy of the specific measure to minimize adverse impacts as planned; and
- The practicability of the measure for applicant implementation.

Based on our evaluation of the applicant's proposed measures, as well as other measures recommended by the public, NMFS has determined that the mitigation measures described above provide the means of effecting the least practicable adverse impact on marine mammal species or stocks and their habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance. Measures to ensure availability of such species or stock for taking for certain subsistence uses are discussed later in this document (see ''Impact on Availability of Affected Species or Stock for Taking for Subsistence Uses'' section).

Monitoring and Reporting

In order to issue an ITA for an activity, section 101(a)(5)(A) of the MMPA states that NMFS must, where applicable, set forth ''requirements pertaining to the monitoring and reporting of such taking''. The MMPA implementing regulations at 50 CFR 216.104 (a)(13) indicate that requests for ITAs must include the suggested means of accomplishing the necessary monitoring and reporting that will result in increased knowledge of the species and of the level of taking or impacts on populations of marine mammals that are expected to be present in the action area.

The monitoring program proposed by BP in its application and described here is based on the continuation of previous monitoring conducted at Northstar. Information on previous monitoring can be found in the ''Previous Activities and Monitoring'' section found later in this document. The monitoring program has been modified based on comments received from the public and the peer review panel (see the ''*Monitoring Plan Peer Review''* and ''Comments and Responses'' sections later in this document).

BP's monitoring focuses on ringed seals and bowhead whales, as they are the most prevalent species found in the Northstar Development area. No monitoring is proposed specifically for bearded or spotted seals or for gray or beluga whales, as their occurrence near Northstar is limited. However, opportunistic data may be collected for these species should they occur in the area (e.g., vocalizations may be recorded on the acoustic array). Few, if any, observations of these species were made during the intensive monitoring from 1999 to 2004. If sightings of these (or other) species are made, those observations will be included in the monitoring reports (described later in this document) that will be prepared.

Annual Monitoring Plans

BP will continue the long-term observer program, conducted by island personnel, of ringed seals during the spring and summer. This program is intended to assess the continued long-term stability of ringed seal abundance and habitat use near Northstar as indexed by counts obtained on a regular and long-term basis. Northstar staff will count seals at Northstar from May 15–July 15 each year from the 108 ft (33 m) high process module following a standardized protocol since 2005. Counts are made on a daily basis (weather permitting), between 11:00–19:00, in an area of approximately 3,117 ft (950 m) around the island, for a duration of approximately 15 minutes. Counts will only be made during periods with visibility of 0.62 mi (1 km) or more and with a cloud ceiling of more than 295 ft (90 m). This year, BP will also begin to record the date of the first appearance of basking seals and the peak date of haul out. Also, BP will begin to attempt conducting seal counts in autumn using the same general approach as noted here for the May 15-July 15 timeframe. However, these counts will be limited by the amount of available daylight.

BP will continue monitoring the bowhead migration in 2014 and subsequent years for approximately 30 days each September through the recording of bowhead calls. BP will deploy a Directional Autonomous Seafloor Acoustic Recorder (DASAR; Greene *et al.,* 2004) or similar recorder about 9.3 mi (15 km) north of Northstar, consistent with a location used in past years (as far as conditions allow). The data of the offshore recorder can provide information on the total number of calls detected, the temporal pattern of calling during the recording period, possibly the bearing to calls, and call types. These data can be compared with corresponding data from the same site in previous years. If substantially higher or lower numbers of calls are recorded than were recorded at that site in previous years, further analyses and additional monitoring will be considered in consultation with NMFS and North Slope Borough (NSB) representatives. A second DASAR, or similar recorder, will be deployed at the same location to provide a reasonable level of redundancy.

In addition to the DASAR already mentioned, BP will install an acoustic recorder about 1,476 ft (450 m) north of Northstar, in the same area where sounds have been recorded since 2001. This recorder will be installed for approximately 30 days each September, corresponding with the deployment of the offshore DASAR (or similar recorder). The near-island recorder will be used to record and quantify sound levels emanating from Northstar. If island sounds are found to be significantly stronger or more variable than in the past, and if it is expected that the stronger sounds will continue in subsequent years, then further consultation with NMFS and NSB representatives will occur to determine if more analyses or changes in monitoring strategy are appropriate. A second acoustic recorder will be deployed to provide a reasonable level of redundancy.

Based on recommendations from the peer review panel, BP will hold an annual meeting with representatives from NMFS and NSB (likely in the late winter/early spring period) to discuss whether or not data collected in the previous year regarding seal counts and bowhead whale call rates should trigger additional or revised monitoring requirements. Additional information regarding this meeting can be found later in this document.

Contingency Monitoring Plans

If BP needs to conduct an activity (i.e., pile driving) capable of producing pulsed underwater sound with levels ≥180 or ≥190 dB re 1 μPa (rms) at locations where whales or seals could be exposed, BP will monitor exclusion zones defined by those levels. [The exclusion zones were described in the ''Mitigation'' section earlier in this document.] One or more on-island observers, as necessary to scan the area of concern, will be stationed at location(s) providing an unobstructed

view of the predicted exclusion zone. The observer(s) will scan the exclusion zone continuously for marine mammals for 30 minutes prior to the operation of the sound source. Observations will continue during all periods of operation and for 30 minutes after the activity has ended. If whales and seals are detected within the (respective) 180 or 190 dB distances, a shutdown or other appropriate mitigation measure (as described earlier in this document) shall be implemented. The sound source will be allowed to operate again when the marine mammals are observed to leave the safety zone or until 15 minutes have elapsed in the case of a pinniped or odontocete or 30 minutes in the case of a mysticete without resighting, whichever occurs sooner. The observer will record the: (1) Species and numbers of marine mammals seen within the 180 or 190 dB zones; (2) bearing and distance of the marine mammals from the observation point; and (3) behavior of marine mammals and any indication of disturbance reactions to the monitored activity.

If BP initiates significant on-ice activities (e.g., construction of new ice roads, trenching for pipeline repair, or projects of similar magnitude) in previously undisturbed areas after March 1, trained dogs, or a comparable method, will be used to search for seal structures. If such activities do occur after March 1, a follow-up assessment must be conducted in May of that year to determine the fate of all seal structures located during the March monitoring. This monitoring must be conducted by a qualified biological researcher approved in advance by NMFS after a review of the observer's qualifications.

BP will conduct acoustic measurements to document sound levels, characteristics, and transmissions of airborne sounds with expected source levels of 90 dBA or greater created by on-ice activity at Northstar that have not been measured in previous years. In addition, BP will conduct acoustic measurements to document sound levels, characteristics, and transmissions of airborne sounds for sources on Northstar Island with expected received levels at the water's edge that exceed 90 dBA that have not been measured in previous years. These data will be collected in order to assist in the development of future monitoring and mitigation measures.

Monitoring Plan Peer Review

The MMPA requires that monitoring plans be independently peer reviewed ''where the proposed activity may affect the availability of a species or stock for taking for subsistence uses'' (16 U.S.C. 1371(a)(5)(D)(ii)(III)). Regarding this requirement, NMFS' implementing regulations state, ''Upon receipt of a complete monitoring plan, and at its discretion, [NMFS] will either submit the plan to members of a peer review panel for review or within 60 days of receipt of the proposed monitoring plan, schedule a workshop to review the plan'' (50 CFR 216.108(d)).

NMFS convened an independent peer review panel, comprised of experts in the fields of marine mammal ecology and underwater acoustics, to review BP's proposed monitoring plan associated with the MMPA application for these regulations. The panel met on March 10, 2011, and provided their final report to NMFS on June 17, 2011. The panel's final report can be found on the Internet at: *http://www.nmfs.noaa.gov/pr/pdfs/permits/bp_northstar_peer_review.pdf*.

NMFS provided the panel with BP's monitoring plan and asked the panel to answer the following questions regarding the plan:

(1) Are the applicant's stated objectives the most useful for understanding impacts on marine mammals and otherwise accomplishing the goals of: Documenting the effects of the activity (including acoustic) on marine mammals; documenting or estimating the actual level of take as a result of the activity (in this case, operation of an oil production facility); increasing the knowledge of the affected species; or increasing knowledge of the anticipated impacts on marine mammal populations?

(2) Are the applicant's stated objectives able to be achieved based on the methods described in the plan?

(3) Are there techniques not proposed by the applicant, or modifications to the techniques proposed by the applicant, that should be considered for inclusion in the applicant's monitoring program to better accomplish the goals stated above?

(4) What is the best way for an applicant to present their data and results (formatting, metrics, graphics, etc.) in the required reports that are to be submitted to NMFS?

NMFS has reviewed the report and evaluated all recommendations made by the panel and has determined that there are several measures that BP can incorporate into its marine mammal monitoring plan to improve it. NMFS reviewed the panel's recommendations and determined that several are appropriate for BP to carry out during the effective period of these regulations. Those recommendations have been discussed with BP and are included in the final rule, as appropriate. A summary of the recommendations that have been incorporated into BP's monitoring plan and how they are being addressed is provided in Table 1 of this document.

TABLE 1—RECOMMENDATIONS FROM THE 2011 BP PEER REVIEW PANEL THAT WILL BE CARRIED OUT AND/OR INCORPORATED INTO BP'S MONITORING PLAN FOR THIS FINAL RULE

Panel recommendation	BP Response/commitment
BP should attempt to assess the duration of deflection (i.e., the amount of time or distance before deflected whales returned to their normal migratory path) of bowheads away from Northstar Island, if possible. Other data sets (i.e., Bowhead Whale Aerial Survey Program [BWASP], Shell acoustic data) might prove useful for addressing this question.	Because of the relatively low sound levels emanating from Northstar into the bowhead whale migration corridor and the subtle responses of the whales, detecting deflection immediately north of Northstar was challenging, but statistically significant deflection was detected in 2001–2004. Shell's arrays west of Northstar were not in the water in 2001–2004, when BP documented statistically significant deflection north of the island. BWASP lacks the resolution needed for meaningful assessment of deflection duration. BP has initiated a scoping project to better understand alternative methods of call tracking in the context of Northstar. If this scoping exercise yields promising results, BP will consider reanalysis of existing data from 2001–2004 with the hope of better understanding deflection duration west of Northstar.

TABLE 1—RECOMMENDATIONS FROM THE 2011 BP PEER REVIEW PANEL THAT WILL BE CARRIED OUT AND/OR INCORPORATED INTO BP'S MONITORING PLAN FOR THIS FINAL RULE—Continued

Panel recommendation	BP Response/commitment
BP should continue to use their proposed approach for counting seals. Additional data should be collected to help interpret the counts, including: recording on-island activities and correlate them with seal numbers. (It is likely that counts of seals will be influenced mostly by onset of spring, however, numbers should also be assessed relative to island activity to investigate whether those activities impact the numbers of seals counted from the island.).	BP will continue seal monitoring. If Northstar undertakes substantial work during the basking season, it might make sense to undertake a behavioral study using island-based observers before, during, and after the work. BP suggests further discussions of this option during annual planning meetings (described below) if substantial work is planned during the basking season.
Previously collected seal data should be analyzed for the date when seals are first seen and the peak date of haul out.	BP agrees to begin reporting dates of the first appearance of basking seals and peak basking dates beginning in 2014.
Counts of seals hauled out on ice in the late autumn or early winter would help assess seal use of the area near Northstar at times other than the spring and early summer.	Limited daylight will make this challenging, but BP agrees to attempt autumn observations for basking seals using the same general approach that is used during breakup and will include results in the 2014 annual report if these results are available before the report is finalized (otherwise, results will be reported for the 2011 autumn counts in the 2015 annual report).
Counts of seals are intended as a broad measure of use of the area around the island. One component of the counts is to determine whether additional monitoring is needed, yet no specific thresholds have been identified that might trigger additional monitoring. Thresholds should be established for the initiation of discussions about additional monitoring.	Due to the large range in seal counts from year to year, BP prefers not to set a priori thresholds but rather to formalize annual discussions about planned monitoring. These discussions should be based not only on specific numbers of seals observed but also on circumstances surrounding those observations and other information. These discussions would also allow for consensus building regarding design of additional monitoring. BP suggests that a formal discussion to specifically address monitoring requirements (for seals, whales, and acoustical measurements) should be held annually with representatives from BP, NMFS, and the North Slope Borough (NSB). Results of these discussions would be summarized in a section of the required annual report.
Thresholds should also be established related to calling rates for initiation of discussions about additional monitoring of bowheads.	See the response to the previous recommendation. This would be part of the annual monitoring discussions between BP, NMFS, and the NSB.
BP should incorporate environmental factors (i.e., sea ice extent, wind, etc.) in addition to anthropogenic activities, as a covariate in analyses of impacts from Northstar Island on bowheads.	Because of the inherent difficulties in adding multiple variables to such analyses, BP suggests that this be discussed at the annual monitoring meeting between BP, NMFS, and the NSB.
BP should continue to deploy one hydrophone (and one back-up unit) 1,476 ft (450 m) north of Northstar to monitor anthropogenic sounds from activities associated with the island.	BP will continue this practice under this final rule.
BP should continue to record the amount and type of activities at the island (i.e., crew boat trips, hovercraft trips, activities on the island, etc.). If activity levels change substantially, discussions of additional monitoring might be warranted.	BP will continue this practice under this final rule. Should additional monitoring be warranted, this would be discussed at the annual monitoring meeting between BP, NMFS, and the NSB.
Determine if additional monitoring (e.g., full acoustic array) might be needed if levels and types of activities at the island increase or whether BP's lower level of monitoring (or other data sets) suggests a change in whale behavior or distribution. If any of those events occur, BP should determine through discussions with NMFS and stake holders whether the full array should be deployed or some other monitoring technique implemented.	This recommendation repeats several previous recommendations. This topic would be included in the annual discussions between BP, NMFS, and the NSB.
Investigate the possibility of using existing acoustic data to monitor species other than bowhead whales. Also consider configuring hydrophones that would be deployed in the future to record at the higher frequencies and monitor other marine mammals in addition to bowheads.	Beginning with the 2011 data set, BP can document calls from species other than bowheads, but many other species do not call in the vicinity so the vocalizations would not be picked up by the array. BP will assess the possibility of recording at higher frequencies, but their ability to do so is limited by existing hardware.
Establish protocols for additional monitoring during autumn migratory seasons for bowheads when "loud" sounds are expected to be produced by Northstar activities. These protocols should be triggered when sounds might be produced and propagated to the migration corridor that are quieter than 180/190 dB (i.e., 160 or even 120 dB).	Should additional monitoring be warranted, this would be discussed at the annual monitoring meeting between BP, NMFS, and the NSB.
Develop an archive of (1) library of industrial sound sources with associated metadata, (2) raw acoustic recordings file, (3) summarized data (i.e., call counts, call types, etc.) from recordings, and (4) other monitoring data. Archived data will be especially important in the event of a large oil spill or other major impact. This archive should probably be maintained by a university or some other institution not associated with a government agency. The panel acknowledges BP's willingness to share data.	BP has provided archived data to the NSB and others in the past and will continue to do so.
Assess Northstar's impacts from a cumulative perspective. Each company's monitoring efforts, including BP's, should fit into a larger more comprehensive monitoring program with the objective of assessing cumulative impacts. This is one of the reasons that monitoring data should be archived.	Although not specifically linked to this monitoring plan, BP has undertaken cumulative effects methods development using an expert panel approach. The method is currently being "truthed" using data collected in 2008, including Northstar data.

TABLE 1—RECOMMENDATIONS FROM THE 2011 BP PEER REVIEW PANEL THAT WILL BE CARRIED OUT AND/OR INCORPORATED INTO BP'S MONITORING PLAN FOR THIS FINAL RULE—Continued

Panel recommendation	BP Response/commitment
Develop a plan for the periodic redeployment of a full array	BP will discuss this possibility at the annual monitoring planning meetings with NMFS and the NSB.

Reporting Measures

An annual report on marine mammal monitoring and mitigation will be submitted to NMFS, Office of Protected Resources, and NMFS, Alaska Regional Office, on June 1 of each year. The first report will cover the period from the effective date of the LOA through October 31, 2014. Subsequent reports will cover activities from November 1 of one year through October 31 of the following year. Ending each annual report on October 31 coincides with the end of the fall bowhead whale migration westward through the Beaufort Sea.

The annual reports will provide summaries of BP's Northstar activities. These summaries will include the following: (1) Dates and locations of ice-road construction; (2) on-ice activities; (3) vessel/hovercraft operations; (4) oil spills; (5) emergency training; and (6) major repair or maintenance activities that might alter the ambient sounds in a way that might have detectable effects on marine mammals, principally ringed seals and bowhead whales. The annual reports will also provide details of ringed seal and bowhead whale monitoring, the monitoring of Northstar sound via the nearshore DASAR (or similar recording device), descriptions of any observed reactions, and documentation concerning any apparent effects on accessibility of marine mammals to subsistence hunters. Based on a recommendation from the peer review panel, the annual reports should also include recorded calls of species other than bowhead whales (e.g., gray whales, bearded seals, etc.).

If specific mitigation and monitoring are required for activities on the sea ice initiated after March 1 (requiring searches with dogs for lairs), during the operation of strong sound sources (requiring visual observations and shutdown procedures), or for the use of new sound sources that have not previously been measured, then a preliminary summary of the activity, method of monitoring, and preliminary results will be submitted within 90 days after the cessation of that activity. The complete description of methods, results, and discussion will be submitted as part of the annual report.

In addition to annual reports, BP will submit a draft comprehensive report to NMFS, Office of Protected Resources, and NMFS, Alaska Regional Office, no later than 240 days prior to the expiration of these regulations. This comprehensive technical report will provide full documentation of methods, results, and interpretation of all monitoring during the first four and a quarter years of the LOA. Before acceptance by NMFS as a final comprehensive report, the draft comprehensive report will be subject to review and modification by NMFS scientists.

BP will notify NMFS within 24 hours if more than five ringed seals are killed annually as a result of the specified activity or if any other marine mammal species is injured, seriously injured or killed as a direct result of the specified activity at Northstar. Information that must be contained in the incident report submitted to NMFS includes: (1) Time, date, and location (latitude/longitude) of the incident; (2) the type of equipment involved in the incident; (3) description of the incident; (4) water depth, if relevant; (5) environmental conditions (e.g., wind speed and direction, Beaufort sea state, cloud cover, and visibility); (6) species identification or description of the animal(s) involved; (7) the fate of the animal(s); and (8) photographs or video footage of the animal (if equipment is available). Activities shall not resume until NMFS is able to review the circumstances of the prohibited take. NMFS shall work with BP to determine what is necessary to minimize the likelihood of further prohibited take and ensure MMPA compliance. BP may not resume their activities until notified by NMFS via letter, email, or telephone.

In the event that BP discovers a dead or injured marine mammal and it is determined that the cause of the injury or death is either unknown or unrelated to the specified activities at Northstar, BP will provide documentation as noted in the previous paragraph to NMFS within 24 hours of the discovery. In these two instances, BP may continue to operate while NMFS reviews the circumstances of the incident. In addition to notifying the NMFS Office of Protected Resources and NMFS Alaska Regional Office, BP will also be required to contact the Alaska Regional Stranding Coordinators or the NMFS Alaska Stranding Hotline so that they can come and recover the animal if they choose to do so.

Adaptive Management

NMFS has included an adaptive management component in the regulations governing the take of marine mammals incidental to operation of the Northstar facility in the U.S. Beaufort Sea. In accordance with 50 CFR 216.105(c), regulations for the proposed activity must be based on the best available information. As new information is developed, through monitoring, reporting, or research, the regulations may be modified, in whole or in part, after notice and opportunity for public review. The use of adaptive management will allow NMFS to consider new information from different sources to determine if mitigation or monitoring measures should be modified (including additions or deletions) if new data suggest that such modifications are appropriate for subsequent LOAs.

The following are some of the possible sources of applicable data:

- Results from BP's monitoring from the previous year;
- Results from general marine mammal and sound research; or
- Any information which reveals that marine mammals may have been taken in a manner, extent or number not authorized by these regulations or subsequent LOAs.

In addition, LOAs shall be withdrawn or suspended if, after notice and opportunity for public comment, the Assistant Administrator finds, among other things, the regulations are not being substantially complied with or the taking allowed is having more than a negligible impact on the species or stock or an unmitigable adverse impact on the availability of marine mammal species or stocks for taking for subsistence uses, as allowed for in 50 CFR 216.106(e). That is, should monitoring and reporting show that operation of the Northstar facility is having more than a negligible impact on marine mammals or an unmitigable adverse impact on the availability of marine mammal species or stocks for taking for subsistence uses, then NMFS reserves the right to modify the regulations and/or withdraw or suspend an LOA after public review.

Previous Activities and Monitoring

The ''Background on the Northstar Development Facility'' section earlier in this document and in the proposed rule (76 FR 39706, July 6, 2011) discussed activities that have occurred at Northstar since construction began in the winter of 1999/2000. Activities that occurred at Northstar since 2006 include transportation (e.g., helicopter, hovercraft, tracked vehicles, and vessels), production activities (e.g., power generation, pipe driving, etc.), construction and maintenance activities, and monitoring programs.

Under previous MMPA ITAs, BP has been conducting marine mammal monitoring within the action area to satisfy monitoring requirements set forth in those authorizations. The monitoring programs have focused mainly on bowhead whales and ringed seals, as they are the two most common marine mammal species found in the Northstar Development area. Monitoring conducted by BP includes: (1) Underwater and in-air noise measurements; (2) monitoring of ringed seal lairs; (3) monitoring of hauled out ringed seals in the spring and summer months; and (4) acoustic monitoring of the bowhead whale migration. Additionally, although it was not a requirement of the regulations or associated LOAs, BP has also incorporated work done by Michael Galginaitis. Since 2001, Galginaitis has observed and characterized the fall bowhead whale hunts at Cross Island.

As required by the regulations and annual LOAs, BP has submitted annual reports, which describe the activities and monitoring that occurred at Northstar. BP also submitted a comprehensive report, covering the period 2005–2009. The comprehensive report concentrates on BP's Northstar activities and associated marine mammal and acoustic monitoring projects from 2005–2009. However, monitoring work prior to 2004 is summarized in that report, and activities in 2010 at Northstar were described as well. The annual and comprehensive reports are available on the Internet at: *http://www.nmfs.noaa.gov/pr/permits/incidental.htm#applications*. A summary of the monitoring was provided in the ''Previous Activities and Monitoring'' section of the proposed rule (76 FR 39706, July 6, 2011). That information has not changed and is not repeated here. NMFS has determined that BP complied with the mitigation and monitoring requirements set forth in regulations and annual LOAs. In addition, NMFS has determined that the impacts on marine mammals and on the availability of marine mammals for subsistence uses from the activity fell within the nature and scope of those anticipated and authorized in the previous authorization (supporting the analysis in the current authorization).

Comments and Responses

On July 6, 2011 (76 FR 39706), NMFS published a proposed rule in response to BP's request to take marine mammals incidental to operation of offshore oil and gas facilities in the U.S. Beaufort Sea, Alaska, and requested comments, information, and suggestions concerning the request. During the 30-day public comment period, NMFS received comments from one private individual and the Marine Mammal Commission (MMC). NMFS has responded to these comments here.

Comment 1: The private citizen letter supported issuance of the authorization.

Response: NMFS has issued the requested authorization.

Comment 2: Regarding the estimated take of beluga whales, the MMC notes that some of the assumptions used to estimate take were based on data from peer-reviewed literature while other assumptions had no reasoned explanation. As such, the MMC does not believe that the information used to calculate the estimated number of takes of beluga whales was explained sufficiently or was scientifically sound. Additionally, the estimated number of takes of beluga whales included in Table 4 of the proposed rule preamble is inconsistent with the number in section 217.142 of the proposed rule. To address both of these concerns, the MMC recommends that NMFS require BP to provide a reasoned justification for the requested number of takes of beluga whales during the open-water season and ensure that the resulting take estimate is reflected accurately in section 217.142 of the regulations.

Response: In developing the estimated take of beluga whales, BP used monitoring data collected before construction of Northstar commenced. BP used Bowhead Whale Aerial Survey Program (BWASP, now referred to as the Aerial Surveys of Arctic Marine Mammals Project [ASAMM]) aerial survey data from 1979–2000 and LGL Limited aerial survey data from 1996–2000. Data from these two aerial survey programs note sightings throughout the Beaufort Sea. Therefore, assumptions needed to be made based on how many beluga whales might occur within the Level B harassment ensonified area around Northstar. Using data from BWASP and LGL surveys, it was noted that the majority of the beluga migration occurred far offshore of the Northstar development and that only 20% (and likely less) of the beluga population migrated closer into shore. The proposed rule used the 1992 estimate of the Beaufort Sea stock of beluga whales of 39,258 individuals. However, it is estimated that the stock has been increasing at a maximum annual rate of 4% (Hill and DeMaster, 1998; Angliss and Allen, 2011). Assuming a continued 4% annual growth rate, the population size could be approximately 89,457 beluga whales in 2013. This estimate is a maximum value and does not include loss of animals due to subsistence harvest or natural mortality factors. Angliss and Allen (2011) consider the current annual rate of increase to be unknown, and thus, the population size in 2013 may be less than the estimated value. Therefore, the 1992 population estimate was used to derive the take estimate.

Because some of the assumptions about percentage of individuals likely to be present in the area were not based on peer-reviewed literature and instead were based on scientific conjecture, it has been determined that it is more reasonable to estimate take of beluga whales based on the aerial survey data regarding sightings of belugas in the area. BWASP data from 2006–2009 note very few sightings of belugas in the survey block that encompasses Northstar (Clarke *et al.,* 2011a,b). Only six individuals were sighted in Block 1 in 2006, and groups of 1–20 individuals were sighted closer to shore in September 2007 with sightings in Block 1 occurring east of Northstar (Clarke *et al.,* 2011a). In 2010 and 2011, there were no sightings of belugas in the survey block closest to Northstar (Block 1; Clarke *et al.,* 2011c, 2012). However, some sightings occurred in Block 2, which is the next block offshore from Northstar. The 2012 ASAMM report indicates a small number of beluga whale sightings in Block 1 (maximum of three individuals in one sighting) with more sightings occurring in Block 2 (Clarke *et al.,* 2013). Based on this information, the sighting rates noted prior to Northstar construction, and average group size, it is estimated that 20 beluga whales would be taken by Level B harassment annually during the open-water season. The inconsistency in take estimates between the preamble and regulatory text has been corrected.

Comment 3: The MMC notes that BP's application did not specify Level A and B harassment zones for each of its proposed activities. Instead, it indicated that it would (1) shut down activities if a marine mammal was within the respective in-water Level A harassment

zone for impulsive sources and (2) conduct acoustic measurements for any novel sound sources that produce in-air sounds of 90 dB re 20 μPa (rms) or greater. The MMC notes their appreciation for BP's measurements of in-water and in-air sound sources to date. However, it is not clear that all sound sources have been identified and that BP has in place reasonable plans to monitor their impacts. To ensure that sound propagation from all important sources is measured and appropriate harassment zones are established, the MMC recommends that NMFS: (1) require BP to identify all untested or novel impulsive and continuous sound sources; (2) work with BP to determine activity- and site-specific in-air and in-water Level A and B harassment zones for all those sources (including using the 120-dB re 1 μPa (rms) threshold for continuous sources); and (3) require BP to monitor those zones during all operations of the various sound sources and report its findings.

Response: As noted earlier in this document, activities anticipated to occur during the period of this final rule (i.e., January 2014–January 2019) are a continuation of activities that have been occurring for several years. Therefore, acoustic measurements have been made for the majority of sound sources to be used during activities occurring under these regulations. In its MMPA authorization request, BP noted all sound sources that are reasonably likely to be used during the course of the next 5 years of operation. However, there could be an unforeseen repair that may require use of a device not previously anticipated. At such time that the sound source is identified, BP is required (by these regulations) to conduct acoustic measurements on that source.

NMFS has established in-water acoustic thresholds that identify the received sound levels above which hearing impairment or other injury could potentially occur, which are 180 and 190 dB re 1 μPa (rms) for cetaceans and pinnipeds, respectively (NMFS, 1995, 2000). As identified in BP's monitoring plan and required in these final regulations, to prevent or at least minimize exposure to sound levels that might cause hearing impairment, exclusion zones will be established and monitored for the presence of seals and whales for activities that will produce impulsive sounds above these levels.

NMFS has not established in-air acoustic thresholds identifying received sound levels above which hearing impairment or other injury could potentially occur. Southall *et al.* (2007) propose that devices producing single or multiple pulse or nonpulse sounds may cause injury at SPLs at or above 149 dB re 20 μPa (rms). Table 5 in BP's application identifies sound levels of several commonly used devices on Northstar Island. In-air broadband sounds were found to be between approximately 65 and 81 dB re 20 μPa. Southall *et al.* (2007) reference Blackwell *et al.* (2004b) where reactions of ringed seals to pipe-driving were noted. The authors noted that there were no observable responses or brief orientation responses to in-air received levels of 60–80 dB re 20 μPa. Based on this information, only minor Level B behavioral harassment responses are anticipated from any of the in-air sounds produced on the island.

For more than a decade, BP has implemented an extensive acoustic monitoring program to measure sounds produced by the island's activities and to record calls of bowhead whales migrating westward through the Beaufort Sea in the fall. In-water sound levels from continuous sources often fell to 120–140 dB re 1 μPa (rms) within 1.2–2.5 mi (2–4 km) of the island. Because most cetaceans migrate farther offshore, many of them will occur outside the area ensonified to Level B harassment thresholds. BP will continue to conduct an acoustic monitoring program under these final regulations, as well as its summer visual monitoring program of hauled out seals. In the case of activities that will introduce impulsive sounds into the marine environment above 180 dB re 1 μPa (rms), BP is required to employ trained biological visual observers to watch for marine mammals. NMFS has determined that the protocols BP currently has in place and as required by these final regulations are sufficient to accurately record sounds produced by island activities and for implementing appropriate mitigation and monitoring procedures.

Comment 4: The MMC recommends that NMFS require BP to use ramp-up, shutdown, and power-down procedures with all activities that require establishment of harassment zones based on either impulsive or continuous noise, whether in-air or in-water.

Response: Currently, the only types of activities that would likely require the establishment of 180– and 190–dB re 1 μPa (rms) exclusion zones are impact hammering activities. BP proposed in their application (and NMFS has required in these final regulations) the implementation of shutdown and power-down procedures if marine mammals enter into the respective exclusion zones. The wording in the proposed rule (i.e., ''. . . reduce its SPL sufficiently to ensure that received SPLs do not exceed those prescribed SPL intensities at the affected marine mammal'') may have led to some confusion about whether or not a power-down would be required. This language was meant to convey the same requirement included in other authorizations that require an operator to reduce the sound output from a source to ensure that a marine mammal would not enter into the exclusion zone. If a power-down is insufficient to reduce the SPL to a level where the animal would not be ensonified to those levels, then a full shutdown is required.

Per the MMC's recommendation, NMFS has added the requirement for a ramp-up technique in the case of impact hammering activities to this final rule. A ramp-up technique shall be used at the beginning of each day's in-water pile driving activities and if pile driving resumes after it has ceased for more than 1 hour. If a vibratory driver is used, BP is required to initiate sound from vibratory hammers for 15 seconds at reduced energy followed by a 1-minute waiting period. The procedure shall be repeated two additional times before full energy may be achieved. If a non-diesel impact hammer is used, BP is required to provide an initial set of strikes from the impact hammer at reduced energy, followed by a 1-minute waiting period, then two subsequent sets. If a diesel impact hammer is used, BP is required to turn on the sound attenuation device for 15 seconds prior to initiating pile driving.

None of BP's activities would require implementation of ramp-up, shutdown, or power-down procedures based on in-air thresholds; therefore, none are required in the final rule.

Comment 5: The MMC recommends that NMFS require BP to conduct monitoring for 30 minutes before, during, and after all in-water activities that use impulsive or continuous sources (e.g., pile driving, pile removal, drilling, etc.). Such monitoring should contribute to a dataset that can be used to inform decisions regarding similar activities in the future.

Response: As noted in the MMC letter, monitoring for 30 minutes prior to initiation of the activity and during the activity was contained in BP's application and the proposed rule. This protocol is contained in this final rule. However, there was no mention of monitoring for up to 30 minutes after the cessation of such activities in BP's application or the proposed rule. NMFS has added such a requirement to the final rule. Therefore, under this final rule, BP is required to conduct monitoring for 30 minutes before, during, and after all in-water activities

that use impulsive or continuous sources (e.g., pile driving, pile removal, drilling, etc.). The data collected by BP during these monitoring efforts will be used by NMFS to inform future decisions regarding similar activities.

Comment 6: The MMC commends BP for its commitment to conducting nearshore and offshore passive acoustic monitoring to assess bowhead whale calls during migration and recommends that NMFS work with BP to continue its monitoring, analysis, and reporting of the acoustic data BP collects on the occurrence, abundance, distribution, and movement of bowhead whales for periods before, during, and after all of the proposed activities (especially the use of vibratory or impact hammers and transiting of the vessels). The MMC also encourages BP to report data collected from any other vocalizing cetacean.

Response: As noted in BP's application and in the proposed rule, BP attempts to limit repairs requiring the use of vibratory or impact hammers during the ice-covered season or break-up period when cetaceans are not present in the area. Acoustic recorders are only deployed for approximately 30 days each year during the fall bowhead whale migration westward through the Beaufort Sea. It is logistically impracticable to deploy acoustic recorders during the ice-covered season. Therefore, the recorders are deployed at times when cetaceans most commonly occur in the area, which is during the open-water season and sometimes during the break-up period. If vibratory or impact hammering activities or vessel transits occur during this time period, then the acoustic monitoring will be in place. BP has agreed to begin reporting recorded vocalizations of other cetacean species (see Table 1 in the ''*Monitoring Plan Peer Review*'' section earlier in this document). However, it is unlikely that many gray or beluga whale calls will be detected. Gray whales are infrequent callers and are not commonly encountered near Northstar. Belugas tend to occur well to the north of Northstar and call at frequencies that are unlikely to carry to the location of the array or to be detectable within the current recording bandwidth of BP's recorders. BP will assess the possibility of recording at higher frequencies, but their ability to do so is limited by existing hardware.

Comment 7: The peer-review panel at the 2011 Open-Water meeting suggested that the oil and gas industry investigate methods of far-field monitoring that do not require visual observers (i.e., unmanned aircraft). The panel also noted that other new technologies (i.e., unmanned underwater vehicles) could be used to provide far-field monitoring. The MMC believes that those technologies offer feasible monitoring techniques for future industry activities, but that legal constraints on using them (e.g., Federal Aviation Administration [FAA] requirements) have yet to be addressed. To further improve mitigation and monitoring methods, the MMC recommends that NMFS work with BP and other industry operators to: (1) evaluate the potential for using new technologies for mitigation and monitoring purposes; and (2) when and as appropriate, consult with the FAA and other responsible agencies to (a) clarify existing constraints on the use of such technology and (b) devise methods to implement the new technologies within those constraints.

Response: NMFS concurs that monitoring techniques are constantly evolving, especially in the Arctic. As appropriate, NMFS will work with BP and other industry operators to evaluate the potential for using new technologies for mitigation and monitoring purposes. If after those discussions it is determined that certain techniques should be pursued further, NMFS will consult with the FAA and other responsible agencies to clarify existing constraints on the use of such technology and devise methods to implement the new technologies within those constraints.

Comment 8: The MMC states that BP and NMFS are too dismissive of the probability of a major oil spill occurring and the risks to marine mammals. The MMC notes that the risk of an oil spill is not simply a function of its probability of occurrence; it also must take into account the consequences if such a spill occurs. Those consequences are, in part, a function of the spill's characteristics and the ability of the industry and government to mount an effective response. The MMC states: ''The assertion that BP would be able to respond adequately to any kind of major spill is simply unsupported by all the available evidence.''

Response: The proposed rule (76 FR 39706, July 6, 2011) described design features, as well as routine inspections and maintenance conducted by BP to minimize the likelihood of a major oil spill occurring at Northstar Island. Additionally, emergency and oil spill response training occurs at various times throughout the year at Northstar. The proposed rule also contained an extensive discussion on the potential effects of oil to cetaceans and pinnipeds in the area and their habitat (see 76 FR 39722–39726 and 39728–39730, July 6, 2011). That discussion noted that in the unlikely event of an oil spill from the Northstar pipeline itself, flow through the line can be stopped, thus reducing the amount of oil that would be spilled into the marine environment, thus making the situation different from the April 2010 incident in the Gulf of Mexico. NMFS' EA for this action also contains an analysis of the potential effects of an oil spill on marine mammals, their habitats, and subsistence activities.

BP has produced oil from Northstar since October 2001. There have been no major oil spills at Northstar or in the marine environment since production began. BP's annual reports note all spills that occur on a yearly basis as a result of conducting oil production operations. Only small spill events have been noted. While spills of basic materials, such as hydraulic fluids and motor oil, occur annually, NMFS has no reason to believe that there will be a major spill from the Northstar facility. For example, the five reports noting activity and incidents at the facility from November 1, 2005, through October 31, 2010, all indicate that there were 91 reportable small spills (such as 0.25 gallons of hydraulic fluid, 3 gallons of power steering fluid, or other relatively small amounts of sewage, motor oil, hydraulic oil, sulfuric acid, etc.), three of which reached Beaufort water or ice. All material (for example, 0.03 gallons of hydraulic fluid) from these three spills was completely recovered, with no resulting impacts to marine mammals, their habitats, or subsistence uses of marine mammals. Based on BP's ability to clean up past material spills, NMFS believes that any future material spills will be quickly contained and cleaned up completely.

Comment 9: The MMC states that BP's current Oil Discharge Prevention and Contingency Plan (ODPCP) outlines several measures for preventing and responding to a spill, as summarized in the application. As a result of the Gulf of Mexico Deepwater Horizon oil spill, the Bureau of Ocean Energy Management (BOEM) recently issued revised requirements for new or previously submitted development and production plans. In accordance with those revised requirements, operators must demonstrate adequate planning and preparation to ensure that oil and gas activity on the Outer Continental Shelf conforms with all applicable federal laws and regulations, is safe, conforms to sound conservation practices and does not cause undue or serious harm or damage to the human, marine or coastal environment (30 CFR 250.202). It also requires operators to revise blowout and worst-case discharge scenarios (Notice to Lessees NTL 2010–

N06) and to obtain additional resources and capabilities to help them avoid a major oil spill or respond if such a spill occurs. To clarify its existing response capabilities, BP should provide a realistic review and demonstration of its response capabilities (e.g., in-situ burning and mechanical recovery) and update its response plans based on lessons learned from the Deepwater Horizon oil spill and the conditions likely to be encountered in the Beaufort Sea.

The MMC understands that BP has submitted a revised ODPCP to the BOEM and that it has yet to be approved. For such purposes, NMFS should work closely with BOEM to ensure that oil and gas operations are safe. Given that BOEM, the state of Alaska, and the U.S. Coast Guard have yet to approve the plan, it is not clear how NMFS can decide that the plan is adequate. For that reason, the MMC recommends that NMFS review BP's revised ODPCP to determine whether the plan is adequate for preventing and responding to a major oil spill, convey the findings of this determination to BOEM, include a full description of response capabilities in the final rule, and incorporate sufficient mitigation measures into that rule to address response capabilities, thereby minimizing the likelihood of spill-related serious injury to or mortality of marine mammals and other wildlife and prevent serious degradation of the marine environment.

Response: At the proposed rule stage, staff from NOAA's Office of Response and Restoration reviewed BP's oil spill prevention and response measures and capabilities and determined that the likelihood of a major uncontrolled well blow-out incident is small. Moreover, that review indicated that BP continues to implement appropriate prevention protocols and utilize the best available technology in the event of a major well blow-out incident. BP's revised plan was again submitted to NOAA's Office of Response and Restoration. Based on that review, Office of Response and Restoration staff determined that BP understands and addresses the complexity involved in responding to potential oil spills at Northstar and that BP has adequately accounted for different scenarios in order to deal successfully with the various types of spills that could occur. While the review revealed some areas of the application that would warrant revised trajectory analysis, the reviewers determined that BP's ODPCP sufficiently and accurately analyzes the scope and oil spill response strategies for the Northstar oil production facility.

Department of the Interior's BSEE is the Federal agency with jurisdiction over determining the sufficiency of pollution prevention measures relating to offshore oil and gas operations. BSEE reviews the plan to ensure that identified measures are in keeping with applicable Federal regulations found in 30 CFR 250 Subpart C and industry standards. Federal agencies are able to provide input regarding mitigation measures through updates of the North Slope Subarea Contingency Plan, which is part of the Alaska Federal/State Preparedness Plan for Response to Oil and Hazardous Substance Discharges/Releases (May 2012). By regulation, industry is required to comply with the applicable standards established in these Area Contingency Plans. As a member of the Alaska Regional Response Team, NMFS was given a full opportunity to submit input to this document establishing requirements for mitigation for all offshore operators. BP has revised their plans to incorporate the lessons learned from the Deep Water Horizon event as well as the requirements contained in the relevant Notices to Lessees for calculating the worst-case discharge volume for the Northstar facility. BP's plan was also revised recently to respond to BSEE regulations relating to updated safety standards and practices. The Northstar ODPCP was made available for public and government comment during the State of Alaska renewal process which resulted in an approved plan by the State on February 10, 2012. BSEE's Oil Spill Response Division is in the process of completing its review of this plan and will ensure that all applicable regulations have been followed.

As noted earlier in this response to comment, experts in NOAA's Office of Response and Restoration reviewed the updated ODPCP. NOAA's comments and suggestions were shared with BSEE, as requested by the MMC. Those comments were considered by BSEE in its review of BP's ODPCP. BP's response capabilities were summarized in the proposed rule (76 FR 39706, July 6, 2011) and are described in greater detail in the ODPCP (available on the Internet at: *http://www.nmfs.noaa.gov/pr/permits/incidental.htm*). NMFS assessed whether additional mitigation measures addressing response capabilities should be added to this final rule and determined that none were appropriate. Moreover, BP will conduct any needed oil spill response activities that occur in the vicinity of marine mammals in accordance with NOAA's Marine Mammal Oil Spill Response Guidelines, to the extent practicable.

Comment 10: The MMC recommends that NMFS condition the final rule to require BP to suspend its activities if more than five ringed seals are killed in any year, or any other marine mammal is seriously injured or killed and the injury or death could have been caused by those activities (e.g., a fresh carcass is found). NMFS should investigate any such incident to assess the cause and full impact (e.g., the types of injuries, the number of animals involved) and to determine what modifications in BP's activities are needed to avoid additional injuries or deaths. This will require that the appropriate investigators have timely access to the carcass(es), which will require that BP take steps to provide such access (e.g., by securing the carcass(es) and providing transport for investigators to the site). Full investigation of such incidents is necessary to provide information regarding the potential impact of Northstar's activities on marine mammals and to devise the means for avoiding such occurrences in the future.

Response: NMFS has added language to § 217.146 of this final rule requiring BP to notify NMFS within 24 hours if more than five ringed seals are killed annually as a result of the specified activity or if any other marine mammal species is injured, seriously injured or killed as a direct result of the specified activity at Northstar. The specific activity that resulted in the injury or death of the marine mammal will be halted until NMFS can review the circumstance of the incident and work with BP to modify operations, if it is deemed necessary. Information that must be contained in the incident report submitted to NMFS includes: (1) time, date, and location (latitude/longitude) of the incident; (2) the type of equipment involved in the incident; (3) description of the incident; (4) water depth, if relevant; (5) environmental conditions (e.g., wind speed and direction, Beaufort sea state, cloud cover, and visibility); (6) species identification or description of the animal(s) involved; (7) the fate of the animal(s); and (8) photographs or video footage of the animal (if equipment is available). Activities shall not resume until NMFS is able to review the circumstances causing the exceedance of the authorized take. NMFS will work with BP to identify additional measures to minimize the likelihood that more than five ringed seals will not be killed each year (or other marine mammal species that may have been injured, seriously injured, or killed) from BP's activities. BP may not resume their activities until notified by NMFS via letter, email, or telephone.

In the event that BP discovers a dead or injured marine mammal and it is determined that the cause of the injury or death is either unknown or unrelated to the specified activities at Northstar, BP will provide documentation as noted in the previous paragraph to NMFS within 24 hours of the discovery. In these two instances, BP may continue to operate while NMFS reviews the circumstances of the incident. In addition to notifying the NMFS Office of Protected Resources and NMFS Alaska Regional Office, BP will also be required to contact the Alaska Regional Stranding Coordinators or the NMFS Alaska Stranding Hotline so that they can come and recover the animal if they choose to do so.

Estimated Take of Marine Mammals

One of the main purposes of NMFS' effects assessments is to identify the permissible methods of taking, which involves an assessment of the following criteria: the nature of the take (e.g., resulting from anthropogenic noise vs. from ice road construction, etc.); the regulatory level of take (i.e., mortality vs. Level A or Level B harassment); and the amount of take. In the ''Potential Effects of the Specified Activity on Marine Mammals'' section of the proposed rule (76 FR 39706, July 6, 2011), NMFS identified the different types of effects that could potentially result from activities at BP's Northstar facility.

Except with respect to certain activities not pertinent here, the MMPA defines ''harassment'' as: ''any act of pursuit, torment, or annoyance which (i) has the potential to injure a marine mammal or marine mammal stock in the wild [Level A harassment]; or (ii) has the potential to disturb a marine mammal or marine mammal stock in the wild by causing disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering [Level B harassment].'' Take by Level B harassment is anticipated from operational sounds extending into the open-water migration paths of cetaceans and open-water areas where pinnipeds might be present, from the physical presence of personnel on the island, vehicle traffic, and by helicopter overflights. Take of hauled out pinnipeds, by harassment, could also occur as a result of in-air sound sources. Certain species may have a behavioral reaction to the sound emitted during the activities; however, hearing impairment as a result of these activities is not anticipated because of the low source levels for much of the equipment that is used. There is also a potential for take by injury or mortality of ringed seals from ice road construction activities. Because of the slow speed of hovercraft and vessels used for Northstar operations, it is highly unlikely that there would be any take from these activities.

Because BP operates the Northstar facility year-round, take of marine mammals could occur at any time of year. However, take of all marine mammal species that could potentially occur in the area is not anticipated during all seasons. This is because of the distribution and habitat preferences of certain species during certain times of the year. BP provided a full description of the methodology used to estimate takes in its application (see **ADDRESSES**), which is also provided in the proposed rule (76 FR 39706, July 6, 2011). Please refer to those documents for the full explanation, as only a short summary is provided here. As noted earlier in this document, there was a slight change to the method for calculating the take of beluga whales during the open-water season. That is explained further in this section.

Estimated Takes in the Ice-Covered Season

Potential sources of disturbance to marine mammals from the Northstar project during the ice-covered period consist primarily of vehicle traffic along the ice-road, helicopter traffic, and the ongoing production and drilling operations on the island. During the ice-covered season, the ringed seal is the only marine mammal that occurs regularly in the area of landfast ice surrounding Northstar. Spotted seals do not occur in the Beaufort Sea in the ice-covered season. Small numbers of bearded seals occur occasionally in the landfast ice in some years. Bowhead and beluga whales are absent from the Beaufort Sea in winter (or at least from the landfast ice portions of the Beaufort Sea), and in spring their eastward migrations are through offshore areas north of the landfast ice, which excludes whales from areas close to Northstar. Gray whales are also absent from this part of the Beaufort Sea during the ice-covered season. Therefore, takes of marine mammals during the ice-covered season were only estimated for ringed and bearded seals.

Potential displacement of ringed seals was more closely related to physical alteration of sea ice by industry than to exposure to detectable levels of low-frequency industrial sound during winter and spring (Williams *et al.,* 2006; Richardson *et al.,* 2008b; Moulton *et al.,* MS). The distance within which displacement of ringed seals might occur near a development like Northstar was defined as the physically affected area plus a 328 ft (100 m) buffer zone. A study from a drill site in the Canadian Beaufort Sea provided similar results (Harwood *et al.,* 2007). The Northstar ice road is typically flooded and thickened and/or cleared of snow. The physically affected ice road area is about 1,312 ft (400 m) wide, and this is extended with 328 ft (100 m) on either side to a total width of 1,969 ft (600 m) to derive the zone of displacement. This zone of displacement (or impact zone) around physically affected areas such as the ice road, work areas on the ice, and Northstar Island itself, is used to calculate the number of seals potentially affected (Richardson *et al.,* 2008b).

(1) Bearded Seal

The few bearded seals that remain in the area during winter and spring are generally found north of Northstar in association with the pack ice or the edge of the landfast ice. Based on available data, and the ecology of bearded seals, it is unlikely that more than a few bearded seals (and most likely none) will be present in close proximity (<328 ft [100 m]) to the ice road and Northstar itself during the ice-covered season. The most probable number of bearded seals predicted to be potentially impacted by Northstar activities during the ice-covered season in any one year is zero. However, to allow for unexpected circumstances that might lead to take of bearded seals when they are present, BP requested take of two bearded seals per year during the ice-covered period by Level B harassment.

(2) Ringed Seal

Individual ringed seals in the Northstar area during the ice-covered season may be displaced a short distance away from the ice road corridors connecting the production islands to the mainland. Seal monitoring each spring since 2005, based on visual observations from the Northstar module in the May 15–July 15 period, has shown continued occurrence of ringed seals near Northstar facilities, though with large variations within and between years (Aerts, 2009). During most of the year, all age and sex classes, except for newborn pups, could occur in the Northstar area. Ringed seals give birth in late March and April; therefore, at that time of year young pups may also be encountered.

Detailed monitoring of ringed seals near Northstar was done during spring and (in some years) winter of 1997 to 2002, including three years of Northstar construction and initial oil production

(2000–2002). BP estimated annual takes of ringed seal based on data collected from the intensive aerial monitoring program conducted in 1997–2002, using a series of steps outlined in BP's MMPA application and the proposed rule. Those results indicate that 3–8 seals could be present in the potential impact zone (Table 3 in BP's application). To allow for unexpected circumstances that might lead to take of ringed seals, BP requested take of eight ringed seals per year during the ice-covered period by Level B harassment. In the unlikely event that a ringed seal lair is crushed or flooded, BP also requested take of up to five ringed seals (including pups) by injury or mortality per year.

Estimated Takes in the Break-up Season

Potential sources of disturbance to marine mammals from the Northstar project during the break-up period consist primarily of hovercraft and helicopter traffic, as well as the ongoing production and drilling operations on the island. Spotted seals and bowhead, gray, and beluga whales are expected to be absent from the Northstar project area during the break-up period. Therefore, take of those species during the break-up period was not estimated.

Similar to the ice-covered season, BP predicts that only very few bearded seals (and most likely none) could be present within the potential impact zone around the ice road and Northstar facilities during the break-up period. The most probable number of bearded seals predicted to be potentially impacted by Northstar activities during break-up in any one year is zero. However, to account for the possible presence of low numbers of bearded seals during this time, NMFS has authorized the take of two bearded seals per year during the break-up season.

Impacts to ringed seals from Northstar activities during the break-up period are anticipated to be similar to those predicted during the ice-covered period. Additionally, the number of ringed seals present within the potential impact zone during the break-up period is expected to be similar to the number present during the ice-covered season. It is possible that some of these seals are the same individuals already counted as present during the latter stages of the ice-covered season (B. Kelly, pers. comm.). Thus, if any seals were affected during break-up, it is probable that some of these would be the same individuals. BP states that the requested Level B take of eight ringed seals per year during the ice-covered periods of 2014–2019 is expected to also cover potentially affected seals during break-up. However, in case the same seals are taken during both periods, NMFS has authorized the take of eight ringed seals per year by Level B harassment during the break-up period.

Estimated Takes in the Open-Water Season

Potential sources of disturbance to marine mammals from the Northstar project during the open-water period consist primarily of hovercraft and ACS vessels used for transfers of crew and supplies, barge and tugboat traffic, helicopter traffic, and the ongoing production and drilling operations on the island. During the open-water season, all six species can potentially be present in the Northstar area. Estimated annual numbers of potential open-water takes for each of these six species are summarized next.

(1) Spotted Seal

Pupping and mating occur in the spring when spotted seals are not in the Beaufort Sea. Hence, young pups would not be encountered in the Northstar Development area. All other sex and age classes may be encountered in small numbers during late summer/autumn. Spotted seals are most often found in waters adjacent to river deltas during the open-water season in the Beaufort Sea, and major haul-out concentrations are absent close to the project area. A small number of spotted seal haul-outs are (or were) located in the central Beaufort Sea in the deltas of the Colville River (which is more than 50 mi [80 km] from Northstar) and, previously, the Sagavanirktok River. No spotted seals were positively identified during BP's Northstar marine mammal monitoring activities, although a few spotted seals might have been present. A total of 12 spotted seals were positively identified near the source vessel during open-water seismic programs in the central Alaskan Beaufort Sea generally near Northstar from 1996 to 2001 (Moulton and Lawson, 2002). Numbers seen per year ranged from zero (in 1998 and 2000) to four (in 1999). To account for the possibility that spotted seals could occur in small numbers in the proximity of Northstar, NMFS has authorized the take of five spotted seals per year during the open-water period by Level B harassment.

(2) Bearded Seal

During the open-water season, bearded seals are widely and sparsely distributed in areas of pack ice and open water, including some individuals in relatively shallow water as far south as Northstar. Studies indicate that pups and other young bearded seals up to 3 years of age comprise 40–45% of the population (Nelson *et al.,* n.d.), and that younger animals tend to occur closer to shore. Therefore, although all age and sex classes could be encountered, bearded seals encountered in the Northstar project area during the open-water period are likely to be young, non-reproductive animals. Bearded seals, if present, may be exposed to noise and other stimuli from production activities and vessel and aircraft traffic on and around the island. To allow for unexpected circumstances, BP requested the take of one bearded seal per year during the open-water period.

(3) Ringed Seal

Because ringed seals are resident in the Beaufort Sea, they are the most abundant and most frequently encountered seal species in the Northstar area. During the open-water period, all sex and age classes (except neonates) could potentially be encountered. BP used a series of steps and assumptions to estimate the number of seals that potentially might be harassed by noise from Northstar production activities or from vessel and aircraft traffic, which is explained in BP's MMPA application and the proposed rule. Based on those assumptions, BP estimated that 15 ringed seals might be present and potentially affected during the open-water season.

(4) Bowhead Whale

Bowhead whales are not resident in the region of activity. During the open-water season, relatively few westward migrating bowheads occur within 6.2 mi (10 km) of Northstar during most years. However, in some years (especially years with relatively low ice cover) a larger percentage of the bowhead population migrates within 6.2–9.3 mi (10–15 km) of Northstar (Treacy, 1998; Blackwell *et al.,* 2007, 2009). The bowhead whale population in the Bering-Chukchi-Beaufort area was estimated to include approximately 10,545 animals (CV=0.128) in 2001. To estimate the 2013 population size for purposes of calculating potential ''takes'', the annual rate of increase was assumed to be steady at 3.4% (George *et al.,* 2004). Based on these figures, the 2013 population size could be approximately 15,750 bowhead whales.

There are few data on the age and sex composition of bowhead whales that have been sighted near the Prudhoe Bay area. The little available data from the area and more extensive data from more easterly parts of the Alaskan Beaufort Sea in late summer/autumn (Koski and Johnson, 1987; Koski and Miller, 2002, 2009) suggest that almost all age and sex

categories of bowheads could be encountered, i.e., males, non-pregnant females, pregnant females, and calves (mostly 3–6 months old). Newly born calves (<1 month old) are not likely to be encountered during the fall (Nerini *et al.,* 1984; Koski *et al.,* 1993). The potential take of bowhead whales from Northstar activities would be limited to Level B harassment (including avoidance reactions and other behavioral changes). Most bowheads that could be encountered would be migrating, so it is unlikely that an individual bowhead would be harassed more than once.

Based on the amount of time bowhead whales are expected to be present in the general vicinity of the Northstar Development area and the fact that most of the whales migrate past the area beyond the 120-dB sound isopleths (NMFS' threshold for Level B harassment from continuous sound sources), which typically extend out less than 1.24–2.5 mi (2–4 km) from the island, it is estimated that only a small number of bowhead whales will be taken by harassment each year as a result of BP's activities. Therefore, BP requested take of 15 bowhead whales per year during the open-water season by Level B harassment.

(5) Gray Whale

Gray whales are uncommon in the Prudhoe Bay area, with no more than a few sightings in summer or early autumn in any one year, and usually no sightings (Miller *et al.,* 1999; Treacy, 2000, 2002a,b). Small numbers of gray whales were sighted on several occasions in the central Alaskan Beaufort, e.g., in the Harrison Bay area (Miller *et al.,* 1999; Treacy, 2000), in the Camden Bay area (Christie *et al.,* 2009) and one single sighting near Northstar production island (Williams and Coltrane, 2002). Several single gray whales have been seen farther east in the Canadian Beaufort Sea (Rugh and Fraker, 1981; LGL Ltd., unpubl. data), indicating that small numbers must travel through the Alaskan Beaufort during some summers. No specific data on age or sex composition are available for the few gray whales that move east into the Beaufort Sea. All sex and age classes (including pregnant females) could be found, with the exception of calves less than 6 months of age.

Gray whales typically do not show avoidance of sources of continuous industrial sound unless the received broadband level exceeds approximately 120 dB re 1 μPa (Malme *et al.,* 1984, 1988; Richardson *et al.,* 1995b; Southall *et al.,* 2007). The broadband received level approximately 1,476 ft (450 m) seaward from Northstar did not exceeded 120 dB 1 μPa in the operational period 2004–2008 (95th percentiles), except when a vessel was passing close to Northstar or the acoustic recorders (maximum levels). To account for the possibility that a low number of gray whales could occur near Northstar, BP requested take of two gray whales per year during the open-water period by Level B harassment.

(6) Beluga Whale

The Beaufort Sea beluga population was estimated at 39,258 individuals in 1992, with a maximum annual rate of increase of 4% (Hill and DeMaster, 1998; Angliss and Allen, 2009). Assuming a continued 4% annual growth rate, the population size could be approximately 89,457 beluga whales in 2013. However, the 4% estimate is a maximum value and does not include loss of animals due to subsistence harvest or natural mortality factors. Angliss and Allen (2009) consider the current annual rate of increase to be unknown. Thus, the population size in 2013 may be less than the estimated value. Additionally, the southern edge of the main fall migration corridor is approximately 62 mi (100 km) north of the Northstar region. A few migrating belugas were observed in nearshore waters of the central Alaskan Beaufort Sea by aerial and vessel-based surveyors during seismic monitoring programs from 1996–2001 (LGL and Greeneridge, 1996a; Miller *et al.,* 1997, 1998b, 1999). Results from aerial surveys conducted in 2006–2008 during seismic and shallow hazard surveys in the Harrison Bay and Camden Bay area also show that the majority of belugas occur along the shelf break, although there were some observations in nearshore areas (Christie *et al.,* 2009). Vessel-based surveyors observed a group of three belugas in Foggy Island Bay in July 2008, during BP's Liberty seismic survey (Aerts *et al.,* 2008) and small groups of westward traveling belugas have occasionally been sighted around Northstar and Endicott, mostly in late July to early/mid-August (John K. Dorsett, Todd Winkel, BP, pers. comm.). Any potential take of these beluga whales in nearshore waters is expected to be limited to Level B harassment. Belugas from the Chukchi stock occur in the Alaskan Beaufort Sea in summer but are even less likely than the Beaufort stock to be encountered in the nearshore areas where sounds from Northstar will be audible.

The few animals involved could include all age and sex classes. Most of the few belugas that could be encountered would be engaged in migration, so it is unlikely that a given beluga would be repeatedly ''taken by harassment''.

As noted in the response to comments found earlier in this document (Comment 2), take of beluga whales has not been estimated the same way it was in the proposed rule. The new explanation is provided here. BWASP data from 2006–2009 note very few sightings of belugas in the survey block that encompasses Northstar (Clarke *et al.,* 2011a,b). Only six individuals were sighted in Block 1 in 2006, and groups of 1–20 individuals were sighted closer to shore in September 2007 with sightings in Block 1 occurring east of Northstar (Clarke *et al.,* 2011a). In 2010 and 2011, there were no sightings of belugas in the survey block closest to Northstar (Block 1; Clarke *et al.,* 2011c, 2012). However, some sightings occurred in Block 2, which is the next block offshore from Northstar. The 2012 ASAMM report indicates a small number of beluga whale sightings in Block 1 (maximum of three individuals in one sighting) with more sightings occurring in Block 2 (Clarke *et al.,* 2013). Based on this information, the sighting rates noted prior to Northstar construction, and average group size, it is estimated that 20 beluga whales would be taken by Level B harassment annually during the open-water season.

Summary of Authorized Take

BP requested and NMFS has authorized the take of six marine mammal species incidental to operational activities at the Northstar facility. However, because some of these species only occur in the Beaufort Sea on a seasonal basis, take of all six species has not been authorized for an entire year. BP broke out its take requests into three seasons: ice-covered season; break-up period; and open-water season. Ringed and bearded seals are the only species for which take was requested (and has been authorized) in all three seasons. Take of all six species was only requested and authorized for the open-water season. With the exception of the request for five ringed seal (including pups) takes by injury or mortality per year, all requested takes are by Level B harassment. Table 2 in this document summarizes the abundance, take estimates, and percent of population for the six species for which NMFS has authorized take.

TABLE 2—POPULATION ABUNDANCE ESTIMATES, TOTAL ANNUAL AUTHORIZED TAKE (WHEN COMBINING TAKES FROM THE ICE-COVERED, BREAK-UP, AND OPEN-WATER SEASONS), AND PERCENTAGE OF POPULATION THAT MAY BE TAKEN FOR THE POTENTIALLY AFFECTED SPECIES

Species	Abundance	Total annual authorized Level B take	Total annual authorized injury or mortality take	Percentage of stock or population
Ringed Seal	[1]~250,000	31	5	0.01
Bearded Seal	[1] 155,000	5	0	<0.01
Spotted Seal	[1] 141,479	5	0	<0.01
Bowhead Whale	[2] 15,750	15	0	0.1
Beluga Whale	[1] 39,258	20	0	0.05
Gray Whale	[1] 19,126	2	0	0.01

[1] Abundance estimates in NMFS 2011 Alaska SAR (Allen and Angliss, 2012).
[2] Estimate from George *et al.* (2004) with an annual growth rate of 3.4%.

Because Prudhoe Bay (and the U.S. Beaufort Sea as a whole) represents only a small fraction of the Arctic basin where these animals occur, NMFS has determined that only small numbers of the marine mammal species or stocks in the area would be potentially affected by operation of the Northstar facility. The take estimates presented here do not take into consideration the mitigation and monitoring measures contained in the regulations and required in subsequent LOAs.

Negligible Impact and Small Numbers Analysis and Determination

NMFS typically includes our negligible impact and small numbers analyses and determinations under the same section heading of our **Federal Register** notices. Despite co-locating these terms, we acknowledge that negligible impact and small numbers are distinct standards under the MMPA and treat them as such. The analyses presented below do not conflate the two standards; instead, each standard has been considered independently and we have applied the relevant factors to inform our negligible impact and small numbers determinations.

NMFS has defined ''negligible impact'' in 50 CFR 216.103 as ''. . . an impact resulting from the specified activity that cannot be reasonably expected to, and is not reasonably likely to, adversely affect the species or stock through effects on annual rates of recruitment or survival.'' In making a negligible impact determination, NMFS considers a variety of factors, including but not limited to: (1) the number of anticipated mortalities; (2) the number and nature of anticipated injuries; (3) the number, nature, intensity, and duration of Level B harassment; and (4) the context in which the takes occur.

No injuries or mortalities are anticipated for bearded and spotted seals or for bowhead, beluga, and gray whales. There is the potential for a small number of injuries or mortalities to ringed seals (no more than five per year) as a result of ice road construction activities during the ice-covered season. These injuries or mortalities could occur if a ringed seal lair is crushed or flooded. Additionally, animals in the area are not anticipated to incur any hearing impairment (i.e., TTS, a Level B harassment, or permanent threshold shift, a Level A [injury] harassment), as acoustic measurements indicate source levels below 180 dB and 190 dB, which are the thresholds used by NMFS for acoustic injury to marine mammals. All other takes are anticipated to be by Level B behavioral harassment only. Certain species may have a behavioral reaction (e.g., increased swim speed, avoidance of the area, etc.) to the sound emitted during the operational activities. Table 2 in this document outlines the number of takes that are anticipated as a result of BP's activities. These takes are anticipated to be of low intensity due to the low level of sound emitted by the majority of the activities themselves. Activities occur at Northstar year-round, but the majority of these activities produce low-level continuous sounds. Only on rare occasions are more high-intensity pulsed sounds emitted into the surrounding environment. The ringed seal (and possibly the bearded seal) are the only species that occur in the area year-round.

Even though activities occur throughout the year, none of the cetacean species occur near Northstar all year. Cetaceans are most likely to occur in the late summer and autumn seasons. However, even during that time, much of the populations of those species migrate past the area farther offshore than the area where Northstar sounds can be heard. Spotted seals also tend to only be present in the open-water season. Moreover, they are more common in the Colville River Delta area, which is more than 50 mi (80 km) west of the Northstar Development area, than in the waters surrounding Northstar. Ringed and bearded seals could be found in the area year-round. However, many of them remain far enough from the facility, outside of areas where harassment is possible. Additionally, ringed seals have been observed in the area every year since the beginning of construction and into the subsequent operational years.

Many animals perform vital functions, such as feeding, resting, traveling, and socializing, on a diel cycle (24-hr cycle). Behavioral reactions to noise exposure (such as disruption of critical life functions, displacement, or avoidance of important habitat) are more likely to be significant if they last more than one diel cycle or recur on subsequent days (Southall *et al.,* 2007). Consequently, a behavioral response lasting less than one day and not recurring on subsequent days is not considered particularly severe unless it could directly affect reproduction or survival (Southall *et al.,* 2007). Even though activities occur on successive days at Northstar, none of the cetacean species (i.e., beluga, bowhead, and gray whales) are anticipated to incur impacts on successive days. In the vicinity of Northstar, bowheads and belugas are migrating through the area. Therefore, it is unlikely that the same animals are impacted on successive days. Acoustic data that have been collected off Northstar Island for more than a decade do not indicate that operations at the island are affecting the bowhead whale migrations through the Beaufort Sea. Although bowhead whales have been observed feeding in several locations throughout the central Beaufort Sea, most sightings have occurred more than 62 mi (100 km) from Northstar. Belugas that migrate through the U.S. Beaufort Sea typically do so farther offshore (more than 37 mi [60 km]) and in deeper

waters (more than 656 ft [200 m]) than where Northstar activities occur. Gray whales are rarely sighted this far east in the U.S. Beaufort Sea. Additionally, there are no known feeding grounds for gray whales in the Prudhoe Bay area. The most northern feeding sites known for this species are located in the Chukchi Sea near Hanna Shoal and Point Barrow. Based on these factors, exposures of gray whales to industrial sounds are not expected to last for prolonged periods (i.e., several days or weeks) since they are not known to remain in the area for extended periods of time.

The same individual bearded and spotted seals are also not likely to occur in the project area on successive days. Individual ringed seals may occur in the project area on successive days. Ringed seals construct lairs for pupping in the Beaufort Sea in late winter/early spring on the landfast ice. As noted earlier in this document, BP is required to implement mitigation measures to avoid disturbing lairs and potentially crushing lairs occupied by ringed seals. Bearded seals breed in the Bering and Chukchi Seas, as the Beaufort Sea provides less suitable habitat for the species. Spotted seals are even less common in the Prudhoe Bay area, and the species does not breed in the Beaufort Sea. Monitoring results (which were discussed in the proposed rule) indicate that operation of the Northstar facility has not affected activities such as ice seal resting and pupping in the area. Additionally, pinnipeds appear to be more tolerant of anthropogenic sound, especially at lower received levels, than other marine mammals, such as mysticetes.

Of the six marine mammal species for which take is authorized, one is listed as endangered under the ESA—the bowhead whale—and two are listed as threatened—ringed and bearded seals. All three species are also considered depleted under the MMPA. As stated previously in this document, the affected bowhead whale stock has been increasing at a rate of 3.4% per year since 2001 (Allen and Angliss, 2012). There are currently no reliable data on trends of the ringed and bearded seal stocks in Alaska. Certain stocks or populations of gray and beluga whales and spotted seals are listed as endangered or are proposed for listing under the ESA; however, none of those stocks or populations occur in the activity area. There is currently no established critical habitat in the project area for any of these six species.

The population estimates for the species that may potentially be taken as a result of BP's activities were presented earlier in this document. For reasons described earlier in this document, the maximum calculated number of individual marine mammals for each species that could potentially be taken annually is small relative to the overall population sizes (less than 1% of each of the six populations or stocks).

Based on the analysis contained herein of the likely effects of the specified activity on marine mammals and their habitat, and taking into consideration the implementation of the mitigation and monitoring measures, NMFS has determined that operation of the BP Northstar facility will result in the incidental take of small numbers of marine mammals and that the total taking from BP's activities will have a negligible impact on the affected species or stocks.

Impact on Availability of Affected Species or Stock for Taking for Subsistence Uses

Relevant Subsistence Uses

The disturbance and potential displacement of marine mammals by sounds from island production activities are the principal concerns related to subsistence use of the area. However, contamination of animals and traditional hunting areas by oil (in the unlikely event that a major oil spill did occur) is also a concern. Subsistence remains the basis for Alaska Native culture and community. Marine mammals are legally hunted in Alaskan waters by coastal Alaska Natives. In rural Alaska, subsistence activities are often central to many aspects of human existence, including patterns of family life, artistic expression, and community religious and celebratory activities. Additionally, the animals taken for subsistence provide a significant portion of the food that will last the community throughout the year. The main species that are hunted include bowhead and beluga whales, ringed, spotted, and bearded seals, walruses, and polar bears. (As mentioned previously in this document, both the walrus and the polar bear are under the USFWS' jurisdiction.) The importance of each of these species varies among the communities and is largely based on availability.

Residents of the village of Nuiqsut are the primary subsistence users in the project area. The communities of Barrow and Kaktovik also harvest resources that pass through the area of interest but do not hunt in or near the Northstar area. Subsistence hunters from all three communities conduct an annual hunt for autumn-migrating bowhead whales. Barrow also conducts a bowhead hunt in spring. Residents of all three communities hunt seals. Other subsistence activities include fishing, waterfowl and seaduck harvests, and hunting for walrus, beluga whales, polar bears, caribou, and moose. Relevant harvest data are summarized in Tables 8 and 9 in BP's application (see **ADDRESSES**).

Nuiqsut is the community closest to the Northstar development (approximately 54 mi [87 km] southwest from Northstar). Nuiqsut hunters harvest bowhead whales only during the fall whaling season (Long, 1996). In recent years, Nuiqsut whalers have typically landed three or four whales per year (see Table 9 in BP's application). Nuiqsut whalers concentrate their efforts on areas north and east of Cross Island, generally in water depths greater than 66 ft (20 m; Galginaitis, 2009). Cross Island is the principal base for Nuiqsut whalers while they are hunting bowheads (Long, 1996). Cross Island is located approximately 16.8 mi (27 km) east of Northstar.

Kaktovik whalers search for whales east, north, and occasionally west of Kaktovik. Kaktovik is located approximately 124 mi (200 km) east of Northstar Island. The western most reported harvest location was about 13 mi (21 km) west of Kaktovik, near 70°10' N., 144°11' W. (Kaleak, 1996). That site is about 112 mi (180 km) east of Northstar Island.

Barrow whalers search for whales much farther from the Northstar area—about 155+ mi (250+ km) to the west. However, given the westward migration of bowheads in autumn, Barrow (unlike Kaktovik) is ''downstream'' from the Northstar region during that season. Barrow hunters have expressed concern about the possibility that bowheads might be deflected offshore by Northstar and then remain offshore as they pass Barrow.

Beluga whales are not a prevailing subsistence resource in the communities of Kaktovik and Nuiqsut. Kaktovik hunters may harvest one beluga whale in conjunction with the bowhead hunt; however, it appears that most households obtain beluga through exchanges with other communities. Although Nuiqsut hunters have not hunted belugas for many years while on Cross Island for the fall hunt, this does not mean that they may not return to this practice in the future. Data presented by Braund and Kruse (2009) indicate that only one percent of Barrow's total harvest between 1962 and 1982 was of beluga whales and that it did not account for any of the harvested animals between 1987 and 1989.

Ringed seals are available to subsistence users in the Beaufort Sea year-round, but they are primarily hunted in the winter or spring due to the rich availability of other mammals in the summer. Bearded seals are primarily hunted during July in the Beaufort Sea; however, in 2007, bearded seals were harvested in the months of August and September at the mouth of the Colville River Delta, which is more than 50 mi (80 km) from Northstar. However, this sealing area can reach as far east as Pingok Island, which is approximately 17 mi (27 km) west of Northstar. An annual bearded seal harvest occurs in the vicinity of Thetis Island (which is a considerable distance from Northstar) in July through August. Approximately 20 bearded seals are harvested annually through this hunt. Spotted seals are harvested by some of the villages in the summer months. Nuiqsut hunters typically hunt spotted seals in the nearshore waters off the Colville River Delta. The majority of the more established seal hunts that occur in the Beaufort Sea, such as the Colville delta area hunts, are located a significant distance (in some instances 50 mi [80 km] or more) from the project area.

Potential Impacts to Subsistence Uses

NMFS has defined ''unmitigable adverse impact'' in 50 CFR 216.103 as: ''. . . an impact resulting from the specified activity: (1) That is likely to reduce the availability of the species to a level insufficient for a harvest to meet subsistence needs by: (i) Causing the marine mammals to abandon or avoid hunting areas; (ii) Directly displacing subsistence users; or (iii) Placing physical barriers between the marine mammals and the subsistence hunters; and (2) That cannot be sufficiently mitigated by other measures to increase the availability of marine mammals to allow subsistence needs to be met.''

Noise and general activity during BP's Northstar operations have the potential to impact marine mammals hunted by Native Alaskans. Additionally, if a major oil spill occurred (even though it is unlikely), there could be impacts to marine mammals hunted by Native Alaskans and to the hunts themselves. Although small spills happen annually, those spills are typically contained to the island and do not reach Beaufort Sea ice or water, thus there are no impacts to marine mammals or marine mammal hunts. In the case of cetaceans, the most common reaction to anthropogenic sounds (as noted in the proposed rule) is avoidance of the ensonified area. In the case of bowhead whales, this often means that the animals divert from their normal migratory path by several kilometers. Helicopter activity also has the potential to disturb cetaceans and pinnipeds by causing them to vacate the area. Additionally, general vessel presence in the vicinity of traditional hunting areas could negatively impact a hunt. Native knowledge indicates that bowhead whales become increasingly ''skittish'' in the presence of seismic noise. Whales are more wary around the hunters and tend to expose a much smaller portion of their back when surfacing (which makes harvesting more difficult). Additionally, natives report that bowheads exhibit angry behaviors in the presence of seismic, such as tail-slapping, which translate to danger for nearby subsistence harvesters.

In the case of subsistence hunts for bowhead whales in the Beaufort Sea, there could be an adverse impact on the hunt if the whales were deflected seaward (further from shore) in traditional hunting areas. The impact would be that whaling crews would have to travel greater distances to intercept westward migrating whales, thereby creating a safety hazard for whaling crews and/or limiting chances of successfully striking and landing bowheads.

Oil spills might affect the hunt for bowhead whales. The harvest period for bowhead whales is probably the time of greatest risk that a relatively large-scale spill would reduce the availability of bowhead whales for subsistence uses. Pipeline spills are possible for the total production period of Northstar. Spills could occur at any time of the year. However, spills at most times of year would not affect bowheads, as bowheads are present near Northstar for only several weeks during late summer and early autumn. Bowheads travel along migration corridors that are far offshore of the planned production islands and pipelines during spring and somewhat offshore of those facilities during autumn. Under the prevailing east-wind conditions, oil spills from Northstar would not move directly into the main hunting area east and north of Cross Island. However, large oil spills could extend into the hunting area under certain wind and current regimes (Anderson *et al.,* 1999). Small spills of items such as hydraulic fluid or diesel fuel are typically relegated to the island or ice roads and are successfully cleaned up before the material reaches areas where marine mammals could be present.

Even in the case of a major spill, it is unlikely that more than a small minority of the bowheads encountered by hunters would be contaminated by oil. However, disturbance associated with reconnaissance and cleanup activities could affect whales and thus accessibility of whales to hunters. In the very unlikely event that a major spill incident occurred during the relatively short fall whaling season, it is possible that hunting would be affected significantly.

Ringed seals are more likely than bowheads to be affected by spill incidents because they occur in the development areas throughout the year and are more likely than whales to occur close to Northstar. Small numbers of bearded seals could also be affected, especially by a spill during the open-water season. Potential effects on subsistence use of seals will still be relatively low, as the areas most likely to be affected are not areas heavily used for seal hunting. However, wind and currents could carry spilled oil west from Northstar to areas where seal hunting occurs. It is possible that oil-contaminated seals could be harvested.

Oil spill cleanup activity could exacerbate and increase disturbance effects on subsistence species, cause localized displacement of subsistence species, and alter or reduce access to those species by hunters. On the other hand, the displacement of marine mammals away from oil-contaminated areas by cleanup activities would reduce the likelihood of direct contact with oil and thus reduce the likelihood of tainting or other impacts on the mammals.

One of the most persistent effects of the Exxon Valdez oil spill (EVOS) was the reduced harvest and consumption of subsistence resources due to the local perception that they had been tainted by oil (Fall and Utermohle, 1995). The concentrations of petroleum-related aromatic compound (AC) metabolites in the bile of harbor seals were greatly elevated from oiled areas of Prince William Sound (PWS). Mean concentrations of phenanthrene equivalents for oiled seals from PWS were over 70 times greater than for control areas and over 20 times higher than for presumably unoiled areas of PWS (Frost *et al.,* 1994b). Concentrations of hydrocarbons in harbor seal tissues collected in PWS 1 year after EVOS were not significantly different from seals collected in non-oiled areas; however, average concentrations of AC metabolites in bile were still significantly higher than those observed in un-oiled areas (Frost *et al.,* 1994b). The pattern of reduced consumption of marine subsistence resources by the local population persisted for at least 1 year. Most affected communities had returned to documented pre-spill harvest levels by

the third year after the spill. Even then, some households in these communities still reported that subsistence resources had not recovered to pre-spill levels. Harvest levels of subsistence resources for the three communities most affected by the spill still were below pre-spill averages even after 3 years. By then, the concern was mainly about smaller numbers of animals rather than contamination. However, contamination remained an important concern for some households (Fall and Utermohle, 1995). As an example, an elder stopped eating local salmon after the spill, even though salmon is the most important subsistence resource, and he ate it every day up to that point. Similar effects could be expected after a spill on the North Slope, with the extent of the decline in harvest and use, and the temporal duration of the effect, dependent upon the size and location of the spill. This analysis reflects the local perception that oil spills pose the greatest potential danger associated with offshore oil production.

Plan of Cooperation (POC)

Regulations at 50 CFR 216.104(a)(12) require MMPA authorization applicants for activities that take place in Arctic waters to provide a POC or information that identifies what measures have been taken and/or will be taken to minimize adverse effects on the availability of marine mammals for subsistence purposes. BP and the Alaska Eskimo Whaling Commission (AEWC) established a conflict avoidance agreement to mitigate the noise and/or traffic impacts of offshore oil and gas production related activities on subsistence whaling. In addition, the NSB and residents from Barrow, Nuiqsut, and Kaktovik participated in the development of the Final Environmental Impact Statement (FEIS) for the Northstar project. Local residents provided traditional knowledge of the physical, biological, and human environment, which was incorporated into the Northstar FEIS. Also included in the Northstar FEIS is information gathered from the 1996 community data collection, along with relevant testimony during past public hearings in the communities of Barrow, Nuiqsut, and Kaktovik. This data collection has helped ensure that the concerns of NSB residents about marine mammals and subsistence are taken into account in the development of the project designs, permit stipulations, monitoring programs, and mitigation measures.

BP meets annually with communities on the North Slope to discuss the Northstar Development project. Stakeholder and peer review meetings convened by NMFS have been held at least annually from 1998 to the present to discuss proposed monitoring and mitigation plans, and results of completed monitoring and mitigation. Those meetings have included representatives of the concerned communities, the AEWC, the NSB, Federal, state, and university biologists, the MMC, and other interested parties. One function of those meetings has been to coordinate planned construction and operational activities with subsistence whaling activity. The agreements have and likely will address the following: operational agreement and communications procedures; when/where agreement becomes effective; general communications scheme, by season; Northstar Island operations, by season; conflict avoidance; seasonally sensitive areas; vessel navigation; air navigation; marine mammal and acoustic monitoring activities; measures to avoid impacts to marine mammals; measures to avoid impacts in areas of active whaling; emergency assistance; and dispute resolution process.

Most vessel and helicopter traffic will occur inshore of the bowhead migration corridor. BP does not often approach bowhead whales with these vessels or aircraft. Insofar as possible, BP will ensure that vessel traffic near areas of particular concern for whaling will be completed before the end of August, as the fall bowhead hunts in Kaktovik and Cross Island (Nuiqsut) typically begin around September 1 each year. Additionally, any approaches of bowhead whales by vessels or helicopters will not occur within the area where Nuiqsut hunters typically search for bowheads. Essential traffic to and from Northstar has been and will continue to be closely coordinated with the NSB and AEWC to avoid disruptions of subsistence activities. Unless limited by weather conditions, BP maintains a minimum flight altitude of 1,000 ft (305 m), except during takeoffs, landings, and emergency situations, and all helicopter transits occur in a specified corridor from the mainland.

Unmitigable Adverse Impact Analysis and Determination

NMFS has determined that BP's operation of the Northstar facility will not have an unmitigable adverse impact on the availability of marine mammal species or stocks for taking for subsistence uses. This determination is supported by the fact that BP works closely with the NSB, AEWC, and hunters of Nuiqsut to ensure that impacts are avoided or minimized during the annual fall bowhead whale hunt at Cross Island (the closest whale hunt to Northstar). Vessel and air traffic will be kept to a minimum during the bowhead hunt in order to keep from harassing the animals, which could possibly make them more difficult to hunt. To minimize the potential for conflicts with subsistence users, marine vessels transiting between Prudhoe Bay or West Dock and Northstar Island travel shoreward of the barrier islands as much as possible and avoid the Cross Island area during the bowhead hunting season in autumn. The fall hunt at Kaktovik occurs well to the east of Northstar (approximately 124 mi [200 km] away), so there should be no impacts to hunters within that community, since the whales will reach Kaktovik well before they enter areas that may be ensonified by activities at Northstar. Barrow is more than 155 mi (250 km) west of Northstar. Even though the whales will have to pass by Northstar before reaching Barrow for the fall hunt, the community is well beyond the range of detectable noise from Northstar. In the spring, the whales will reach Barrow before Northstar. Therefore, no impacts are anticipated on the spring bowhead whale hunt for the Barrow community.

Beluga whales are not a primary target of subsistence hunts by the Beaufort Sea communities. However, Nuiqsut whalers at Cross Island have been known to take a beluga in conjunction with the fall bowhead whale hunt. The reasons stated previously regarding no unmitigable adverse impact to bowhead hunting at Cross Island are also applicable to beluga hunts. Additionally, should Kaktovik or Barrow conduct a beluga hunt, the distance from Northstar of these two communities would ensure no unmitigable adverse impact to those hunts.

Subsistence hunts of ice seals can occur year-round in the Beaufort Sea. However, hunts do not typically occur in the direct vicinity of Northstar. Some of the more established seal hunts occur in areas more than 20–30 mi (32–48 km) from Northstar. It is not anticipated that there would be any impacts to the seals themselves that would make them unavailable to Native Alaskans. Additionally, no adverse effects to the hunters are anticipated to occur due to conflicts with them in traditional hunting grounds.

In the unlikely event of a major oil spill that spread into Beaufort Sea ice or water, there could be major impacts on the availability of marine mammals for subsistence uses. As discussed earlier in this document, the probability of a major oil spill occurring over the life of the project is low (S.L. Ross

Environmental Research Ltd., 1998). Additionally, BP developed an oil spill prevention and contingency response plan, which has been amended several times. The most recent revision has been approved by the State of Alaska and is pending approval by BSEE. BP also conducts routine inspections of and maintenance on the pipeline (as described in the proposed rule) to help reduce the likelihood of a major oil spill. To help with preparedness in the event of a major oil spill, BP conducts emergency and oil spill response training activities at various times throughout the year. Equipment and techniques used during oil spill response exercises are continually updated.

Based on the measures described in BP's POC, the required mitigation and monitoring measures (described earlier in this document), and the project design itself, NMFS has determined that there will not be an unmitigable adverse impact on subsistence uses from BP's operation of the Northstar facility. Even though there could be unmitigable adverse impacts on subsistence uses from a major oil spill, because of the low probability of such an event occurring and the measures that BP implements to reduce the likelihood of a major oil spill, NMFS has determined that there will not be an unmitigable adverse impact to subsistence uses from an oil spill at Northstar.

Endangered Species Act (ESA)

On March 4, 1999, NMFS concluded consultation with the U.S. Army Corps of Engineers on permitting the construction and operation of the Northstar site. The finding of that consultation was that construction and operation at Northstar is not likely to jeopardize the continued existence of the bowhead whale. Since no critical habitat has been established for that species, the consultation also concluded that none would be affected.

Within the project area, the bowhead whale is listed as endangered and the ringed and bearded seals are listed as threatened under the ESA. Therefore, the NMFS Permits and Conservation Division conducted consultation with the NMFS Endangered Species Division on the issuance of regulations and subsequent LOAs under section 101(a)(5)(A) of the MMPA for this activity. In May, 2012, NMFS finished conducting its section 7 consultation and issued a Biological Opinion, and concluded that the issuance of regulations and subsequent LOAs associated with BP's operation of Northstar is not likely to jeopardize the continued existence of the endangered bowhead whale, the Arctic sub-species of ringed seal, or the Beringia distinct population segment of bearded seal. No critical habitat has been designated for these species, therefore none will be affected.

National Environmental Policy Act (NEPA)

On February 5, 1999 (64 FR 5789), the Environmental Protection Agency noted the availability for public review and comment of a FEIS prepared by the U.S. Army Corps of Engineers under NEPA on Beaufort Sea oil and gas development at Northstar. Based upon a review of the FEIS and comments received on the Draft and Final EIS, NMFS adopted the FEIS on May 18, 2000. Because of the age of the FEIS and the availability of new scientific information, NMFS conducted a new analysis, pursuant to NEPA, regarding the issuance of MMPA rulemaking and subsequent LOA(s) to BP for its operation of Northstar. In June 2012, NMFS released an EA and issued a FONSI for this action. NMFS determined that issuance of these regulations and subsequent LOAs would not significantly impact the quality of the human environment; therefore, preparation of an Environmental Impact Statement was not required for this action.

Classification

The Office of Management and Budget (OMB) has determined that this final rule is not significant for purposes of Executive Order 12866.

At the proposed rule stage, the Chief Counsel for Regulation of the Department of Commerce certified to the Chief Counsel for Advocacy of the Small Business Administration that this rule, if adopted, would not have a significant economic impact on a substantial number of small entities. BP Exploration (Alaska) Inc. is the only entity that would be subject to the requirements in these proposed regulations. BP Exploration (Alaska) Inc. is an upstream strategic performance unit of the BP Group. Globally, BP ranks among the 10 largest oil companies. BP Exploration (Alaska) Inc. is one of Alaska's largest employers with nearly 2,000 employees, and, as of December 31, 2011, BP Group had more than 83,000 employees worldwide. Therefore, it is not a small governmental jurisdiction, small organization, or small business, as defined by the Regulatory Flexibility Act. No comments were received on the certification. Accordingly, a regulatory flexibility analysis is not required and none has been prepared.

Notwithstanding any other provision of law, no person is required to respond to nor shall a person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act (PRA) unless that collection of information displays a currently valid OMB control number. This final rule contains collection-of-information requirements subject to the provisions of the PRA. These requirements have been approved by OMB under control number 0648–0151 and include applications for regulations, subsequent LOAs, and reports.

List of Subjects in 50 CFR Part 217

Exports, Fish, Imports, Indians, Labeling, Marine mammals, Penalties, Reporting and recordkeeping requirements, Seafood, Transportation.

Dated: December 5, 2013.

Alan D. Risenhoover,

Director, Office of Sustainable Fisheries, performing the functions and duties of the Deputy Assistant Administrator for Regulatory Programs, National Marine Fisheries Service.

For reasons set forth in the preamble, 50 CFR part 217 is amended as follows:

PART 217—REGULATIONS GOVERNING THE TAKE OF MARINE MAMMALS INCIDENTAL TO SPECIFIED ACTIVITIES

■ 1. The authority citation for part 217 continues to read as follows:

Authority: 16 U.S.C. 1361 *et seq.*

■ 2. Subpart O is added to part 217 to read as follows:

Subpart O—Taking of Marine Mammals Incidental to Operation of Offshore Oil and Gas Facilities in the U.S. Beaufort Sea

Sec.

217.140 Specified activity and specified geographical region.
217.141 Effective dates.
217.142 Permissible methods of taking.
217.143 Prohibitions.
217.144 Mitigation.
217.145 Measures to ensure availability of species for subsistence uses.
217.146 Requirements for monitoring and reporting.
217.147 Applications for Letters of Authorization.
217.148 Letters of Authorization.
217.149 Renewal of Letters of Authorization and adaptive management.
217.150 Modifications of Letters of Authorization.

Subpart O—Taking of Marine Mammals Incidental to Operation of Offshore Oil and Gas Facilities in the U.S. Beaufort Sea

§ 217.140 Specified activity and specified geographical region.

(a) Regulations in this subpart apply only to BP Exploration (Alaska) Inc. (BP) and those persons it authorizes to conduct activities on its behalf for the taking of marine mammals that occurs in the area outlined in paragraph (b) of this section and that occurs incidental to operation of offshore oil and gas facilities in the U.S. Beaufort Sea, Alaska, in the Northstar Development Area.

(b) The taking of marine mammals by BP may be authorized in a Letter of Authorization only if it occurs in the geographic region that encompasses the Northstar Oil and Gas Development area within state and/or Federal waters in the U.S. Beaufort Sea.

§ 217.141 Effective dates.

Regulations in this subpart are effective from January 13, 2014 through January 14, 2019.

§ 217.142 Permissible methods of taking.

(a) Under Letters of Authorization issued pursuant to §§ 216.106 and 217.148 of this chapter, the Holder of the Letter of Authorization (hereinafter ''BP'') may incidentally, but not intentionally, take marine mammals within the area described in § 217.140(b), provided the activity is in compliance with all terms, conditions, and requirements of the regulations in this subpart and the appropriate Letter of Authorization.

(b) The activities identified in § 217.140(a) must be conducted in a manner that minimizes, to the greatest extent practicable, any adverse impacts on marine mammals and their habitat.

(c) The incidental take of marine mammals under the activities identified in § 217.140(a) is limited to the following species and by the indicated method and amount of take:

(1) Level B Harassment:

(i) Cetaceans:

(A) Bowhead whale (*Balaena mysticetus*)—75 (an average of 15 annually)

(B) Gray whale (*Eschrichtius robustus*)—10 (an average of 2 annually)

(C) Beluga whale (*Delphinapterus leucas*)—100 (an average of 20 annually)

(ii) Pinnipeds:

(A) Ringed seal (*Phoca hispida*)—155 (an average of 31 annually)

(B) Bearded seal (*Erignathus barbatus*)—25 (an average of 5 annually)

(C) Spotted seal (*Phoca largha*)—25 (an average of 5 annually)

(2) Level A Harassment and Mortality: Ringed seal—25 (an average of 5 annually)

§ 217.143 Prohibitions.

Notwithstanding takings contemplated in § 217.140 and authorized by a Letter of Authorization issued under §§ 216.106 and 217.148 of this chapter, no person in connection with the activities described in § 217.140 may:

(a) Take any marine mammal not specified in § 217.142(c);

(b) Take any marine mammal specified in § 217.142(c) other than by incidental take as specified in § 217.142(c)(1) and (c)(2);

(c) Take a marine mammal specified in § 217.172(c) if such taking results in more than a negligible impact on the species or stocks of such marine mammal;

(d) Take a marine mammal specified in § 217.172(c) if such taking results in an unmitigable adverse impact on the species or stock for taking for subsistence uses; or

(e) Violate, or fail to comply with, the terms, conditions, and requirements of this subpart or a Letter of Authorization issued under §§ 216.106 and 217.148 of this chapter.

§ 217.144 Mitigation.

(a) When conducting the activities identified in § 217.140(a), the mitigation measures contained in the Letter of Authorization issued under §§ 216.106 and 217.148 of this chapter must be implemented. These mitigation measures include but are not limited to:

(1) Ice-covered Season:

(i) In order to reduce the taking of ringed seals to the lowest level practicable, BP must begin winter construction activities, principally ice roads, as soon as possible once weather and ice conditions permit such activity.

(ii) Any ice roads or other construction activities that are initiated after March 1, in previously undisturbed areas in waters deeper than 10 ft (3 m), must be surveyed, using trained dogs in order to identify and avoid ringed seal structures by a minimum of 492 ft (150 m).

(iii) After March 1 of each year, activities should avoid, to the greatest extent practicable, disturbance of any located seal structure.

(2) Open-water Season:

(i) BP will establish and monitor, during all daylight hours, a 190 dB re 1 μPa (rms) exclusion zone for seals around the island for all activities with sound pressure levels (SPLs) that are expected to exceed that level in waters beyond the Northstar facility on Seal Island.

(ii) BP will establish and monitor, during all daylight hours, a 180 dB re 1 μPa (rms) exclusion zone for cetaceans around the island for all activities with SPLs that are expected to exceed that level in waters beyond the Northstar facility at Seal Island.

(iii) If any marine mammals are observed within the relevant exclusion zone, described in § 217.144(a)(2)(i) or (a)(2)(ii), the activity creating the noise will shutdown or reduce its SPL sufficiently (i.e., power down) to ensure that received SPLs do not exceed those prescribed SPL intensities at the affected marine mammal. The shutdown or reduced SPL shall be maintained until such time as the observed marine mammal(s) has been seen to have left the applicable exclusion zone or until 15 minutes have elapsed in the case of a pinniped or odontocete or 30 minutes in the case of a mysticete without resighting, whichever occurs sooner.

(iv) The entire exclusion zones prescribed in § 217.144(a)(2)(i) or (a)(2)(ii) must be visible during the entire 30-minute pre-activity monitoring time period in order for the activity to begin.

(v) BP shall employ a ramp-up technique at the beginning of each day's in-water pile driving activities and if pile driving resumes after it has ceased for more than 1 hour.

(A) If a vibratory driver is used, BP is required to initiate sound from vibratory hammers for 15 seconds at reduced energy followed by a 1-minute waiting period. The procedure shall be repeated two additional times before full energy may be achieved.

(B) If a non-diesel impact hammer is used, BP is required to provide an initial set of strikes from the impact hammer at reduced energy, followed by a 1-minute waiting period, then two subsequent sets.

(C) If a diesel impact hammer is used, BP is required to turn on the sound attenuation device for 15 seconds prior to initiating pile driving.

(vi) New drilling into oil-bearing strata shall not take place during either open-water or spring-time broken ice conditions.

(vii) All non-essential boats, barge, and air traffic will be scheduled to avoid periods when bowhead whales are migrating through the area where they may be affected by noise from these activities.

(3) Helicopter flights to support Northstar activities must be limited to a corridor from Seal Island to the mainland, and, except when limited by weather or personnel safety, must maintain a minimum altitude of 1,000 ft

(305 m), except during takeoff and landing.

(4) Additional mitigation measures as contained in a Letter of Authorization issued under §§ 216.106 and 217.148 of this chapter.

(b) [Reserved]

§ 217.145 Measures to ensure availability of species for subsistence uses.

When applying for a Letter of Authorization pursuant to § 217.147 or a renewal of a Letter of Authorization pursuant to § 217.149, BP must submit a Plan of Cooperation that identifies what measures have been taken and/or will be taken to minimize any adverse effects on the availability of marine mammal species or stocks for taking for subsistence uses. A plan shall include the following:

(a) A statement that the applicant has notified and met with the affected subsistence communities to discuss proposed activities and to resolve potential conflicts regarding timing and methods of operation;

(b) A description of what measures BP has taken and/or will take to ensure that the proposed activities will not interfere with subsistence whaling or sealing; and

(c) What plans BP has to continue to meet with the affected communities to notify the communities of any changes in operation.

§ 217.146 Requirements for monitoring and reporting.

(a) BP must notify the Alaska Regional Office, NMFS, within 48 hours of starting ice road construction, cessation of ice road usage, and the commencement of icebreaking activities for the Northstar facility.

(b) BP must designate qualified, on-site individuals, approved in advance by NMFS, to conduct the mitigation, monitoring, and reporting activities specified in the Letter of Authorization issued under §§ 216.106 and 217.148 of this chapter.

(c) Monitoring measures during the ice-covered season shall include, but are not limited to, the following:

(1) After March 1, trained dogs must be used to detect seal lairs in previously undisturbed areas that may be potentially affected by on-ice construction activity, if any. Surveys for seal structures should be conducted to a minimum distance of 492 ft (150 m) from the outer edges of any disturbance.

(2) If ice road construction occurs after March 1, conduct a follow-up assessment in May of that year of the fate of all seal structures located during monitoring conducted under paragraph (c)(1) of this section near the physically disturbed areas.

(3) BP shall conduct acoustic measurements to document sound levels, characteristics, and transmissions of airborne sounds with expected source levels of 90 dBA or greater created by on-ice activity at Northstar that have not been measured in previous years. In addition, BP shall conduct acoustic measurements to document sound levels, characteristics, and transmissions of airborne sounds for sources on Northstar Island with expected received levels at the water's edge that exceed 90 dBA that have not been measured in previous years.

(d) Monitoring measures during the open-water season shall include, but are not limited to, the following:

(1) Acoustic monitoring of the bowhead whale migration.

(2) BP shall monitor the exclusion zones of activities capable of producing pulsed underwater sound with levels ≥180 or ≥190 dB re 1 μPa (rms) at locations where cetaceans or seals could be exposed. At least one on-island observer shall be stationed at a location providing an unobstructed view of the predicted exclusion zone. The observer(s) shall scan the exclusion zone continuously for marine mammals for 30 minutes prior to the operation of the sound source. Observations shall continue during all periods of operation and for 30 minutes after the cessation of the activity. The observer shall record the: species and numbers of marine mammals seen within the 180 or 190 dB zones; bearing and distance of the marine mammals from the observation point; and behavior of marine mammals and any indication of disturbance reactions to the monitored activity.

(e) BP shall conduct any additional monitoring measures contained in a Letter of Authorization issued under §§ 216.106 and 217.148 of this chapter.

(f) BP shall submit an annual report to NMFS within the time period specified in a Letter of Authorization issued under §§ 216.106 and 217.148 of this chapter.

(g) If specific mitigation and monitoring are required for activities on the sea ice initiated after March 1 (requiring searches with dogs for lairs), during the operation of strong sound sources (requiring visual observations and shutdown procedures), or for the use of new sound sources that have not previously been measured, then a preliminary summary of the activity, method of monitoring, and preliminary results shall be submitted to NMFS within 90 days after the cessation of that activity. The complete description of methods, results, and discussion shall be submitted as part of the annual report described in paragraph (f) of this section.

(h) BP shall submit a draft comprehensive report to NMFS, Office of Protected Resources, and NMFS, Alaska Regional Office (specific contact information to be provided in Letter of Authorization), no later than 240 days prior to the expiration of the regulations in this subpart. This comprehensive technical report shall provide full documentation of methods, results, and interpretation of all monitoring during the first four and a quarter years of the LOA. Before acceptance by NMFS as a final comprehensive report, the draft comprehensive report shall be subject to review and modification by NMFS scientists.

(i)(1) In the unanticipated event that Northstar operations clearly causes the death of more than five ringed seals annually or the take of a marine mammal in a manner prohibited by this final rule, such as an injury (Level A harassment), serious injury or mortality (e.g., ship-strike, gear interaction), BP shall immediately take steps to cease the operations that caused the unauthorized take and report the incident as soon as practicable and no later than 24 hours after the incident to the Chief of the Permits and Conservation Division, Office of Protected Resources, NMFS, or his designee, the Alaska Regional Office, and the Alaska Regional Stranding Coordinators (specific contact information to be provided in Letter of Authorization). The report must include the following information:

(i) Time, date, and location (latitude/longitude) of the incident;

(ii) The type of equipment involved in the incident;

(iii) Description of the incident;

(iv) Water depth, if relevant;

(v) Environmental conditions (e.g., wind speed and direction, Beaufort sea state, cloud cover, and visibility);

(vi) Species identification or description of the animal(s) involved;

(vii) The fate of the animal(s); and

(viii) Photographs or video footage of the animal (if equipment is available).

(2) Activities shall not resume until NMFS is able to review the circumstances causing the exceedance of the authorized take. NMFS will work with BP to identify additional measures to minimize the likelihood that more than five ringed seals will not be killed each year (or other marine mammal species that may have been injured, seriously injured, or killed) from BP's activities. BP may not resume their activities until notified by NMFS via letter, email, or telephone.

(3) In the event that BP discovers an injured or dead marine mammal, and it

is determined 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 described in the next paragraph), BP will report the incident/discovery as soon as practicable and no later than 24 hours after the incident/discovery to the Chief of the Permits and Conservation Division, Office of Protected Resources, NMFS, by phone or email, the Alaska Regional Office, and the NMFS Alaska Stranding Hotline and/or by email to the Alaska Regional Stranding Coordinators (specific contact information to be provided in Letter of Authorization). The report must include the same information identified in § 217.146(i)(1). Activities may continue while NMFS reviews the circumstances of the incident. NMFS will work with BP to determine whether modifications in the activities are appropriate.

(4) In the event that BP discovers an injured or dead marine mammal, and it is determined that the injury or death is not associated with or related to the activities authorized in this final rule (e.g., previously wounded animal, carcass with moderate to advanced decomposition, or scavenger damage), BP shall report the incident to the Chief of the Permits and Conservation Division, Office of Protected Resources, NMFS, by phone or email and the NMFS Alaska Stranding Hotline and/or by email to the Alaska Regional Stranding Coordinators (specific contact information to be provided in Letter of Authorization), as soon as practicable and no later than 24 hours after the discovery. BP shall provide photographs or video footage (if available) or other documentation of the stranded animal sighting to NMFS and the Marine Mammal Stranding Network. Activities may continue while NMFS reviews the circumstances of the incident.

§ 217.147 Applications for Letters of Authorization.

(a) To incidentally take marine mammals pursuant to these regulations, the U.S. Citizen (as defined by § 216.103 of this chapter) conducting the activity identified in § 217.140(a) (i.e., BP) must apply for and obtain either an initial Letter of Authorization in accordance with § 217.148 or a renewal under § 217.149.

(b) [Reserved]

§ 217.148 Letters of Authorization.

(a) A Letter of Authorization, unless suspended or revoked, shall be valid for a period of time not to exceed the period of validity of this subpart.

(b) The Letter of Authorization shall set forth:

(1) Permissible methods of incidental taking;

(2) Means of effecting the least practicable adverse impact on the species, its habitat, and on the availability of the species for subsistence uses (i.e., mitigation); and

(3) Requirements for mitigation, monitoring and reporting.

(c) Issuance and renewal of the Letter of Authorization shall be based on a determination that the total number of marine mammals taken by the activity as a whole will have no more than a negligible impact on the affected species or stock of marine mammal(s) and will not have an unmitigable adverse impact on the availability of species or stocks of marine mammals for taking for subsistence uses.

§ 217.149 Renewal of Letters of Authorization and adaptive management.

(a) A Letter of Authorization issued under § 216.106 and § 217.148 of this chapter for the activity identified in § 217.140(a) shall be renewed upon request by the applicant or determination by NMFS and the applicant that modifications are appropriate pursuant to the adaptive management component of these regulations, provided that:

(1) NMFS is notified that the activity described in the application submitted under § 217.147 will be undertaken and that there will not be a substantial modification to the described work, mitigation or monitoring undertaken during the upcoming 12 months;

(2) NMFS receives the monitoring reports required under § 217.146(f) and (g); and

(3) NMFS determines that the mitigation, monitoring and reporting measures required under §§ 217.144 and 217.146 and the Letter of Authorization issued under §§ 216.106 and 217.148 of this chapter were undertaken and will be undertaken during the upcoming period of validity of a renewed Letter of Authorization.

(b) If either a request for a renewal of a Letter of Authorization issued under §§ 216.106 and 217.149 of this chapter or a determination by NMFS and the applicant that modifications are appropriate pursuant to the adaptive management component of these regulations indicates that a substantial modification, as determined by NMFS, to the described work, mitigation or monitoring undertaken during the upcoming season will occur, NMFS will provide the public a period of 30 days for review and comment on the request. Review and comment on renewals of Letters of Authorization are restricted to:

(1) New cited information and data indicating that the determinations made in this document are in need of reconsideration, and

(2) Proposed substantive changes to the mitigation and monitoring requirements contained in these regulations or in the current Letter of Authorization.

(c) A notice of issuance or denial of a renewal of a Letter of Authorization will be published in the **Federal Register**.

(d) *Adaptive management*—NMFS may modify or augment the existing mitigation or monitoring measures (after consulting with BP regarding the practicability of the modifications) if doing so creates a reasonable likelihood of more effectively accomplishing the goals of mitigation and monitoring set forth in the preamble of these regulations. Below are some of the possible sources of new data that could contribute to the decision to modify the mitigation or monitoring measures:

(1) Results from BP's monitoring from the previous year;

(2) Results from general marine mammal and sound research; or

(3) Any information which reveals that marine mammals may have been taken in a manner, extent or number not authorized by these regulations or subsequent LOAs.

§ 217.150 Modifications of Letters of Authorization.

(a) Except as provided in paragraph (b) of this section, no substantive modification (including withdrawal or suspension) to the Letter of Authorization issued by NMFS, pursuant to §§ 216.106 and 217.148 of this chapter and subject to the provisions of this subpart, shall be made until after notification and an opportunity for public comment has been provided. For purposes of this paragraph, a renewal of a Letter of Authorization under § 217.149, without modification (except for the period of validity), is not considered a substantive modification.

(b) If the Assistant Administrator determines that an emergency exists that poses a significant risk to the well-being of the species or stocks of marine mammals specified in § 217.142(c), a Letter of Authorization issued pursuant to §§ 216.106 and 217.148 of this chapter may be substantively modified without prior notification and an opportunity for public comment. Notification will be published in the **Federal Register** within 30 days subsequent to the action.

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