

more bears was 0.11–0.14 percent; and for 20 or more bears, it is 0.06–0.08 percent.

In addition, using exposure variables and production estimates from the Northstar EIS, we estimated that the likelihood of one or more spills greater than 1,000 barrels in size occurring in the marine environment is 1–5 percent during the period covered by the proposed regulations.

Discussion

The greatest source of uncertainty in our calculations was the probability of an oil spill occurring. The oil spill probability estimates for the Northstar Project were calculated using data for sub-sea pipelines outside of Alaska and outside of the Arctic. These spill probability estimates, therefore, do not reflect conditions that are routinely encountered in the Arctic, such as permafrost, ice gouging, and strudel scour. They may include other conditions unlikely to be encountered in the Arctic, such as damage from anchors and trawl nets. Consequently, we have some uncertainty about oil spill probabilities as presented in the Northstar FEIS. If the probability of a spill were actually twice the estimated value, however, the probability of a spill that will cause a mortality of one or more bears is still low (about 6 percent).

In addition to the results from the risk analysis, anecdotal information supported our determination that any take associated with Northstar will have a negligible impact on the Beaufort Sea polar bear population. This information was based on observations of polar bear aggregations on barrier islands and coastal areas in the Beaufort Sea, which may occur for brief periods in the fall, usually 4 to 6 weeks. The presence and duration of these aggregations are influenced by the presence of sea ice near shore and the availability of marine mammal carcasses, notably bowhead whales from subsistence hunts. In order for any take associated with a Northstar oil spill to have more than a negligible impact on polar bears, an oil spill would have to occur, an aggregation of bears would have to be present, and the spill would have to contact the aggregation. We believe the probability of all these events occurring simultaneously is low.

We concluded that if an offshore oil spill were to occur during the fall or spring broken-ice periods, a significant impact to polar bears could occur. However, in balancing the level of impact with the probability of occurrence, we concluded that the probability of large-volume spills that would cause significant polar bear takes is low. Additionally, because of the

small volume of oil associated with onshore spills, the rapid response system in place to clean up spills, and the protocol available to deter bears away from the affected area for their safety, we concluded that onshore spills would have little impact on the polar bear population. Therefore, the total expected taking of polar bear during Industry activities will have no more than a negligible impact on this species.

In making this proposed finding, we are following Congressional direction in balancing the potential for a significant impact with the likelihood of that event occurring. The specific Congressional direction that justifies balancing probabilities with impacts follows:

If potential effects of a specified activity are conjectural or speculative, a finding of negligible impact may be appropriate. A finding of negligible impact may also be appropriate if the probability of occurrence is low but the potential effects may be significant. In this case, the probability of occurrence of impacts must be balanced with the potential severity of harm to the species or stock when determining negligible impact. In applying this balancing test, the Service will thoroughly evaluate the risks involved and the potential impacts on marine mammal populations. Such determination will be made based on the best available scientific information. 53 FR at 8474; accord, 132 Cong. Rec. S 16305 (Oct. 15, 1986).

Summary of Take Estimate for Pacific Walrus and Polar Bear

Pacific Walrus

Since walrus are typically not found in the region of Industry activity, the probability is small that Industry activities, such as offshore drilling operations, seismic, and coastal activities, will affect walrus. Walrus observed in the region have typically been lone individuals, further reducing the number of potential takes expected. Only 3 walrus were observed by Industry during its activities between 1994 to 2000. In addition, the majority of walrus hunted by Barrow residents were harvested west of Point Barrow, outside of the area covered by incidental take regulations, while Kaktovik harvested only one walrus. Given this information, no more than a small number of walrus will be taken during the length of this rule. These takes would be unintentional and most likely non-lethal.

Polar Bear

Industry activities, from exploration, development and production operations could potentially disturb polar bears.

These disturbances are expected to be primarily short-term behavioral reactions resulting in displacement, and should have no more than a negligible impact on the population. Noise and vibration are theorized to have the following effects on polar bears. Polar bears could be displaced from the immediate area of activity due to noise and vibrations. They could be attracted to sources of noise and vibrations out of curiosity, which could result in human/bear encounters. Denning females with cubs could prematurely abandon their dens due to noise and vibrations produced by certain industrial activities at close distances. Also, noise and vibration from stationary sources could keep females from denning in the vicinity of the source.

Contact with, or ingestion of oil could also potentially affect polar bears. Small oil spills are cleaned up immediately and should have little opportunity to affect polar bears. The probability of a large spill occurring is very small. If such a spill were to occur at an offshore oil facility, however, polar bears could come into contact with oil. The impact of a large spill would depend on the location and size of the spill, environmental factors, and the success of clean-up measures.

The Service estimates that only a small number of polar bear takes will occur during the length of the proposed regulations. These takes would be unintentional and non-lethal. However, it is possible that a few unintentional lethal takes could occur under low probability circumstances. For example, a scenario of an unintentional lethal take could be a road accident where a vehicle strikes and kills a polar bear.

Conclusions

Based on the previous discussion, we make the following findings regarding this action.

Impact on Species

The Beaufort Sea polar bear population is widely distributed throughout their range. Polar bears typically occur in low numbers in coastal and nearshore areas where most Industry activities occur. Hence, impacts that might be significant for individuals or small groups of animals are expected to be no more than negligible for the polar bear population as a whole. Likewise, the Pacific walrus is only occasionally found during the open-water season in the Beaufort Sea. Industry impacts would be no more than negligible for the walrus population as well.

We reviewed the effects of the oil and gas industry activities on marine