



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration

National Marine Fisheries Service

P.O. Box 21668

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October 13, 2006

Hanh Shaw
US EPA Region 10
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Seattle, WA 98101

Dear Ms. Shaw:

National Marine Fisheries Service (NMFS), Alaska Region has received the US Environmental Protection Agency (EPA) Revised Biological Evaluation (BE) for the Cook Inlet Oil and Gas Exploration, Development, and Production Facilities NPDES General Permit Reissuance and request for concurrence in EPA's determination of not likely to adversely affect listed species or their critical habitat. The determination used as the administrative record in this consultation was the BE.

Proposed Action

The proposed action is to reissue a general National Pollutant Discharge Elimination System (NPDES) permit for oil and gas exploration, development, and production facilities in state and federal waters in Cook Inlet, Alaska. Discharges to be authorized by the proposed permit are from facilities regulated under the Coastal and Offshore Subcategory of the Oil and Gas Extraction Point Source Category (Title 40 of the Code of Federal Regulations [CFR], Part 435, Subparts A and D). These facilities are oil and gas operations associated with wellheads in Cook Inlet. Fifteen of the 16 offshore platforms in Cook Inlet of have applied for coverage under the proposed permit; the Osprey platform operates under an individual permit. The general permit also includes three onshore treatment facilities along the shores of upper Cook Inlet and approximately 221 miles of undersea pipelines, 78 miles of oil pipelines, and 149 miles of gas pipelines associated with the existing operations. The NPDES general permit must be reissued to allow existing oil and gas exploration, development, and production facilities in Cook Inlet to continue operations. The proposed permit would authorize the following discharges in all areas of coverage:

- Drilling Fluids and Drill Cuttings
- Deck Drainage
- Sanitary Wastes
- Domestic Wastes
- Desalination Unit Wastes
- Blowout Preventer Fluid



- Fire Control System Test Water
- Non-Contact Cooling Water
- Uncontaminated Ballast Water
- Bilge Water
- Excess Cement Slurry
- Mud, Cuttings, Cement at Seafloor
- Completion Fluids
- Workover Fluids
- Test Fluids
- Storm Water Runoff from Onshore Facilities

Waterflooding discharges, produced water discharges, and well treatment fluids (other than test fluids) would also be authorized for existing upper Cook Inlet development and production operations.

Location

The expired general permit authorized discharges from exploratory oil and gas extraction facilities in Cook Inlet north of a line extending between Cape Douglas (58E 51' N latitude, 153E 15' W longitude) and Port Chatham (59E 13' N latitude, 151E 47' W longitude) (see Figure 1 in BE). Development and production facilities were authorized to discharge only in the northern (coastal) portion of this area of coverage. This is the area north of a line extending across the Inlet at the southern edge of Kalgin Island (Figure 1). The Action Area of coverage for the reissued general permit will include the areas covered by the expired permit and an additional area to the south in the lower portion of Cook Inlet to the northern edge of Shuyak Island (see Figure 2 in BE). The expanded area of coverage includes areas under the Minerals Management Service (MMS) lease sales 191 and 199 and the adjoining Territorial Seas (Figure 2). Figure 3 presents the locations of the existing platforms with discharges that would be covered under the proposed permit.

The permit requires no discharges within the boundaries of, or within 4,000 meters of, a coastal marsh (the seaward edge of a coastal marsh is defined as the seaward edge of emergent wetland vegetation), river delta, river mouth, designated Area Meriting Special Attention (AMSA), State Game Refuge (SGR), state game sanctuary (SGS), Critical Habitat Area (CHA), or National Parks. Areas meeting the above classifications within the proposed area of coverage include: Palmer Hay Flats SGR, Kachemak Bay CHA, Kalgin Island CHA, Lake Clark National Park, Susitna Flats SGR, Goose Bay SGR, Anchorage Coastal Wildlife Refuge, Clam Gulch CHA, Port Graham/Nanwalek AMSA, McNeil River SGS, Trading Bay SGR, Redoubt Bay CHA, and Potter Point SGR.

Species Covered

The BE identified the following Endangered Species Act (ESA) listed species under NMFS

jurisdiction: blue whale, fin whale, humpback whale, Northern right whale, Sei whale, sperm whale, Steller sea lion (Western stock, west of 144 degrees w. longitude), Snake River sockeye, Snake River fall chinook, and Snake River spring/summer chinook. Critical habitat within the project footprint is only designated for Steller sea lions and consists of major rookeries, haulouts and buffer areas, and the Shelikof Strait special aquatic foraging area (50 CFR part 226.203). The BE also addresses Cook Inlet beluga whales, which are designated as depleted under the Marine Mammal Protection Act and are presently undergoing a Status Review under the ESA.

EPA Analysis and Effects Determination

The effects determination is divided into these sections:

- Drilling Fluids and Cuttings
- Produced water
- Mixing Zones and Water Quality Standards
- Noise, Disturbance, and other Impacts
- Potential for Accidental Oil Spills

Drilling Fluids and Cuttings

The technology-based limits for drilling fluids in the expired general permit will be included in the reissued permit. Discharges of drilling fluids from new source facilities will not be authorized. While the discharge of nonaqueous-based drilling fluids will be prohibited under the proposed permit (see Section 2.3.1.1), the discharge of drill cuttings that are generated using nonaqueous- based drilling fluids is proposed to be authorized by the reissued permit. These new discharges are only proposed to be authorized in the territorial seas and federal waters in Cook Inlet.

The technology-based limits in the expired general permit for drill cuttings for exploratory facilities will be included without modification in the reissued general permit. No discharge of cuttings will be authorized for new source development and production facilities.

Technology-based limitations and conditions are proposed in the general permit as required under federal regulation (Effluent Limitations Guidelines, 40 CFR Part 435, Subparts A and D). These guidelines establish best practicable control technology currently available (BPT), best conventional pollution control technology (BCT), best available pollution control technology economically achievable (BAT), and new source performance standards (NSPS) for the offshore and coastal subcategories of the Oil and Gas Point Source Category. Federal regulations define the term "new source" for the oil and gas extraction point source category. For Offshore Subcategory facilities (facilities in Territorial Seas or Federal Waters), NSPS were promulgated on March 4, 1993(58 FR 12454, March 4, 1993). For Coastal Subcategory facilities (those located in Coastal Waters), NSPS were promulgated on December 16, 1996 (61 FR. 66125, December 16, 1996). In simple terms, a "new source" is a development/production facility or onshore treatment facility, that was constructed after issuance of NSPS.

The permit restrictions for drilling fluids and cuttings are provided in Sections 2.3.1.1 and 2.3.1.2, respectively. No discharge of drilling fluids or cuttings would be allowed for new development and production facilities. Existing facilities would be allowed to discharge drilling

fluids and cuttings subject to the technology-based restrictions that:

- prohibit the discharge of free oil
- prohibit the discharge of diesel oil
- require a minimum toxicity limit of 3 percent by volume
- allow maximum concentrations of 3 mg/kg cadmium and 1 mg/kg mercury in stock barite
- prohibit the discharge of nonaqueous-based drilling fluids, except those that adhere to drill cuttings
- prohibit the discharge of oil-based drilling fluids, inverse emulsion drilling fluids, oil contaminated drilling fluids, and drilling fluids to which mineral oil has been added.

EPA's drilling fluids and cuttings effects determination on marine mammals includes the following analysis and discussion. Marine mammals potentially impacted by the discharge of drilling fluids and cuttings are those that occur near permitted facilities, consume benthic organisms, or rely on prey species that consume benthic organisms. None of the marine mammals evaluated here are sessile, or restricted to small ranges, and therefore, direct adverse effects by the discharge of drilling fluids and cuttings are not expected. Consequently, potential impacts associated with discharges are most likely to be indirect, causing changes in the distribution or abundance of food items or prey species.

The likelihood of indirect effects depends on the proportion of the foraging range affected, the proportion of the diet affected, and the availability of alternative food resources. Blue whales, northern right whales, sei whales, and sperm whales either do not or are not likely to occur in the waters of Cook Inlet covered by the general permit, and consume highly mobile prey organisms that are unlikely to be adversely impacted by drilling discharge in the permit area. Fin whales and humpback whales are unlikely to be adversely impacted by drilling discharges because they are highly mobile and unlikely to spend substantial amounts of time within mixing zones, or areas in the immediate vicinity of drilling activities.

Steller sea lions feed on larger fish including salmon, but are not likely to consume prey organisms that would be adversely impacted by the discharge of drilling fluids and cuttings (see discussion of impacts to salmon below). Additionally, drilling fluid discharges are unlikely to directly impact sea lions because they are rapidly diluted and the majority of the deposition generally occurs within 100 meters of the point of discharge (Tetra Tech 1993). The Steller sea lion is the only ESA-listed species with designated critical habitat within the geographic area of covered by the NPDES general permit (Cape Douglas, the Barren Islands, and off of the southwestern portion of the Kenai Peninsula). Critical habitat restrictions do not allow discharges in the vicinity of Steller sea lions, eliminating the chance of discharge in the vicinity of other important sea lion habitats such as rookeries and haul outs.

Produced Water

The term "produced water" refers to the water brought up from the oil-bearing subsurface geologic formations during the extraction of oil and gas; it can include formation water, injection water, and any chemicals added to the well hole, or added during the oil/water separation process

(USEPA 1996).

Under the expired NPDES general permit, produced water is an authorized discharge from the following facilities: Granite Point Treatment Facility, Trading Bay Facility, East Forelands Treatment Facility, and platforms Anna, Baker, Bruce, Platform A (Tyonek), Cross Timbers Platform A, Cross Timbers Platform C, and Spark. Federal guidelines for the coastal subcategory of oil and gas extraction point source category allow produced water to be discharged to Cook Inlet coastal waters provided these discharges meet a monthly average oil and grease limit of 29 mg/L and a daily maximum oil and grease limit of 42 mg/L. These limits are contained in the expired general permit for produced water and will be included without modification, for existing facilities only, in the reissued general permit. The general permit will include a new produced water sheen monitoring requirement that was not part of the expired general permit. Produced water will not be authorized for discharge in either coastal or offshore waters for new sources.

The characteristics of the produced water that was discharged into Cook Inlet during the Cook Inlet Discharge Monitoring Study have been documented. The discharges included about 0.9 kilograms of zinc per day (about 0.31 tonnes per year). The amount of oil and grease discharged is about 694 kilograms per day (about 253 tonnes/year).

EPA's produced water effects determination on marine mammals includes the following analysis and discussion. Oil sheens and other toxicants in produced water may directly affect marine mammals through the transdermal absorption of contaminants or the ingestion of contaminated water or prey. The greatest potential for these impacts exists in coastal environments in the immediate vicinity of existing development and processing facilities; the offshore and coastal discharge of produced water will not be allowed at new facilities under the general permit. Therefore, mammal species most susceptible to impacts of the proposed residue criteria include those commonly found in nearshore environments or those that eat prey species that could be exposed to produced water. Sei whales, blue whales, fin whales, northern right whales, and sperm whales may occur in the vicinity of the permit area but do not occur in Alaska nearshore waters where impacts from these existing facilities are located (northern right whales do occur in nearshore waters but not in Cook Inlet), and do not feed on benthic organisms or fish potentially impacted by discharges of produced water. Therefore the issuance of the NPDES permit, as proposed, would result in a determination of no effect for these species.

Humpback whales and Steller sea lions commonly occur in nearshore waters and could be locally impacted by produced water discharges. However, all of these species are highly mobile (e.g.,

migratory) and wide ranging and only existing facilities in a fairly localized area would be permitted to discharge produced water. Additionally, because discharges from oil and gas development and production facilities could only exceed water quality limits within the mixing zones, which represent a small portion of the total coastal area in Cook Inlet, the continued

discharge of produced water would have discountable impacts to populations of these species or their critical habitats (Steller sea lion). Therefore, the issuance of the NPDES general permit is not likely to adversely affect these species.

Mixing Zones

Alaska's Water Quality Standards require that, when authorized, mixing zones must be as small as practicable. Numeric criteria for chronic aquatic life and human health protection can be exceeded within the mixing zone, but they must be met at its boundary. The standards (18 AAC 70.255) also require that there is no lethality to organisms passing through mixing zones and that acute aquatic life criteria are met at the boundary of a smaller zone of initial dilution established within the mixing zone.

Alaska's Water Quality Standards do not allow ADEC to authorize mixing zones if the pollutants could bioaccumulate or persist in concentrations above natural levels in the environment, or if they can be expected to cause a carcinogenic or other human health risk. ADEC is required to take into account the potential exposure pathways in determining whether to authorize mixing zones. ADEC has determined that the discharges authorized by the previous permit are not likely to persist in the environment and, therefore, has authorized mixing zones. Mixing zones ranging in size from 20 to 1,420 meters from the discharge point have previously been authorized by the state for Cook Inlet oil and gas facilities.

The size of the mixing zone that is required to meet water quality standards depends upon the concentration of the parameter in the discharge water, how the water is discharged to receiving waters, and the characteristics of the receiving water. ADEC and EPA used the CORMIX dispersion model to calculate the dilution that the effluent plume receives and determine how far from the point of discharge water quality standards would be met. The largest mixing zones would be necessary to meet water quality standard for total aromatic hydrocarbons (TAH)/Total Aqueous Hydrocarbons (TAqH); the proposed mixing zones for existing facilities range from 36 to 3,016 meters. Mixing zones for whole effluent toxicity, chronic metals, and acute metals have the ranges 31 to 1,742 meters, 9 to 262 meters, and less than 1 to 239 meters, respectively.

In June 2003, Alaska submitted revisions to the state's numeric water quality criteria for toxic and other deleterious organic and inorganic substances (18 AAC 70.020(b)) to EPA for approval in accordance with Section 303(c)(2) of the CWA. The effect of the federal action approving these criteria, which included acute and chronic marine criteria for the metals found in discharges from oil and gas production facilities (see Table 5-1), on all threatened and endangered species found in Alaskan waters was evaluated in a biological evaluation that was completed in January

2004 (Tetra Tech 2004). This statewide biological evaluation determined that the water quality standards for toxic and other deleterious organic and inorganic substances may affect, but were not likely to adversely affect, all the threatened and endangered species considered in this BE.

The previous evaluation of potential effects to ESA-listed species arising from exposure to the Alaska marine water quality standards are adopted by reference in this BE. It is assumed that compliance with the water quality standards as stipulated in the NPDES general permit is not likely to adversely affect ESA-listed species considered in this BE.

EPA's mixing zone effects determination on marine mammals includes the following analysis and discussion. Blue whales, northern right whales, sperm whales, and sei whales are not expected to occur in the general permit area and therefore would not be exposed to mixing zones where water quality may exceed state standards. Consequently, Alaska water quality standards do provide adequate protection for these species and issuance of the general permit would have no effect on these species in relation to mixing zones or water quality.

Fin whales and humpback whales could occur within the area covered by the general permit but are highly mobile and are not expected to spend substantial amounts of time within the small areas encompassed by the mixing zones. Previous work indicates that exposure to discharge pollutant concentrations equal to or below Alaska water quality standards are not likely to result in adverse effects (MMS 2003), indicating that these standards provide adequate protection for fin and humpback whales. As such, issuance of the general permit is not likely to adversely affect these species.

Some individual Steller sea lions may occur in the vicinity of oil and gas facilities and could be exposed to pollutant concentrations that exceed state water quality standards within mixing zones. The largest mixing zones (3,016 meters for TAqH), are associated with produced water and only authorized for existing facilities located in the northern portion of Cook Inlet. Therefore exposure of these species would be low. The small size (between 60 and 260 meters) for mixing zones associated with existing sanitary waste discharges, would also result in very low probabilities of exposure. Any mixing zones for sanitary discharges associated with new facilities would also be small, limiting the probability and duration of exposure. As previously noted, the evaluation of potential effects to ESA listed species arising from exposure to the Alaska marine water quality standards incorporated by reference above indicates that water quality standards do provide adequate protection to these species. Consequently, the issuance of the general permit is not likely to adversely affect Steller sea lions.

Noise, Disturbance and Other Activities

Noise and other disturbances to the environment would occur during oil and gas exploration, development, and production activities. Exploration typically includes seismic activities and associated support and logistic activities. If exploration results in a commercial discovery, then

during the construction and operation phases, seismic activities, production platform and drilling activities, and other support and logistic activities would occur. Noise would be generated through boat and ship transit, helicopters, general machinery use, drilling, pipeline and platform construction, seismic survey operations, platform abandonment, and other human activity. These sounds would be propagated into an environment that experiences noise and activity from other,

ongoing activities. Cook Inlet contains numerous sources of human-caused sound from fishing and tour boats, tankers, barges, airplanes and helicopters, human settlements, and marine development (such as harbor construction).

Certain activities associated with oil and gas activities [seismic] may result in the taking of marine mammals (including listed species) and small take authorizations will likely be needed under the MMPA and will be reviewed individually by NMFS.

EPA's noise and disturbance effects determination on marine mammals includes the following analysis and discussion. The behavior of feeding humpback whales and fin whales could be adversely affected by noise from seismic exploration. Humpbacks exhibit variable responses to noise, and the level and type of response exhibited appears to be dependent on group composition, size, and apparent behaviors at the time of the disturbance. Humpback whales have suffered severe mechanical damage to their ears from noise pulses from underwater blasting; whales exposed to playback of noise from drillships, semisubmersibles, and drilling and production platforms do not exhibit avoidance behaviors at noise levels of up to 116 db (Malme et al. 1985). MMS (2003) concluded that both fin and humpback whales could be impacted by noise associated with oil and gas activities in Cook Inlet. However, if they occurred, these effects would be localized and relatively short-term.

Vessel traffic associated with the support and operation of oil and gas facilities also pose an increased risk to these species. A ship strike has been implicated in the death of a single fin whale in Uyak Bay, Alaska in 2000 (NMFS 2003). Direct ship strikes are significant sources of mortality in the eastern North Pacific stock of humpback whales in California, Oregon, and Washington waters, where there is an average of 0.6 whales killed per year (Perry et al. 1999). Little information is available on mortality rates from ship strikes for humpback whales in Alaska, however one pregnant humpback whale was killed by a cruise ship in Glacier Bay in 2001 (Richardson 2003). These species may have been involved in other ship strike incidents that were not reported. Due to the short-term nature of potential noise and disturbance impacts, oil and gas development activities are not likely to adversely affect humpback and fin whales.

Other whale species (blue, northern right, sperm, and sei) are not likely to occur in areas impacted by noise or other disturbance associated with oil and gas exploration, development, or production. Consequently, noise and disturbance produced by oil and gas exploration and development activities in Cook Inlet would have no effect on these species.

The behavior of Steller sea lions could be affected by noise and other disturbance from seismic surveys and the placement of drilling rigs during exploration and development. Aircraft, particularly helicopters, could disturb sea lions on rookeries and haulouts in the Barren Islands and Cape Douglas and cause mortality, if stampeding occurred. Sea lion pups are particularly vulnerable to trampling if adults are panicked by low-flying aircraft noise. This type of disturbance would be avoided by compliance with NMFS-specified flight practices and other

aerial and aquatic critical habitat distance restrictions that ensure that such noise does not affect sea lions. Displacement of individual sea lions of the western population from other important critical habitats (e.g., feeding areas), could potentially result in a significant effect on the population if alternative, equally valuable food resources were unavailable to them, or their shift to alternative areas displaced other Steller sea lions (MMS 2003). However, displacement from foraging areas would be prevented by avoiding vessel traffic in these areas.

Compliance with the MMPA would require that all activities be subject to approval of individual plans of operations, including best management practices, and conservation and mitigation measures designed to reduce potential air and underwater noise impacts. Based on the above discussion, noise and disturbance associated with oil and gas exploration and development activities in Cook Inlet are not likely to adversely affect Steller sea lions.

Potential for Accidental Oil Spills

Although the granting of the NPDES permit renewal does not authorize oil spills, issuance of the permit allows for associated activities that have the potential to result in oil spills. The MMS (2003) developed a detailed analysis of the potential for oil spills and effects on threatened and endangered species within the project area. The following discussion is primarily summarized from that document and from the subsequent biological opinion.

MMS (2003) characterized the types of oil spills that could affect threatened and endangered species (and other non-listed species) into two categories—those less than 1,000 barrels and those greater than or equal to 1,000 barrels.

There have been three (3) blowouts in Cook Inlet, all of them gas (MMS 2002). MMS predicts the probability for a blowout, based upon worldwide data, at 0.01 blowouts per billion barrels produced (MMS 2002). MMS (2003) evaluated the potential impacts of a large oil spill as a worst-case scenario because of the high potential for impacts. MMS (2003) noted that a large spill is not considered a possibility during exploration activities; if such a spill were to occur, it would occur after development. Prior to any development, MMS would need to reinitiate consultation with respect to endangered and threatened species, under Section 7 of the ESA.

MMS (2003) modeled the probability of large spills and estimated the probability of a spill of 1,500 to 4,600 barrels from project-related activities over the life of the project at 19 percent.

This spill range is similar to actual spills that occurred in Glacier Bay (3,100 barrels), while it is only about 2 percent of the large Exxon Valdez spill (257,000 barrels) in Prince William Sound.

The model developed by MMS (2003) projects that if a large spill were to occur from project-related activities, beaches within Cook Inlet would have a 20 percent chance of being oiled; the beaches most immediately outside Cook Inlet and larger bays within the Inlet (Kamishak Bay) would have only a 2 percent chance of being oiled. If a large oil spill originated in the outer

portion of Cook Inlet, the chance of oil reaching Kamishak Bay would increase to 18 percent (MMS 2003).

Any oil reaching marine waters outside Cook Inlet and nearby waters would have weathered at least 10 days and would be much less toxic (MMS 2003). This would greatly reduce the overall impact on marine species in these regions from oil spills. Marine waters seaward of Kodiak and Barren Islands (designated critical habitat for Steller sea lion) have less than a 0.5 percent chance of being oiled even with a large spill. Although some contact with oil could occur for some listed species, the effect should be slight to none because oil levels would likely be less than the state water quality standard of 15 parts per billion.

EPA's potential for accidental oil spills effects determination on marine mammals includes the following analysis and discussion. Blue whales, northern right whales, sperm whales, and sei whales are not expected to occur in the general permit area and therefore would not be exposed to the potential adverse effects of a large oil spill within Cook Inlet. Consequently, there would be no effect on these species in the unlikely event of an oil spill.

It is difficult to accurately predict the effects of oil on humpback and fin whales (or any cetacean) because of a lack of data on the metabolism of these species and because of inconclusive results of examinations of baleen whales found dead after major oil releases (Bratton et al., 1993; Geraci, 1990); however, impacts to humpback and fin whales can include skin contact with the oil, baleen fouling, ingestion of oil, respiratory distress from hydrocarbon vapors, contaminated food sources, and displacement from feeding areas (Geraci, 1990).

Actual impacts on marine mammals would depend on the extent and duration of contact, and the characteristics (age) of the oil. Most likely, the effects of oil would be irritation to the respiratory membranes and absorption of hydrocarbons into the bloodstream (Geraci, 1990). If a marine mammal was present in the immediate area of fresh oil, it is possible that it could inhale enough vapors to affect its health. For example, although pneumonia was not found in sea otters that died after the Exxon Valdez oil spill, inhalation of vapors was suspected to have caused interstitial pulmonary emphysema (accumulation of bubbles of air within connective tissues of the lungs). Depending on the concentration of vapors and duration of exposure, effects may range from mild irritation to sudden death (Geraci 1990).

Marine carnivores generally are inefficient assimilators of petroleum compounds in food. Since primary prey species are able to release hydrocarbons from their tissues (Neff and Anderson 1981), biomagnification does not occur. There is no direct correlation between a marine mammal's trophic level and the concentration of residues that it might consume.

Physical contact with oil by Steller sea lions could occur since this species spends considerable time at the surface, swimming, breathing, feeding, or resting, thereby enhancing the possibility of contact with surface oil. Oil that would come ashore is likely to foul Steller sea lions and other

pinnipeds that require such areas for haulouts or nursery areas (Neff 1991). Oil fouling has been implicated in the deaths of pinnipeds; however, large-scale mortality has never been observed, even after some of the more catastrophic spills (St. Aubin 1990). Incidental ingestion during feeding, exposure to vapor concentrations that might be expected under natural conditions at sea, and limited surface fouling with relatively fresh oil do not appear to cause significant distress (St. Aubin 1990).

Several Steller sea lion critical habitat sites occur in the sale area or “downstream” of some potential spills from that area. These include the Shelikof Strait foraging area, the Sugerloaf Island rookery, and major haul outs at Nagahut Rocks, Ushagat Island, Sud Island, Latax Rocks, and Shakun Rocks. Other major haul out/critical habitat sites occur along the south shoreline of the Alaska Peninsula: sites which may be impacted by oil spills originating in the permit area. The current lack of activity in the lower portions of Cook Inlet, reflected in the very small number of active leases, further reduces the likelihood of a large spill where critical habitat could be affected.

The potential for adverse effects from a large oil spill to fin and humpback whales, and Steller sea lions and their designated critical habitat appears remote, especially for resources in lower portions of Cook Inlet. Fin whales and humpback whales are highly mobile and are not expected to spend substantial amounts of time within an oiled area and previous work indicates that exposure to oil is not likely to result in adverse effects on these species (MMS 2003). Given the unlikely event of a large oil spill occurring during the critical foraging periods for the whales, and pupping periods for Steller seal lions, the low probability of a spill reaching high use areas or designated critical habitat, and efforts to further reduce the possibility through approved individual plans of operation, best management practices, spill control and countermeasure plans, and conservation and mitigation plans, an oil spill is not likely to adversely affect fin whale, humpback whale, and Steller sea lions or their critical habitat.

EPA Determination Summary

Species	Effects Determination *
Snake River Fall Chinook salmon	NLAA

Snake River spring/summer Chinook salmon	NLAA
Snake River sockeye salmon	NE
Northern right whale	NE
Sei whale	NE
Blue whale	NE
Fin whale	NLAA
Humpback whale	NLAA
Sperm whale	NE
Steller sea lion (western stock, west of 144° W longitude)	NLAA
*NE = No Effect NLAA = Not likely to Adversely Affect	

NMFS Discussion and Concurrence

Snake River fall Chinook and Snake River spring/summer chinook salmon would occur in the project area rarely, if at all, and NMFS concurs in EPA's determination that the proposed action would not likely adversely affect these species. Snake River sockeye salmon, Northern right whales, Sei whales, blue whales, and sperm whales would occur in the project area rarely, if at all and NMFS concurs in EPA's determination that the proposed project would have no effect on these species.

Humpback whales, fin whales and Steller sea lions do occur in the project area and could potentially be impacted by oil and gas activities. However, potential impacts are lessened by

their lack of occurrence in the specific locations of the mid-Inlet near existing facilities. Rugh et al. (2005) states harbor seals are the only marine mammals other than belugas that are routinely found in the upper Inlet. Aerial surveys of Cook Inlet done in June of 2001-2004 had all sightings of humpback whales, fin whales and Steller sea lions below 60° N. latitude in the lower-Inlet (Rugh et al. 2005). Existing facilities are all in mid-Inlet, well above the common range of these three species.

Where humpback whales, fin whales and Steller sea lions occur in the lower-Inlet there are no existing facilities and the proposed action does not authorize discharge of cuttings or produced

water in new facilities. Only existing facilities in a fairly localized area in mid-Inlet, well outside the common range of humpback whales, fin whales and Steller sea lions, would be permitted to discharge produced water. The proposed action states no discharge of cuttings will be authorized for new source development and production facilities. Produced water will not be authorized for discharge in either coastal or offshore waters for new sources. Additional mitigation requires no discharges within the boundaries of, or within 4,000 meters of, a coastal marsh (the seaward edge of a coastal marsh is defined as the seaward edge of emergent wetland vegetation), river delta, river mouth, designated Area Meriting Special Attention (AMSA), State Game Refuge (SGR), state game sanctuary (SGS), Critical Habitat Area (CHA), or National Parks. The general permit will include a new produced water sheen monitoring requirement that was not part of the expired general permit.

Seismic activities are covered under MMPA and will be reviewed individually by NMFS. Other disturbance associated with existing facilities will occur in mid-Inlet well outside of the common range of humpback whales, fin whales and Steller sea lions. A 2001 acoustics study also investigated noise associated with operating (not drilling) offshore oil platforms (Blackwell and Greene 2002). The Phillips A oil platform produced underwater noise which was generally below 10 kHz. While much of the sound energy in this noise fell below the hearing thresholds of beluga whales, some noise between 2 and 10 kHz was measured as high as 85 dB re: 1μ Pa. out to 19 kilometers. This is well below the 160 dB re: 1μ Pa. guideline currently used by NMFS to limit potential sound impacts.

Oil spills have the potential to impact humpback whales, fin whales and Steller sea lions. However, any oil reaching marine waters outside Cook Inlet (within the common range of these three species) and nearby waters would have weathered at least 10 days and would be much less toxic (MMS 2003). This would greatly reduce the overall impact on marine species in these regions from oil spills. Marine waters seaward of Kodiak and Barren Islands (designated critical habitat for Steller's sea lion) have less than a 0.5 percent chance of being oiled even with a large spill. Although some contact with oil could occur for some listed species, the effect should be slight to none because oil levels would likely be less than the state water quality standard of 15 parts per billion.

Due to their common range in the lower-Inlet and EPA's restrictions on new development, NMFS concurs with EPA's determination that the proposed action is not likely to adversely affect humpback whales, fin whales and Steller sea lions.

Steller sea lion critical habitat is in the extreme lower-Inlet or outside of Cook Inlet. Additional mitigation requires no discharges within the boundaries of, or within 4,000 meters of a critical habitat area. Due to its location in the lower-Inlet, the 4,000 meter mitigation, and EPA's restrictions on new development, NMFS concurs in EPA's determination that the proposed action is not likely to adversely affect the critical habitat of Steller sea lions.

Due to their common range in the lower-Inlet and EPA's restrictions on new development, NMFS concurs with EPA's determination that the proposed action is not likely to adversely affect humpback whales, fin whales and Steller sea lions.

Steller sea lion critical habitat is in the extreme lower-Inlet or outside of Cook Inlet. Additional mitigation requires no discharges within the boundaries of, or within 4,000 meters of a critical habitat area. Due to its location in the lower-Inlet, the 4,000 meter mitigation, and EPA's restrictions on new development, NMFS concurs in EPA's determination that the proposed action is not likely to adversely affect the critical habitat of Steller sea lions.

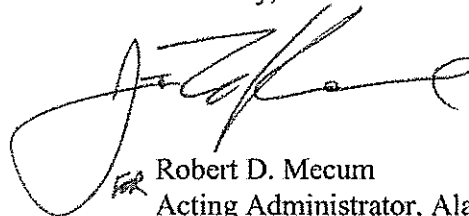
Beluga Whales

EPA has included Cook Inlet beluga whales in the analysis. NMFS designated the Cook Inlet stock of beluga whales as depleted under the Marine Mammal Protection Act, 1972, as amended (MMPA) on May 31, 2000 (65 FR 34590). NMFS does not agree or disagree with EPA's determination for beluga whales, but recommends that if the analysis is included in this BE, that certain aspects of the analysis are expanded. Cook Inlet beluga whales do commonly occur in the mid to upper-Inlet where existing oil and gas facilities are located. The analysis needs a clear line that leads from the discharge of contaminants, to the potential impact to beluga whales species and their prey. NMFS' concern lies primarily with chemical toxicity and associated impacts to the benthic environment, bioaccumulation within the food chain, and sublethal effects to prey species that may affect prey reproductive success and prey biomass available to beluga whales.

Reinitiation of consultation is required where discretionary Federal agency involvement or control over the action has been retained (or is authorized by law) and if: (1) take of a listed species occurs, (2) new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not considered, (3) the action is subsequently modified in a manner that causes an effect to the listed species or critical habitat not considered, or (4) a new species is listed or critical habitat designated that may be affected by the action.

Thank you for the opportunity to comment on the US Environmental Protection Agency Revised Biological Evaluation for the Cook Inlet Oil and Gas Exploration, Development, and Production Facilities NPDES General Permit Reissuance. Please contact Kaja Brix at 907-586-7824 if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read 'R. Mecum', is written over a printed name and title. The signature is fluid and cursive.

Robert D. Mecum
Acting Administrator, Alaska Region

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