UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
P.O. Box 21668
Juneau, Alaska 99802-1668
May 19, 2004

Colonel Timothy J. Gallagher
District Engineer, Alaska District
U.S. Army Corps of Engineers
P. O. Box 898
Anchorage, Alaska 99506-6898

Re: POA-2004-282-2 Norton Sound

Attn: Victor Ross

Dear Col. Gallagher:

The National Marine Fisheries Service (NMFS) has reviewed the above referenced public notice regarding a proposal by Concha Holdings Ltd. to conduct an offshore mining operation to recover gold and other precious metals off the coast of Nome in Norton Sound. The project proposes using a floating suction dredge with a 20-inch nozzle. The dredge will process 2,000 cubic yards (yd^3) of material an hour, twenty hours a day during the 150-day ice-free season. A total of 32,000,000 yd^3 of material will be dredged during three mining seasons from 2004-2006. The applicant proposes to mine 2,200 acres of sea floor under lease from the State of Alaska. The dredge tailings will be stacked with low profile swales and ridges back on the ocean floor.

Background

Offshore gold placer mining in the Norton Sound region has occurred for many years. Western Gold Exploration & Mining Company (WestGold) conducted the largest and most notable project. WestGold's operation, the Nome Offshore Placer Project, began in late 1985 and continued through September 1990. The BIMA, the world's largest bucket-line offshore mining dredge at that time, was purchased by WestGold in 1986 and conducted the majority of the gold recovery. The BIMA dredge vessel was 558 ft long and used a bucket ladder containing 134 buckets; each bucket had a 1.1-yd^3 capacity. It could operate in water depths of 148 ft and cut to a depth of 10 ft below the seafloor. It typically processed 10,000 to 20,000 yd^3 of material per day and operated in water depths of 20 to 60 feet.

As required by the National Environmental Policy Act (NEPA), an environmental assessment (EA) was prepared for the Nome Offshore Placer Project prior to WestGold's permits being issued. During the scoping and permitting process a number of issues and questions were raised including concerns about benthic habitat loss and associated impacts on subsistence fisheries, sustainability of the local marine resources, the ability for habitats to recover or recolonize, and localized environmental degradation as a result

of turbidity from dredging and tailings discharge. Therefore, a number of studies and monitoring programs were stipulated in the permit to address these concerns.

Discussion

The proposed project is located in an area with a relatively high abundance of fish and invertebrate biomass. Deposit feeders (e.g., polychaete worms, small clams, cockles) and associated predators (crabs, large snails, and bottomfishes) are common in this area (MMS 1991). Echinoderms dominate the epibenthic invertebrate community in the area, comprising 80 percent of the invertebrate biomass and over 60 percent of the combined invertebrate and demersal (species associated with the bottom) fish biomass (MMS, 1991 from Jewett and Feder 1981). In the Eastern Bering Sea, these benthic invertebrates are very important prey for large decapod crustaceans (red king crab, Tanner crab), fishes (Pacific cod, pollock, halibut, sablefish, yellowfin sole, Greenland turbot, Alaska plaice, rock sole, arrowtooth flounder, flathead sole, rex sole), and marine mammals (gray whale, bearded seal, walrus) (ODCE, 1989).

Offshore dredging and the discharge of spoils have the potential to affect marine invertebrates (including red king crab) via habitat alteration, including turbidity; entrainment of organisms; exposure to trace metals; noise and disturbances; and fuel spills (MMS, 1991). Previous mining operations off Nome resulted in considerable localized substrate alteration. Sediment fines destabilized by mining operations were redistributed by local currents and sea conditions (Jewett, 1999). Further, evidence suggested that recolonization of benthic communities to their original structure may not occur after mining disturbance; instead, a somewhat different assemblage may result. The time required for a community to stabilize (i.e., recolonization of dredged sites to comparable density, biomass, and number of taxa) is still unknown. The studies associated with the Nome Offshore Placer Project showed that even seven (7) years after the mining ceased, some mined sites had still not recovered to the original species assemblage (Gardner, Jewett 1994).

WestGold's studies suggest significant storm events and longshore currents cause extensive mixing of nearshore sediments and alteration of the sea floor. These are natural events that occur within nearshore waters less than 25 feet in depth (Jewett, 1999). Ice gouging is also a common occurrence in the region. The seaward edge of the ice typically extends to the 60-foot isobath and may be anchored by ice keels in the depth from 30 to 60 feet (Jewett, 1999). WestGold's studies also indicated that the deeper waters (deeper than 20 feet) contained more diverse and greater numbers of species, especially in the cobble habitats, perhaps as a result of less natural disturbance from storms and ice gouging.

Essential Fish Habitat

The Corps of Engineers (Corps) has determined that the project may adversely affect 2,200 acres of Essential Fish Habitat (EFH) for groundfish and crab. NMFS agrees with

this determination. Norton Sound includes EFH for red king crab (RKC), blue king crab, Alaska plaice, yellowfin sole, sculpins, chum, coho, chinook, pink, and sockeye salmon. All of these federally managed species are found in these waters during certain stages of their life history. Many of these commercially important species are also important subsistence resources to the local residents of Nome. In particular, RKC concentrate along shallow water depth contours to migrate, form mating pairs, cluster, or release eggs. More specific habitat associations, and predator/prey relationship for these species are explained in the EFH Draft Environmental Impact Statement NMFS has provided your office. This information can also be found on our website: http://www.fakr.noaa.gov/habitat/.

EFH Conservation Recommendations

NMFS offers the following recommendations pursuant to Section 305(b)(4)(A) of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act):

(1) Mining activities should not be conducted from March 1 through May 31.

Rationale: The highest plankton production in spring is associated with the retreating ice edge and provides a seasonally important feeding habitat in Norton Sound that would be disrupted by the proposed dredging. Also, RKC associate with the ice edge and its movement through break-up and migrate into shallow nearshore areas for reproductive associations during this time. These associations include reproductive pair bonding, molting, and egg extrusion, all of which would be affected by dredging.

(2) From June 1 through July 15 dredging operations should not take place within a radius of one nautical mile from the mouth of anadromous streams identified in the Alaska Department of Fish & Game's Anadromous Waters Catalog, specifically, the Snake River and Dry Creek.

Rationale: The seasonal restriction will ensure that turbidity plumes from dredge operations do not create a barrier to out-migrating juvenile salmon.

(3) For mining activities in depths greater than 20 feet, prior to commencing mining the permittee should conduct a visual inspection (e.g., by remotely operated video or divers) for red king crabs along the projected dredge track. If RKC mating pairs or clusters are present, mining operations should move to an alternate location.

Rationale: Visual inspections are necessary to minimize injury and mortality for RKC in the project vicinity.

(4) Mining activities should be limited to water depths less than 30 feet.

Rationale: Environmental studies associated with offshore mining, specifically studies from the Nome Offshore Placer Project, have concluded that mining disturbances of benthic substrate in water depths greater than 30 feet are distinguishable and are slow to recover. Benthic habitat diversity is much greater at the deeper depths (>30 feet) and in the cobble substrate due to less natural disturbances.

Please note that under section 305(b)(4)(B) of the Magnuson-Stevens Act, the Corps is required to respond in writing within 30 days to NMFS' EFH Conservation Recommendations. If the Corps does not make a decision within 30 days, the Corps should provide NMFS with a letter to that effect, and indicate when a full response will be provided.

Should you have any questions or need additional information, please contact Lieutenant Mark Boland, in Anchorage at (907) 271-5006.

Sincerely,

For James W. Balsiger
Administrator, Alaska Region

cc: USFWS, ADFG, ADEC, ADGC, EPA - Anchorage, Concha Holdings Ltd - Applicant.

References:

(MMS 1991). Alaska Outer Continental Shelf (OCS) Mining Program. Norton Sound Lease Sale. Final Environmental Impact Statement. March 1991.

(Gardner, Jewett 1994). Gardner, L.A. and S.C. Jewett. 1994. To Evaluate the Suitability of a Coarse-Grain Hydraulic Bucket Sampler for Marine Placer Deposits and Mine Tailings Sites. 1993 Benthic Monitoring Results Final Report. Document No. 6938-001-400 Box :16.

(Jewett 1999). Jewett, S.C. Assessment of Red King Crabs Following Offshore Placer Gold Mining in Norton Sound. Reprinted from Alaska Fishery Research Bulletin. Vol. 6 No. 1, Summer 1999.

(ODCE 1989). Ocean Discharge Criteria Evaluation (ODCE) Information Database for Norton Sound 45 Nome Offshore Placer Project. NPDES Permit No. AK-004319-2. ENSR Consulting and Engineering. December 1989.

Supplemental ODCE Information Database for Norton Sound 45 Nome Offshore Placer Project. NPDES Permit No. AK-004319-2. ENSR Consulting and Engineering. February 1989.

Regulatory Processes Associated With Metal-Mine Development in Alaska: A Case Study of the WestGold BIMA. Prepared for U.S. Bureau of Mines by ENSR Consulting and Engineering, Inc. July 1992.

Rusanowski, P.C. and L.A. Gardner. Nome Offshore Placer Project Synthesis Report. 1988. Prepared for Western Gold Exploration and Mining Company. March 1989.