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United States Department of the Interior

FISH AND WILDLIFE SERVICE

646 Cajundome Blvd.

Suite 400

Lafayette, Louisiana 70506

June 2, 2004

Commander Mark A. Prescott
U.S. Coast Guard (G-MSO-5)
Chief, Deepwater Ports Standards Division
2100 Second Street, S.W.
Washington, DC 20593-0001

USCG-2004-16860-49

Dear Commander Prescott:

Please reference your May 6, 2004, letter (received in this office on May 11, 2004) requesting our review of the proposed Gulf Landing, L.L.C., liquefied natural gas (LNG) deepwater port. The proposed project would involve installing a gravity-based LNG terminal approximately 38 miles off the coast of Cameron Parish, Louisiana, and five takeaway pipelines that would interconnect with existing natural gas pipelines located in the Gulf of Mexico. The U.S. Fish and Wildlife Service (Service) has reviewed the information you provided, and offers the following comments in accordance with provisions of the National Environmental Policy Act (NEPA) of 1969 (83 Stat. 852; 42 U.S.C. 4321 et seq.), the Endangered Species Act (ESA) of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.), the Migratory Bird Treaty Act (40 Stat. 755, as amended; 16 U.S.C. 703 et seq.), and the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.).

The following Federally listed threatened and/or endangered species are known to occur within, or off the coast of, Cameron Parish, Louisiana:

<u>SPECIES</u>	<u>GROUP</u>	<u>STATUS</u>
West Indian manatee	Mammal	Endangered
Bald eagle	Bird	Threatened
Piping plover	Bird	Threatened
Brown pelican	Bird	Endangered
Gulf sturgeon	Fish	Threatened
Green sea turtle	Reptile	Threatened
Hawksbill sea turtle	Reptile	Endangered
Kemp's Ridley sea turtle	Reptile	Endangered
Leatherback sea turtle	Reptile	Endangered
Loggerhead sea turtle	Reptile	Threatened

Because the forthcoming draft EIS may also serve as a Biological Assessment (BA) of potential project-related impacts to Federally listed threatened and endangered species, the Service recommends that the information provided below, as well as an analysis of project-related impacts to those species, and USCG/MARAD's "likely (or not likely) to adversely affect" determination be included in the forthcoming draft EIS/BA. The National Marine Fisheries

Service (NOAA Fisheries) is responsible for marine threatened or endangered species that occur off the Louisiana Gulf Coast, including the Gulf sturgeon and the above listed sea turtles (however, the Service is responsible for sea turtles while they are coming ashore and nesting). Please contact the NOAA Fisheries office (727/570-5312) in St. Petersburg, Florida, for further information concerning those species.

Federally listed as endangered, West Indian manatees (*Trichechus manatus*) occasionally enter Louisiana coastal waters and streams during the summer months (i.e., June through September). The manatee has declined in numbers due to collisions with boats and barges, entrapment in flood control structures, poaching, habitat loss, and pollution. Cold weather and outbreaks of red tide may also adversely affect these animals.

Bald eagles (*Haliaeetus leucocephalus*) nest in Louisiana from October through mid-May. Eagles typically nest in bald cypress trees near fresh to intermediate marshes or open water in the southeastern Parishes. Areas with high numbers of nests include the Lake Verret Basin, south to Houma, the southern/marsh ridge complex from Houma to Bayou Vista, the north shore of Lake Pontchartrain, and the Lake Salvador area. Eagles also winter, and infrequently nest near large lakes in central and northern Louisiana. Bald eagles usually return to the same nest year after year, but they may also use alternate nests in the same general vicinity in different years. Bald eagles are most vulnerable to disturbance during courtship, nest building, egg laying, incubation, and brooding (roughly the first 12 weeks of the nesting cycle). Disturbance during this critical period may lead to nest abandonment, cracked and chilled eggs, and exposure of small young to the elements. Human activity near a nest late in the nesting cycle may also cause flightless birds to jump from the nest tree, thus reducing their chance of survival. Major threats to this species include habitat alteration, human disturbance, and environmental contaminants (i.e., organochlorine pesticides and lead).

The piping plover (*Charadrius melodus*), as well as its designated critical habitat, occur along the Gulf of Mexico shoreline. Piping plovers winter in Louisiana, and may be present for 8 to 10 months; they arrive from the breeding grounds as early as late July and remain until late March or April. Piping plovers feed extensively on intertidal beaches, mudflats, sandflats, algal flats, and wash-over passes with no or very sparse emergent vegetation; they also require unvegetated or sparsely vegetated areas for roosting. Roosting areas may have debris, detritus, or micro-topographic relief offering refuge to plovers from high winds and cold weather. In most areas, wintering piping plovers are dependant on a mosaic of sites distributed throughout the landscape, as the suitability of a particular site for foraging or roosting is dependent on local weather and tidal conditions. Plovers move among sites as environmental conditions change.

Designated piping plover critical habitat includes those specific areas that are essential to the conservation of that species. The primary constituent elements for piping plover wintering habitat are those which support foraging, roosting, and sheltering and the physical features necessary for maintaining the natural processes that support those habitat components. Constituent elements are found in geologically dynamic coastal areas that contain intertidal beaches and flats (between annual low tide and annual high tide), and associated dune systems and flats above annual high tide. Important components (or primary constituent elements) of intertidal flats include sand and/or mud flats with no or very sparse emergent vegetation. Adjacent unvegetated or sparsely vegetated sand, mud, or algal flats above high tide are also

important, especially for roosting plovers. Major threats to this species include the loss and degradation of habitat due to development, disturbance by humans and pets, and predation.

In southwestern Louisiana, brown pelicans (*Pelecanus occidentalis*) are currently known to nest on Rabbit Island in Calcasieu Lake. In winter, spring, and summer, nests are built in mangrove trees or other shrubby vegetation, although occasional ground nesting may occur. Pelicans also change nesting sites as habitat changes occur. Brown pelicans feed along the Louisiana coast in shallow estuarine waters, using sand spits and offshore sand bars as rest and roost areas. Major threats to this species include chemical pollutants, colony site erosion, disease, and human disturbance.

Should the proposed project involve construction of a new onshore base, expansion of an existing onshore base, or activities associated with onshore natural gas pipelines along the Louisiana Gulf coast, further consultation with this office will be necessary for the manatee, bald eagle, piping plover, and brown pelican.

Lighting, communication, and/or flare towers associated with the operation of the LNG terminal could potentially impact trans-Gulf migratory birds. Impacts from lighting and towers should also be addressed and analyzed in the EIS. For your convenience, the Service has enclosed guidelines for the siting, construction, operation and decommissioning of communication towers.

The proposed project would likely affect aquatic resources within the New Orleans Corps of Engineers' (Corps) regulatory jurisdiction. If the Corps determines that the proposed project is within their jurisdiction, official Service comments would be provided in response to the corresponding Public Notice issued by the Corps. Accordingly, we recommend that the draft EIS fully evaluate potential project impacts on those resources.

We appreciate the opportunity to provide information during the planning stages of the proposed activity. If you have any questions regarding our comments, please contact Brigette Firmin (337/291-3108) of this office.

Sincerely,



Russell C. Watson
Supervisor
Louisiana Field Office

Enclosure

cc: NOAA Fisheries, St. Petersburg, FL
NOAA Fisheries, Baton Rouge, LA
Corps of Engineers, New Orleans, LA
LDNR, CMD, Baton Rouge, LA
LDWF, Baton Rouge, LA
LDWF, Natural Heritage Program, Baton Rouge, LA

United States Department of Interior
Fish and Wildlife Service
Washington, DC 20240

September 14, 2000

To: Regional Directors

From: Director /s/ Jamie Rappaport Clark

Subject: Service Guidance on the Siting, Construction, Operation and Decommissioning of Communications Towers*

Construction of communications towers (including radio, television, cellular, and microwave) in the United States has been growing at an exponential rate, increasing at an estimated 6 percent to 8 percent annually. According to the Federal Communication Commission's *2000 Antenna Structure Registry*, the number of lighted towers greater than 199 feet above ground level (AGL) currently number over 45,000 and the total number of towers over 74,000. Non-compliance with the registry program is estimated at 24 percent to 38 percent, bringing the total to 92,000 to 102,000. By 2003, all television stations must be digital, adding potentially 1,000 new towers exceeding 1,000 feet AGL.

The construction of new towers creates a potentially significant impact on migratory birds, especially some 350 species of night-migrating birds. Communications towers are estimated to kill 4-5 million birds per year, which violates the spirit and the intent of the Migratory Bird Treaty Act and the Code of Federal Regulations at Part 50 designed to implement the MBTA. Some of the species affected are also protected under the Endangered Species Act and Bald and Golden Eagle Act.

Service personnel may become involved in the review of proposed tower sitings and/or in the evaluation of tower impacts on migratory birds through National Environmental Policy Act review; specifically, Sections 1501.6, opportunity to be a cooperating agency, and 1503.4, duty to comment on federally-licensed activities for agencies with jurisdiction by law, in this case the MBTA, or because of special expertise. Also, the National Wildlife Refuge System Improvement Act requires that any activity on Refuge lands be determined as compatible with the Refuge system mission and the Refuge purpose(s). In addition, the Service is required by the ESA to assist other Federal agencies in ensuring that any action they authorize, implement, or fund will not jeopardize the continued existence of any Federally endangered or threatened species.

A Communication Tower Working Group composed of government agencies, industry, academic researchers and NGO's has been formed to develop and implement a research protocol to determine the best ways to construct and operate towers to prevent bird strikes. Until the research study is completed, or until research efforts uncover significant new mitigation measures, all Service personnel involved in the review of proposed tower sitings and/or the evaluation of the impacts of towers on migratory birds should use the attached interim guidelines when making recommendations to all companies, license applicants, or licensees proposing new tower sitings. These guidelines were developed by Service personnel from research conducted in several eastern, midwestern, and southern states, and have been refined through Regional review. They are based on the best information available at this time, and are the most prudent and effective measures for avoiding bird strikes at towers. We believe that they will provide significant protection for migratory birds pending completion of the Working Group's recommendations. As new information becomes available, the guidelines will be updated accordingly.

Implementation of these guidelines by the communications industry is voluntary, and our recommendations must be balanced with Federal Aviation Administration requirements and local community concerns where necessary. Field offices have discretion in the use of these guidelines on a case by case basis, and may also have additional recommendations to add which are specific to their geographic area.

Also attached is a Tower Site Evaluation Form, which may prove useful in evaluating proposed towers and in streamlining the evaluation process. Copies may be provided to consultants or tower companies who regularly submit requests for consultation, as well as to those who submit individual requests that do not contain sufficient information to allow adequate evaluation. This form is for discretionary use, and may be modified as necessary.

The Migratory Bird Treaty Act (16 U.S.C. 703-712) prohibits the taking, killing, possession, transportation, and importation of migratory birds, their eggs, parts, and nests, except when specifically authorized by the Department of the Interior. While the Act has no provision for allowing unauthorized take, it must be recognized that some birds may be killed at structures such as communications towers even if all reasonable measures to avoid it are implemented. The Service's Division of Law Enforcement carries out its mission to protect migratory birds not only through investigations and enforcement, but also through fostering relationships with individuals and industries that proactively seek to eliminate their impacts on migratory birds. While it is not possible under the Act to absolve individuals or companies from liability if they follow these recommended guidelines, the Division of Law Enforcement and Department of Justice have used enforcement and prosecutorial discretion in the past regarding individuals or companies who have made good faith efforts to avoid the take of migratory birds.

Please ensure that all field personnel involved in review of FCC licensed communications tower proposals receive copies of this memorandum. Questions regarding this issue should be directed to Dr. Benjamin Tuggle, Chief, Division of Habitat Conservation, at (703)358-2161, or Jon Andrew, Chief, Division of Migratory Bird Management, at (703)358-1714. These guidelines will be incorporated in a Director's Order and placed in the Fish and Wildlife Service Manual at a future date.

Service Interim Guidelines For Recommendations On

Communications Tower Siting, Construction, Operation, and Decommissioning

1. Any company/applicant/licensee proposing to construct a new communications tower should be strongly encouraged to collocate the communications equipment on an existing communication tower or other structure (*e.g.*, billboard, water tower, or building mount). Depending on tower load factors, from 6 to 10 providers may collocate on an existing tower.
2. If collocation is not feasible and a new tower or towers are to be constructed, communications service providers should be strongly encouraged to construct towers no more than 199 feet above ground level (AGL), using construction techniques which do not require guy wires (*e.g.*, use a lattice structure, monopole, etc.). Such towers should be unlighted if Federal Aviation Administration regulations permit.

3. If constructing multiple towers, providers should consider the cumulative impacts of all of those towers to migratory birds and threatened and endangered species as well as the impacts of each individual tower.
4. If at all possible, new towers should be sited within existing "antenna farms" (clusters of towers). Towers should not be sited in or near wetlands, other known bird concentration areas (e.g., state or Federal refuges, staging areas, rookeries), in known migratory or daily movement flyways, or in habitat of threatened or endangered species. Towers should not be sited in areas with a high incidence of fog, mist, and low ceilings.
5. If taller (>199 feet AGL) towers requiring lights for aviation safety must be constructed, the minimum amount of pilot warning and obstruction avoidance lighting required by the FAA should be used. Unless otherwise required by the FAA, only white (preferable) or red strobe lights should be used at night, and these should be the minimum number, minimum intensity, and minimum number of flashes per minute (longest duration between flashes) allowable by the FAA. The use of solid red or pulsating red warning lights at night should be avoided. Current research indicates that solid or pulsating (beacon) red lights attract night-migrating birds at a much higher rate than white strobe lights. Red strobe lights have not yet been studied.
6. Tower designs using guy wires for support which are proposed to be located in known raptor or waterbird concentration areas or daily movement routes, or in major diurnal migratory bird movement routes or stopover sites, should have daytime visual markers on the wires to prevent collisions by these diurnally moving species. (For guidance on markers, see *Avian Power Line Interaction Committee (APLIC). 1994. Mitigating Bird Collisions with Power Lines: The State of the Art in 1994. Edison Electric Institute, Washington, D.C., 78 pp.* and *Avian Power Line Interaction Committee (APLIC). 1996. Suggested Practices for Raptor Protection on Power Lines. Edison Electric Institute/Raptor Research Foundation, Washington, D.C., 128 pp.* Copies can be obtained via the Internet at <http://www.eei.org/resources/pubcat/enviro/>, or by calling 1-800/334-5453).
7. Towers and appendant facilities should be sited, designed and constructed so as to avoid or minimize habitat loss within and adjacent to the tower "footprint". However, a larger tower footprint is preferable to the use of guy wires in construction. Road access and fencing should be minimized to reduce or prevent habitat fragmentation and disturbance, and to reduce above ground obstacles to birds in flight.
8. If significant numbers of breeding, feeding, or roosting birds are known to habitually use the proposed tower construction area, relocation to an alternate site should be recommended. If this is not an option, seasonal restrictions on construction may be advisable in order to avoid disturbance during periods of high bird activity.
9. In order to reduce the number of towers needed in the future, providers should be encouraged to design new towers structurally and electrically to accommodate the applicant/licensee's antennas and comparable antennas for at least two additional users (minimum of three users for each tower structure), unless this design would require the addition of lights or guy wires to an otherwise unlighted and/or unguyed tower.
10. Security lighting for on-ground facilities and equipment should be down-shielded to keep light within the boundaries of the site.

11. If a tower is constructed or proposed for construction, Service personnel or researchers from the Communication Tower Working Group should be allowed access to the site to evaluate bird use, conduct dead-bird searches, to place net catchments below the towers but above the ground, and to place radar, Global Positioning System, infrared, thermal imagery, and acoustical monitoring equipment as necessary to assess and verify bird movements and to gain information on the impacts of various tower sizes, configurations, and lighting systems.
12. Towers no longer in use or determined to be obsolete should be removed within 12 months of cessation of use.

In order to obtain information on the extent to which these guidelines are being implemented, and to identify any recurring problems with their implementation which may necessitate modifications, letters provided in response to requests for evaluation of proposed towers should contain the following request:

“In order to obtain information on the usefulness of these guidelines in preventing bird strikes, and to identify any recurring problems with their implementation which may necessitate modifications, please advise us of the final location and specifications of the proposed tower, and which of the measures recommended for the protection of migratory birds were implemented. If any of the recommended measures can not be implemented, please explain why they were not feasible.”

** Please note that the above information can be found at the following website:
<http://migratorybirds.fws.gov/issues/towers/comtow.html>*

TOWER SITE EVALUATION FORM

1. Location (Provide maps if possible):

State: _____ County: _____ Latitude/Longitude/GPS Grid: _____ City
and Highway Direction (2 miles W on Hwy 20, etc.)

2. Elevation above mean sea level: _____

3. Will the equipment be co-located on an existing **FCC licensed** tower or other existing structure (building, billboard, etc.)? (y/n) _____ If yes, type of structure:

If yes, no further information is required.

4. If no, provide proposed specifications for new tower:

Height: _____ Construction type (lattice, monopole, etc.):

_____ Guy-wired? (y/n) _____ No. bands: _____ Total No. Wires:

Lighting (Security & Aviation):

If tower will be lighted or guy-wired, complete items 5-19. If not, complete only items 19 and 20.

5. Area of tower footprint in acres or square feet: _____

6. Length and width of access road in feet: _____

7. General description of terrain - mountainous, rolling hills, flat to undulating, etc. Photographs of the site and surrounding area are beneficial:

8. Meteorological conditions (incidence of fog, low ceilings, etc.):

9. Soil type(s):

10. Habitat types and land use on and adjacent to the site, by acreage and percentage of total:

11. Dominant vegetative species in each habitat type:

12. Average diameter breast height of dominant tree species in forested areas:

13. Will construction at this site cause fragmentation of a larger block of habitat into two or more smaller blocks? (y/n)_____ If yes, describe:

14. Is evidence of bird roosts or rookeries present? (y/n)_____ If yes, describe:

15. Distance to nearest wetland area (forested swamp, marsh, riparian, marine, etc.), and coastline if applicable:

16. Distance to nearest telecommunications tower:

17. Potential for co-location of antennas on existing towers or other structures:

18. Have measures been incorporated for minimizing impacts to migratory birds? (y/n)
If yes, describe:

19. Has an evaluation been made to determine if the proposed facility may affect listed or proposed endangered or threatened species or their habitats as required by FCC regulation at CFR 1.1307(a)(3)? (y/n) _____ If yes, present findings:

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20. Additional information required: