



# MARINE MAMMAL COMMISSION

10 September 2009

Mr. M.A. Prescott, Chief  
Deepwater Ports Standards Division (CG-5225)  
U.S. Coast Guard  
2100 Second Street SW  
Washington DC 20593-0001

Re: Docket Number USCG-2007-28532, USCG Final Environmental Impact Statement Addressing the Port Dolphin LLC Liquefied Natural Gas Deepwater Port Application

Dear Mr. Prescott:

The Marine Mammal Commission, in consultation with its Committee of Scientific Advisors on Marine Mammals, has reviewed the U.S. Coast Guard's final environmental impact statement on the Port Dolphin LLC Liquefied Natural Gas Deepwater Port. Port Dolphin, LLC, proposes to construct, operate, and remove at the end of its useful life a liquefied natural gas deepwater port facility in the Gulf of Mexico approximately 28 miles west of Tampa Bay, Manatee County, Florida. The Commission provides the following recommendation and rationale.

## RECOMMENDATION

The Marine Mammal Commission recommends that the U.S. Coast Guard revise its proposed monitoring and reporting requirements for the Port Dolphin LLC Liquefied Natural Gas Deepwater Port to require monitoring and reporting of (1) the ecological effects of introduced noise and thermal effluent at the proposed construction site, (2) the nature of any interactions with marine mammals during port construction and operations, including interactions arising from port maintenance and support.

## RATIONALE

The proposed port will consist of two permanently moored, submerged-turret loading buoy systems approximately 3 miles apart in 100 feet of water. The mooring buoys will each be tethered by up to eight mooring lines connected to pile driven anchor points on the seafloor. When not in use the buoys will be submerged at a depth of 60-70 feet below the surface. The moorings will be connected to a 35-inch diameter, 41-mile long buried gas pipeline connected to existing natural gas pipelines in Manatee County, Florida.

For transport through the pipeline the liquefied natural gas will be regasified using a closed loop glycol/water-brine heat transfer system, requiring seawater to condense steam and cool the diesel engines powering the ship and regasification system, and to provide ballast water as each vessel carrying liquefied natural gas is offloaded. An estimated 0.5 to 1 billion gallons of seawater will be discharged annually at a temperature of 10° C (18° F) above ambient.

Among other things, the final environmental impact statement analyzes the potential effects of construction, including the introduction of noise and contaminants, and the disturbance of habitat from piledriving, pipeline installation and testing, and related activities. It also analyzes port operations that may produce marine debris, spill oil and other contaminants, alter local water temperatures, and generate noise. In addition, the statement analyzes the risk of collisions between marine mammals and vessels for some 45-90 transits per year of vessels carrying liquified natural gas and 938 transits of maintenance and supply vessels per year from multiple port locations.

The estimates of underwater noise expected to be produced by operations are based on insufficient data and what the Commission believes are incorrect extrapolations from in-air measurements and mitigation. The analysis appears to assume that measures to dampen in-air noise from shipboard equipment such as the regasification equipment also will reduce the noise introduced into the water. However, the vibrations of engines, pumps, generators and other machinery on the ship may well be transferred through the hull to the water with relatively little dampening. The impact statement cites three references on this point (page 4-203) but only one is listed in the references section (JASCO, 2008), and that reference does not provide sufficient information to confirm the conclusions presented in the statement. In any case, predictions of underwater noise from a new, complex system such as the proposed LNG terminal have not yet been shown sufficiently reliable to conclude that the proposed mitigation measures will have the expected dampening effect. For that reason, the Commission believes that a better approach would be to have an independent third party monitor the sound field around the system during installation and operation, and then publicly report the results to affirm the utility of the mitigation measures or provide a basis for modifying them. Such an approach is warranted because this system will operate more-or-less continuously at a fixed site and generate a considerable amount of noise—i.e., more than two large ocean vessels operating at idle. All of this added noise may have unanticipated effects on marine life in that area and should be evaluated more carefully.

The release of heated water also may affect the local ecosystem and warrants a better monitoring plan. Although the released thermal energy will dissipate quickly, the flow of heated water will be nearly continuous, creating a relatively sharp but significant temperature gradient of 10° C. The effects of such thermal effluents from power plants have been studied, but were not used to inform this impact statement. Manatees rely on warm water plumes as refuges from cold winter temperatures and, although they tend to remain close to shore, it is conceivable that they may occur at the port site. Dolphins also may concentrate at the site, increasing the risk of vessel collisions. Also, the addition of hard substrate in the form of anchoring and mooring structures may add to this effect by providing a substrate for attachment of invertebrates and shelter for various fishes. As the nature and extent of such effects are uncertain, the management plan should require monitoring to describe what changes occur. Documentation of such changes will provide a more informed basis for managing this site and for developing similar ports at other locations in this region.

Finally, although the environmental impact statement presents an action plan for mitigating the risks of vessel collision and noise during the offloading of liquified natural gas, the Commission believes that the implementation plan for the proposed mitigation measures should be strengthened.

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Providing the telephone numbers of the Southeast Regional Office of the National Marine Fisheries Service and local stranding network does not provide sufficient assurance that this and other needed information will be provided to the operators of the facility, or that they will be sufficiently trained to make the correct decisions in real time. Because this facility and vessels using or supporting it may interact with marine mammals, the Commission believes it would be useful to train facility personnel regarding management requirements, develop and implement a standardized reporting form to keep a record of interactions, and provide the results to the National Marine Fisheries Service on a regular basis so that Service personnel and the public can develop a better understanding of any risks associated with the use of such LNG ports.

The development of these liquified natural gas ports is a relatively new endeavor. Although the proposed port may not cause significant impacts on the surrounding marine ecosystem, a suitable monitoring and reporting system seems prudent to provide an objective basis for judging impacts rather than simply making assumptions about them. For that reason, the Marine Mammal Commission recommends that the U.S. Coast Guard revise its proposed monitoring and reporting requirements for the Port Dolphin LLC Liquified Natural Gas Deepwater Port to require monitoring and reporting of (1) the ecological effects of introduced noise and thermal effluent at the proposed construction site, and (2) the nature of any interactions with marine mammals during port construction and operations, including interactions arising from port maintenance and support.

Please contact me if you have questions concerning this recommendation or the accompanying rationale.

Sincerely,

A handwritten signature in black ink, appearing to read "Timothy J. Ragen" followed by a flourish and the word "for".

Timothy J. Ragen, Ph.D.  
Executive Director

Enclosure