



MARINE MAMMAL COMMISSION

25 October 2012

Mr. P. Michael Payne, Chief
Permits and Conservation Division
Office of Protected Resources
National Marine Fisheries Service
1315 East-West Highway
Silver Spring, MD 20910-3225

Dear Mr. Payne:

The Marine Mammal Commission, in consultation with its Committee of Scientific Advisors on Marine Mammals, has reviewed the application from Port Dolphin Energy LLC (Port Dolphin) seeking issuance of regulations under section 101(a)(5)(A) of the Marine Mammal Protection Act. The taking would be incidental to construction and operation of an offshore liquefied natural gas facility, Port Dolphin Deepwater Port, in the Gulf of Mexico. The proposed activities would occur from July 2013 through May 2018. The Commission also has reviewed the National Marine Fisheries Service's 10 September 2012 notice (77 Fed. Reg. 55646) announcing receipt of the application and proposing to issue the authorization, subject to certain conditions.

RECOMMENDATIONS

The Marine Mammal Commission recommends that the National Marine Fisheries Service—

- provide greater assurance that no more than small numbers of each marine mammal species in the area will be taken and that, for each species or stock, the overall impact will be negligible by basing its determinations on (1) the estimated mean number of individuals of each species in the area that may be taken plus some measure of uncertainty for each species or (2) the estimated maximum number of each species in the project area that may be taken;
- require Port Dolphin to expand the size of the Level A harassment zone for buoy installation, pipeline burial, and pipe laying activities to at least 200 m;
- require Port Dolphin to submit the preliminary results of its in-situ sound source measurements to the Service and adjust the size of the Level A and B harassment zones, as necessary, within five days after it initiates construction activities;
- require Port Dolphin to monitor the full extent of the Level A and B harassment zones to detect the presence and characterize the behavior of marine mammals during all construction activities;
- require Port Dolphin to install and maintain passive acoustic monitoring equipment at the proposed port to (1) determine ambient (pre-construction), construction, and operational (post-construction) sound levels and (2) monitor the occurrence of marine mammals in the vicinity of the port; and
- require Port Dolphin to provide the Service with sound measurements collected from passive acoustic recorders as part of its reporting requirements, and also to make that data

available to the Gulf of Mexico Coastal Ocean Observing System for integration with other oceanographic data.

RATIONALE

Port Dolphin has proposed to construct and operate the Port Dolphin Deepwater Port facility located off Tampa Bay, Florida, in the Gulf of Mexico. Port Dolphin would install a moored offloading buoy system with two submersible buoys using an impact hammer in water 31 m in depth. It then would install 74 km of pipeline connecting the deepwater port to shoreside facilities at Port Manatee in Tampa using five main techniques—plowing, trenching, dredging, horizontal drilling (with vibratory pile driving of support structures), and covering with concrete mattresses or rock armoring. Use of those techniques would depend on the type of sediment and presence of any physical barriers. Construction activities would begin in June 2013 and would continue for 11 months.

Port Dolphin would begin operations once construction is complete. The operations would involve the maneuvering, docking, regasification, and offloading of liquefied natural gas from up to two shuttle regasification vessels at a time. The vessels would use thrusters to maneuver during these processes and both the thrusters and regasification systems would add additional sound to the marine environment. Both construction and operation activities could occur during day or night, except impact pile driving would be restricted to daylight hours only.

The National Marine Fisheries Service proposes to authorize the taking of bottlenose dolphins and Atlantic spotted dolphins by Level B harassment incidental to construction and operation of the deepwater port. The Service preliminarily has determined that the proposed activities could result in a temporary modification in the behavior of small numbers of those two species, but that the total taking would have a negligible impact on the affected species or stocks. The Service does not anticipate any take of marine mammals by death or serious injury and believes that the potential for disturbance will be at the least practicable level because of the proposed mitigation and monitoring measures. Those measures would include—

- (1) using the minimum power required to drive piles with impact hammers;
- (2) using a Service-approved sound attenuation device for impact pile driving;
- (3) using no more than one impact hammer at any given time;
- (4) conducting in-situ sound propagation measurements during construction and operation activities and during periods of no construction or operation activities;
- (5) using two trained and experienced vessel-based observers to monitor visually the Level A and Level B harassment zones during daylight hours throughout all construction activities, except when poor visibility conditions make observations impossible;
- (6) using ramp-up procedures during pile-driving activities and using shut-down procedures during all construction activities;
- (7) prohibiting impact pile driving during nighttime hours or poor visibility conditions;
- (8) prohibiting operators from ramping up during pile driving unless the entire Level A harassment zone can be monitored;
- (9) monitoring the Level A harassment zone for marine mammals 30 minutes prior to, during, and for 30 minutes after construction activities;

- (10) using sound-muffling devices or engine covers, when appropriate, and turning off engines and equipment when not in use;
- (11) implementing vessel strike mitigation measures;
- (12) using best management practices to avoid impacts from lighting, entanglement in lines and cables, discarded debris, turbidity, anchoring, and seawater intake and discharge;
- (13) reporting injured and dead marine mammals to the Service and the local stranding network using the Service's phased approach and suspending activities, if appropriate;
- (14) requiring an adaptive management process; and
- (15) submitting a report to the Service summarizing all marine mammal monitoring and construction activities at the end of construction activities, annual reports of monitoring and operations activities, and a five-year comprehensive report.

With certain exceptions, the Service's proposed suite of mitigation and monitoring measures appears to be generally thorough and appropriate for the activities being considered. The exceptions are as follows.

Estimation of takes

Port Dolphin estimated the expected number of takes by Level B harassment using the size of the Level B harassment zone and estimates of marine mammal densities from a U.S. Navy review of available marine mammal survey data for the eastern Gulf of Mexico (U.S. Department of Navy 2003). Although the density data were obtained in the same area and during the same season as the proposed activities, Port Dolphin did not appear to consider the uncertainty (e.g., standard deviation, standard error, or coefficient of variation) in those densities. That information would provide decision-makers with a better sense of the confidence level associated with the take estimates. To address this concern, the Marine Mammal Commission recommends that the National Marine Fisheries Service provide greater assurance that no more than small numbers of each marine mammal species in the area will be taken and that, for each species or stock, the overall impact will be negligible by basing its determinations on (1) the estimated mean number of individuals of each species in the area that may be taken plus some measure of uncertainty for each species or (2) the estimated maximum number of each species in the project area that may be taken.

Mitigation and monitoring measures

The size of the Level A harassment zones proposed for buoy installation, pipeline burial, and pipe laying appears to be inadequate to ensure that Level A harassment is avoided. The proposed rule specified a 250-m Level A harassment zone for impact pile-driving activities and a 91-m Level A harassment zone for all other activities. Table 6 of the *Federal Register* notice indicated that the distances to the 180-dB re 1 μ Pa threshold for buoy installation, pipeline burial, and pipe laying are less than 200 m, but presumably greater than 91 m. To ensure that the size of the Level A harassment zone to be monitored is sufficient to avoid taking dolphins by Level A harassment, the Marine Mammal Commission recommends that the National Marine Fisheries Service require Port Dolphin to expand the size of the Level A harassment zone for buoy installation, pipeline burial, and pipe laying activities to at least 200 m.

The distances to the Level A and B harassment thresholds listed in Table 6 were based on modeled scenarios from representative sound sources used during other projects. Port Dolphin has

indicated that in-situ sound source measurements would be made for all construction and operation activities to verify the appropriate size of the Level A harassment zone for each activity. However, the proposed rule does not indicate when the results of those measurements would be submitted to the Service. For other projects, the Service has required applicants to submit initial sound source analyses within five days of completion of the measurements (e.g., 77 Fed. Reg. 49922). To ensure that adjustments to the sizes of the Level A harassment zones are made in a timely manner, the Marine Mammal Commission recommends that the National Marine Fisheries Service require Port Dolphin to submit the preliminary results of its in-situ sound source measurements to the Service and adjust the size of the Level A and B harassment zones, as necessary, within five days after it initiates construction activities.

The proposed authorization included monitoring by protected species observers to implement shut-down or delay procedures, validate take estimates, and document marine mammal responses. The authorization would require Port Dolphin to visually monitor the marine mammals in the Level A and B harassment zones and, to the extent possible, identify the marine mammals by species. However, the Service indicated that because of the large size of the Level B harassment zones, it will require monitoring only to a maximum line-of-sight distance from established monitoring locations; no further rationale was provided for not monitoring the entire area within the Level B harassment zones. Marine mammal responses to the proposed construction activities are not well studied and monitoring of both the Level A and B harassment zones during all construction activities is the only way to ensure that unexpected responses are detected, documented, and evaluated. Monitoring also is the only way for the Service and Port Dolphin to be confident that they are causing the least practicable impact. The Marine Mammal Commission recommends that the National Marine Fisheries Service require Port Dolphin to monitor the full extent of the Level A and B harassment zones to detect the presence and characterize the behavior of marine mammals during all construction activities.

Construction versus operations

Finally, all the mitigation and monitoring measures listed above pertain to construction activities only. Those measures will not provide information on potential changes in habitat use by marine mammals in the area because of the increased vessel presence and noise (i.e., disturbance) during normal operations. The Service noted several sources of natural and human-caused sound in Tampa Bay and the adjoining shelf, but ambient sound levels in the mooring area are not well known. In addition, a failure during normal operations could lead to extensive disturbance of the mooring and pipeline areas. All of these concerns provide reasonable justification for assessing sound levels and the presence of marine mammals over time. Passive acoustic monitoring devices at the port could provide information on sound levels prior to construction, during construction, and during port operations and also on the occurrence and seasonal movements of vocalizing dolphins and other marine mammals in the vicinity of the port. The latter could provide a useful index of marine mammal habitat use and the potential effects of port operations. All of that information is necessary to assess potential long-term effects of the proposed operations. Therefore, the Marine Mammal Commission recommends that the National Marine Fisheries Service require Port Dolphin to install and maintain passive acoustic monitoring equipment at the proposed port to (1) determine ambient (pre-construction), construction, and operational (post-construction) sound levels and (2) monitor the occurrence of marine mammals in the vicinity of the port. The Marine Mammal Commission further recommends that the National Marine Fisheries Service require Port Dolphin

Mr. P. Michael Payne

25 October 2012

Page 5

to provide the Service with sound measurements collected from passive acoustic recorders as part of its reporting requirements, and also to make that data available to the Gulf of Mexico Coastal Ocean Observing System for integration with other oceanographic data.

The Commission hopes you find these recommendations and comments helpful. Please contact me if you have questions concerning them.

Sincerely,

A handwritten signature in blue ink that reads "Timothy J. Ragen". The signature is fluid and cursive, with the first name "Timothy" and last name "Ragen" clearly legible.

Timothy J. Ragen, Ph.D.
Executive Director

Reference

U.S. Department of the Navy. 2003. Estimation of marine mammal and sea turtle densities in the Eastern Gulf of Mexico Operational Region, Technical Report. Naval Facilities Engineering Command, Norfolk, VA. Contract #N62477-00-D-0159, CTO 009.