



UNITED STATES DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
NATIONAL MARINE FISHERIES SERVICE  
Silver Spring, MD 20910

JUL 11 2011

Daniel McPherson  
Environmental Manager  
Neptune LNG LLC  
6 Rowe Square  
Gloucester, Massachusetts 01930

Dear Mr. McPherson:

Enclosed is a Letter of Authorization (LOA) issued to Neptune LNG LLC under the authority of Section 101(a)(5)(A) of the Marine Mammal Protection Act (16 U.S.C. 1361 *et seq.*) to take, by Level B harassment only, small numbers of several species of marine mammals incidental to operation, including port commissioning and maintenance and repair activities, of a deepwater liquefied natural gas facility in Massachusetts Bay. The LOA is valid from July 12, 2011, through July 10, 2016.

You are required to comply with the conditions contained in the LOA. In addition, you must submit weekly reports during repair/maintenance activities, an annual report on marine mammal monitoring and mitigation on August 1 of each year to cover the time period of January 1 through December 31 of the previous year of activity, and a draft comprehensive final report to the National Marine Fisheries Service (NMFS) Office of Protected Resources and the NMFS Northeast Regional Office 180 days prior to the expiration of the associated final regulations. The LOA requires the monitoring of marine mammals by qualified individuals during all operational activities and reporting of marine mammal observations, including species, numbers, and behavioral modifications potentially resulting from operational activities.

If you have any questions concerning the LOA or its requirements, please contact Candace Nachman, Office of Protected Resources, NMFS at (301) 427-8401.

Sincerely,

James H. Lecky, Director  
Office of Protected Resources

Enclosure





## Letter of Authorization

Neptune LNG, L.L.C. (Neptune), One Liberty Square, Boston, Massachusetts 02109 is hereby authorized to take small numbers of marine mammals incidental to those activities at the Neptune Liquefied Natural Gas (LNG) Deepwater Port off Massachusetts in accordance with 50 CFR 217, Subpart R—Taking of Marine Mammals Incidental to Operation and Maintenance of the Neptune Liquefied Natural Gas Facility off Massachusetts subject to the provisions of the Marine Mammal Protection Act (16 U.S.C. 1361 et seq.; MMPA) and the following conditions:

1. This Authorization is valid from July 12, 2011, through July 10, 2016.
2. This Authorization is valid only for activities associated with operation of a LNG facility, including commissioning and repair and maintenance activities, in the Massachusetts Bay, of the Commonwealth of Massachusetts, as specified in Neptune's March 11, 2010, request. The taking of marine mammals is limited to the area defined by the Neptune Deepwater Port within Outer Continental Shelf blocks NK 19-04 6525 and NK 19-04 6575, which are located approximately 42° 28' 09" N. latitude and 70° 36' 22" W. longitude.

### 3. Species Impacted and Level of Takes

(a). The incidental take, by Level B harassment only, of marine mammals under the activities identified in condition 2, above, and 50 CFR 217.170(a) is limited to the species listed under condition 3(b) below by the indicated method and indicated number of times. The taking by Level A harassment, injury, or death of these species, or the taking of any other species of marine mammal is prohibited and may result in the modification, suspension, or revocation of this Authorization.

(b). The species authorized for taking by Level B harassment are:

- North Atlantic right whale (*Eubalaena glacialis*)—120 (an average of 24 annually)
- Humpback whale (*Megaptera novaeangliae*)—390 (an average of 78 annually)
- Fin whale (*Balaenoptera physalus*)—145 (an average of 29 annually)
- Minke whale (*B. acutorostrata*)—90 (an average of 18 annually)
- Sei Whale (*B. borealis*)—60 (an average of 12 annually)
- Long-finned pilot whale (*Globicephala melas*)—595 (an average of 119 annually)
- Atlantic white-sided dolphin (*Lagenorhynchus acutus*)—1,935 (an average of 387 annually)
- Common dolphin (*Delphinus delphis*)—100 (an average of 20 annually)
- Bottlenose dolphin (*Tursiops truncatus*)—50 (an average of 10 annually)
- Risso's dolphin (*Grampus griseus*)—100 (an average of 20 annually)
- Killer whale (*Orcinus orca*)—100 (an average of 20 annually)





Harbor porpoise (*Phocoena phocoena*)—25 (an average of 5 annually)  
 Harbor seal (*Phoca vitulina*)—75 (an average of 15 annually)  
 Gray seal (*Halichoerus grypus*)—75 (an average of 15 annually)

(c). The taking of any marine mammal in a manner prohibited under this Authorization must be reported within 48 hours to the Regional Administrator, Northeast Regional Office, National Marine Fisheries Service (NMFS), Telephone (978) 281-9300 and the Director, Office of Protected Resources, NMFS, Telephone (301) 427-8400.

#### 4. Mitigation Requirements

##### (a). Major Repair Measures (May 1 to November 30)

(i). During repairs, if a marine mammal is detected within 0.6 mi (1 km) of the repair vessel (or acoustically), the vessel superintendent or on-deck supervisor will be notified immediately. The vessel's crew will be put on a heightened state of alert. The marine mammal will be monitored constantly to determine if it is moving toward the repair area.

(ii). Repair vessels will cease any movement in the area if a marine mammal other than a right whale is sighted within or approaching to a distance of 100 yd (91 m) from the operating repair vessel. Repair vessels will cease any movement in the construction area if a right whale is sighted within or approaching to a distance of 500 yd (457 m) from the operating vessel. Vessels transiting the repair area, such as pipe haul barge tugs, will also be required to maintain these separation distances.

(iii). Repair vessels will cease all sound emitting activities if a marine mammal other than a right whale is sighted within or approaching to a distance of 100 yd (91 m) or if a right whale is sighted within or approaching to a distance of 500 yd (457 m), from the operating repair vessel. The back-calculated source level, based on the most conservative cylindrical model of acoustic energy spreading, is estimated to be 139 dB re 1  $\mu$ Pa.

(iv). Repair activities may resume after the marine mammal is positively reconfirmed outside the established zones (either 500 yd (457 m) or 100 yd (91 m), depending upon species) or if the marine mammal has not been re-sighted in the established zones for 30 minutes.

(v). While under way, all repair vessels will remain 500 yd (457 m) away from right whales and 100 yd (91 m) away from all other marine mammals to the extent physically feasible given navigational constraints.

(vi). All repair vessels 300 gross tons or greater will maintain a speed of 10 knots (18.5 km/hr) or less. Vessels less than 300 gross tons carrying supplies or crew between the shore and the repair site will contact the Mandatory Ship Reporting System (MSRS), the USCG, or the protected species observers (PSOs) at the repair site before leaving shore for reports of recent right whale sightings or active Dynamic Management Areas (DMAs) and,

consistent with navigation safety, restrict speeds to 10 knots (18.5 km/hr) or less within 5 mi (8 km) of any recent sighting location and within any existing DMA.

(vii). Vessels transiting through the Cape Cod Canal and Cape Cod Bay (CCB) between January 1 and May 15 will reduce speeds to 10 knots (18.5 km/hr) or less, follow the recommended routes charted by NOAA to reduce interactions between right whales and shipping traffic, and avoid aggregations of right whales in the eastern portion of CCB.

(b). Major Repair Measures (December 1 to April 30): If unplanned/emergency repair activities cannot be conducted between May 1 and November 30, then Neptune shall implement the following mitigation measures in addition to those listed in conditions 4(a)(i)-(vii) above to ensure the least adverse practicable impact on marine mammals:

(i). If on-board PSOs do not have at least 0.6-mi (1-km) visibility, they shall call for a shutdown of repair activities. If dive operations are in progress, then they shall be halted and brought on board until visibility is adequate to see a 0.6-mi (1-km) range. At the time of shutdown, the use of thrusters must be minimized to the lowest level needed to maintain personnel safety. If there are potential safety problems due to the shutdown, the captain must decide what operations can safely be shut down and shall document such activities in the data log.

(ii). Prior to leaving the dock to begin transit, the barge must contact one of the PSOs on watch to receive an update of sightings within the visual observation area. If the PSO has observed a North Atlantic right whale within 30 minutes of the transit start, the vessel will hold for 30 minutes and again get a clearance to leave from the PSOs on board. PSOs will assess whale activity and visual observation ability at the time of the transit request to clear the barge for release.

(iii). Neptune or its contractor shall provide a half-day training course to designated crew members assigned to the transit barges and other support vessels. This course shall cover topics including, but not limited to, descriptions of the marine mammals found in the area, mitigation and monitoring requirements contained in this Authorization, sighting log requirements, and procedures for reporting injured or dead marine mammals. These designated crew members shall be required to keep watch on the bridge and immediately notify the navigator of any whale sightings. All watch crew shall sign into a bridge log book upon start and end of watch. Transit route, destination, sea conditions, and any protected species sightings/mitigation actions during watch shall be recorded in the log book. Any whale sightings within 3,281 ft (1,000 m) of the vessel shall result in a high alert and slow speed of 4 knots (7.4 km/hr) or less. A sighting within 2,461 ft (750 m) shall result in idle speed and/or ceasing all movement.

(iv). The material barges and tugs used for repair work shall transit from the operations dock to the work sites during daylight hours, when possible, provided the safety of the vessels is not compromised. Should transit at night be required, the maximum speed of the tug will be 5 knots (9.3 km/hr).

(v). Consistent with navigation safety, all repair vessels must maintain a speed of 10 knots (18.5 km/hr) or less during daylight hours. All vessels will operate at 5 knots or less at all times within 3.1 mi (5 km) of the repair area.

(c). Speed Restrictions in Seasonal Management Areas (SMAs): Repair vessels and shuttle regasification vessels (SRVs) shall transit at 10 knots (18.5 km/hr) or less in the following seasons and areas, which either correspond to or are more restrictive than the times and areas in NMFS' regulations at 50 CFR 224.105 that implement speed restrictions to reduce the likelihood and severity of ship strikes of right whales:

(i). CCB SMA from January 1 through May 15, which includes all waters in CCB, extending to all shorelines of the Bay, with a northern boundary of 42° 12' N. latitude;

(ii). Off Race Point SMA year round, which is bounded by straight lines connecting the following coordinates in the order stated: 42° 30' N. 69° 45' W.; thence to 42° 30' N. 70° 30' W.; thence to 42° 12' N. 70° 30' W.; thence to 42° 12' N. 70° 12' W.; thence to 42° 04' 56.5" N. 70° 12' W.; thence along mean high water line and inshore limits of COLREGS limit to a latitude of 41° 40' N.; thence due east to 41° 41' N. 69° 45' W.; thence back to starting point; and

(iii). Great South Channel (GSC) SMA from April 1 through July 31, which is bounded by straight lines connecting the following coordinates in the order stated:

42° 30' N. 69° 45' W.  
 41° 40' N. 69° 45' W.  
 41° 00' N. 69° 05' W.  
 42° 09' N. 67° 08' 24" W.  
 42° 30' N. 67° 27' W.  
 42° 30' N. 69° 45' W.

(d). Additional Mitigation Measures:

(i). When approaching and departing from the Neptune Port, SRVs shall use the Boston Traffic Separation Scheme (TSS) starting and ending at the entrance to the GSC. Upon entering the TSS, the SRV shall go into a "heightened awareness" mode of operation.

(ii). In the event that a whale is visually observed within 0.6 mi (1 km) of the Port or a confirmed acoustic detection is reported on either of the two auto-detection buoys (ABs) closest to the Port, departing SRVs shall delay their departure from the Port, unless extraordinary circumstances, defined in the Marine Mammal Detection, Monitoring, and Response Plan (the Plan), require that the departure is not delayed. The departure delay shall continue until either the observed whale has been visually (during daylight hours) confirmed as more than 0.6 mi (1 km) from the Port or 30 minutes have passed without another confirmed detection either acoustically within the acoustic detection range of the two ABs closest to the Port or visually within 0.6 mi (1 km) from Neptune.

(iii). SRVs that are approaching or departing from the Port and are within the Area to be Avoided (ATBA) surrounding Neptune shall remain at least 0.6 mi (1 km) away from any visually detected right whales and at least 100 yards (91 meters) away from all other visually detected whales unless extraordinary circumstances, as defined in Section 1.2 of the Plan, require that the vessel stay its course. The ATBA is defined in 33 CFR 150.940. It is the largest area of the Port marked on nautical charts and it is enforceable by the USCG in accordance with the 33 CFR 150.900 regulations. The Vessel Master shall designate at least one lookout to be exclusively and continuously monitoring for the presence of marine mammals at all times while the SRV is approaching or departing Neptune.

(vi). The holder of this Authorization shall ensure that other vessels providing support to Port operations during regasification activities that are approaching or departing from the Port and are within the ATBA shall be operated so as to remain at least 0.6 mi (1 km) away from any visually detected right whales and at least 100 yd (91 m) from all other visually detected whales.

(v). PSOs shall direct a moving vessel to slow to idle if a baleen whale is seen less than 0.6 mi (1 km) from the vessel.

(vi). Use of lights during repair or maintenance activities shall be limited to areas where work is actually occurring, and all other lights must be extinguished. Lights must be downshielded to illuminate the deck and shall not intentionally illuminate surrounding waters, so as not to attract whales or their prey to the area.

(vii). The holder of this Authorization must immediately suspend any repair and maintenance or operations activities if a dead or injured marine mammal is found in the vicinity of the project area, and the death or injury of the animal could be attributable to the LNG facility activities. Neptune must contact NMFS (telephone: 301-427-8401) and the Northeast Stranding and Disentanglement Program (telephone: 978-281-9351). Activities shall not resume until review and approval has been given by NMFS.

## 5. Monitoring Requirements

### (a). Visual Monitoring Program:

(i). The holder of this Authorization shall employ PSOs during maintenance- and repair-related activities on each vessel that has a dynamic positioning system. Two (2) PSOs shall be on-duty at all times. All PSOs must receive NMFS-approved PSO training and be approved in advance by NMFS after a review of their qualifications.

(ii). Qualifications for these PSOs shall include direct field experience on a marine mammal observation vessel and/or aerial surveys in the Atlantic Ocean/Gulf of Mexico.

(iii). The PSOs (one primary and one secondary) are responsible for visually locating marine mammals at the ocean's surface and, to the extent possible,



identifying the species. The primary PSO shall act as the identification specialist, and the secondary PSO shall serve as data recorder and also assist with identification. Both PSOs shall have responsibility for monitoring for the presence of marine mammals.

(iv). The PSOs shall monitor the maintenance/repair area using the naked eye, hand-held binoculars, and/or power binoculars.

(v). The PSOs shall scan the ocean surface during maintenance- and repair-related activities and record all sightings in marine mammal field sighting logs. Observations of marine mammals shall be identified to the species or the lowest taxonomic level possible, and their relative position in relation to the vessel shall be recorded.

(vi). While an SRV is navigating within the designated TSS, three (3) people have lookout duties on or near the bridge of the ship including the SRV Master, the Officer-of-the-Watch, and the Helmsman on watch.

(vii). In addition to standard watch procedures, while the SRV is within the ATBA and/or while actively engaging in the use of thrusters an additional lookout shall be designated to exclusively and continuously monitor for marine mammals. Once the SRV is moored and regasification activities have begun, the vessel is no longer considered in "heightened awareness" status.

(viii). At the conclusion of regasification activities, when the SRV is prepared to depart from the Port, the Master shall once again ensure that the responsibilities as defined in the Plan are carried out. All sightings of marine mammals by the designated lookout, individuals posted to navigational lookout duties, and/or any other crew member while the SRV is within the TSS, in transit to the ATBA, within the ATBA, and/or when actively engaging in the use of thrusters shall be immediately reported to the Officer-of-the-Watch who shall then alert the Master.

(b). General Passive Acoustic Monitoring (PAM) Program

(i). Neptune shall work with NMFS, SBNMS, and other scientists to install and monitor an array of passive acoustic buoys in the Boston TSS that meets the criteria specified in the recommendations developed by NOAA through consultation with the US Coast Guard (USCG) under the National Marine Sanctuary Act (NMSA). The system shall provide near real-time information on the presence of vocalizing whales in the shipping lanes.

(ii). Neptune shall work with NMFS, SBNMS, and other scientists to monitor the archival array of acoustic recording units (ARUs), or "pop-ups," around the Port that meets the criteria specified in the program developed by NOAA in consultation with the USCG under the NMSA. The ARUs shall remain in place for five (5) years following initiation of operations to monitor the actual acoustic output of port

operations and alert NOAA to any unanticipated adverse effects of port operations, such as large-scale abandonment of the area or greater acoustic impacts than predicted through modeling.

(iii). Passive acoustic devices shall be actively monitored for detections by a NMFS-approved bioacoustic technician.

(c). Repair Activity PAM Measures: PAM, in addition to that required in this section of these regulations, shall be required, on a case-by-case basis, during both planned and emergency repair activities in order to better detect right whales in the area of repair work and to collect additional data on the noise levels produced during repair and maintenance activities.

(i). Neptune shall work with NOAA (NMFS and SBNMS) to evaluate when to install and maintain an array of real-time passive acoustic detection buoys to provide early warnings for potential occurrence of right whales in the vicinity of the repair area. The number of passive acoustic detection buoys installed around the activity site, if deemed necessary, shall be commensurate with the type and spatial extent of maintenance/repair work required, but must be sufficient to detect vocalizing right whales within the 120-dB impact zone.

(ii). Neptune shall provide NMFS with empirically measured source level data for all sources of noise associated with Port maintenance and repair activities. Measurements shall be carefully planned and coordinated with noise-producing activities and shall be collected from the passive detection network.

(d). SRV Regasification PAM Measures: Source levels associated with dynamic positioning of SRVs at the buoys shall be estimated using empirical measurements collected from a platform positioned as close as practicable to thrusters while in use.

## 6. Reporting

(a). Because the Neptune Port Project area is within the Mandatory Ship Reporting Area (MSRA), all SRVs transiting to and from the Port must report their activities to the mandatory reporting section of the USCG to remain apprised of North Atlantic right whale movements within the area. All vessels entering and exiting the MSRA will report their activities to WHALESNORTH. Any North Atlantic right whale sightings must be reported to the NMFS Sighting Advisory System.

### (b). Repair Work Reports

(i). For any repair work associated with the pipeline lateral or other port components, Neptune LNG shall notify the appropriate NOAA personnel as soon as practicable after it is determined that repair work must be conducted.



(ii). During maintenance and repair of the pipeline lateral or other port components, weekly status reports must be provided to NOAA. The weekly report must include data collected for each distinct marine mammal species observed in the project area during the period of the repair activity. The weekly reports shall include the following:

- (1) The location, time, and nature of the pipeline lateral activities;
- (2) Whether the dynamic position (DP) system was operated and, if so, the number of thrusters used and the time and duration of DP operation;
- (3) Marine mammals observed in the area (number, species, age group, and initial behavior);
- (4) The distance of observed marine mammals from the repair activities;
- (5) Observed marine mammal behaviors during the sighting;
- (6) Whether any mitigation measures were implemented;
- (7) Weather conditions (sea state, wind speed, wind direction, ambient temperature, precipitation, and percent cloud cover, etc.)
- (8) Condition of the marine mammal observation (visibility and glare); and
- (9) Details of passive acoustic detections and any action taken in response to those detections.

(iii). For all minor repair work, the holder of this Authorization must notify NOAA regarding when and where the repair/maintenance work is to take place along with a tentative schedule and description of the work. Vessel crews shall record/document any marine mammal sightings during the work period.

(iv). At the conclusion of all minor repair work, the holder of this Authorization shall provide NOAA personnel with a report describing any marine mammal sightings, the type of work taking place when the sighting occurred, and any avoidance actions taken during the repair/maintenance work.

(b). Incident Reports. During all phases of project repair/maintenance activities and operation, sightings of any injured or dead marine mammals must be reported immediately to the Chief, Permits, Conservation and Education Division or staff member (telephone: 301-427-8401) and the Northeast Stranding and Disentanglement Program (telephone: 978-281-9351), regardless of whether the injury or death is caused by project activities. If the injury or death was caused by a project vessel (e.g., SRV, support vessel, or construction vessel), the USCG must be notified immediately, and a full report must be provided to NMFS. The report must include the following information: (1) the time, date, and location (latitude/longitude) of the incident; (2) the name and type of vessel involved; (3) the vessel's speed during the incident; (4) a description of the incident; (5) water depth; (6) environmental conditions (e.g., wind speed and direction, sea state, cloud cover, and visibility); (7) the species identification or description of the animal; and (8) the fate of the animal; and (9) photographs or video footage of the animal (if equipment is available).

(c). Annual Report

(i). An annual report on marine mammal monitoring and mitigation must be submitted to NMFS, Office of Protected Resources (1315 East West Highway, Silver Spring, Maryland 20910) and NMFS, Northeast Regional Office (Protected Resources Division, 55 Great Republic Drive, Gloucester, Massachusetts 01930) on August 1 of each year. The annual report shall cover the time period of January 1 through December 31 of each year of activity.

(ii). The annual report should include data collected for each distinct marine mammal species observed in the project area in the Massachusetts Bay during the period of LNG facility operations and repair/maintenance activities. The annual report shall also include a description of marine mammal behavior, overall numbers of individuals observed, frequency of observation, and any behavioral changes and the context of the changes relative to operation and repair/maintenance activities. Additional information that shall be recorded by Neptune or its contractor during operations and repair/maintenance activities and contained in the reports include: date and time of marine mammal detections (visually or acoustically), weather conditions, species identification, approximate distance from the source, activity of the vessel when a marine mammal is sighted, and whether thrusters were in use and, if so, how many at the time of the sighting.

(d). Five-year Comprehensive Report

(i). Neptune shall submit a draft comprehensive final report to NMFS, Office of Protected Resources (1315 East West Highway, Silver Spring, Maryland 20910), and NMFS, Northeast Regional Office (Protected Resources Division, 55 Great Republic Drive, Gloucester, Massachusetts 01930), 180 days prior to the expiration of the regulations. This comprehensive technical report shall provide full documentation of methods, results, and interpretation of all monitoring during the first four and a half years of the LOA.

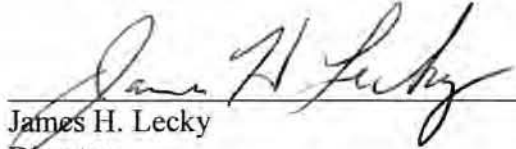
(ii). Neptune shall submit a revised final comprehensive technical report, including all monitoring results during the entire period of the LOA, 90 days after the end of the period of effectiveness of the regulations to NMFS, Office of Protected Resources (1315 East West Highway, Silver Spring, Maryland 20910), and NMFS, Northeast Regional Office (Protected Resources Division, 55 Great Republic Drive, Gloucester, Massachusetts 01930).

7. A copy of this Authorization and the attached Subpart R of the regulations must be in the possession of each observer or group operating under the authority of this Letter of Authorization while conducting the specified activities.

8. The holder of this Authorization and anyone operating under its authority is required to comply with the Terms and Conditions of the Biological Opinion Incidental Take Statement as they pertain to listed marine mammals.

9. Prohibitions - Notwithstanding takings contemplated in § 217.170 and authorized by a Letter of Authorization issued under §§ 216.106 and 217.177, no person in connection with the activities described in § 217.170 may violate, or fail to comply with, the terms, conditions, and requirements of these regulations or a Letter of Authorization issued under §§ 216.106 and 217.177.

10. This Authorization may be modified, suspended or withdrawn (pursuant to 50 CFR § 216.106(e)(1 or 2)) if the Holder or any person operating under its authority fails to abide by the conditions prescribed herein or if the authorized taking is having more than a negligible impact on the species or stock of affected marine mammals.

  
\_\_\_\_\_  
James H. Lecky  
Director  
Office of Protected Resources  
National Marine Fisheries Service

JUL 11 2011

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Date