



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

SEP 28 2010

Peter D. Mandelstam  
President  
Bluewater Wind, LLC  
22 Hudson Place  
Hoboken, NJ 07030

Dear Mr. Mandelstam

Enclosed is an Incidental Harassment Authorization (IHA) issued pursuant to Section 101(a)(5)(D) of the Marine Mammal Protection Act (16 U.S.C. 1361 et seq.), to take small numbers of marine mammals, by Level B harassment, incidental to construction of two meteorological data collection facilities in the Outer Continental Shelf (OCS) Official Protraction Diagram (OPD) Salisbury, NJ 18-05 lease block 6325 and OCS OPD lease block Wilmington, NJ 18-02 Block 6936.

You are required to comply with the conditions contained in the IHA, including all mitigation, monitoring and reporting requirements. In addition, you must cooperate with any Federal, state, or local agency monitoring the impacts of your activities. Along with mitigation measures to be incorporated, the IHA requires monitoring for the presence and behavior of marine mammals prior to, during, and after all pile driving.

If you have any questions concerning the IHA or its requirements, please contact Jaclyn Daly, Office of Protected Resources (NMFS), at 301-713-2289.

Sincerely,

for James H. Lecky,  
Director, Office of Protected Resources,  
National Marine Fisheries Service.

Enclosure



## INCIDENTAL HARASSMENT AUTHORIZATION

Bluewater Wind, LLC. (Bluewater), 22 Hudson Place, Hoboken, NJ 07030, is hereby authorized, under section 101(a)(5)(D) of the Marine Mammal Protection Act (16 U.S.C. 1371(a)(5)(D)) and 50 CFR 216.107, to harass small numbers of marine mammals incidental to construction of two meteorological data collection facilities located in the Outer Continental Shelf (OCS) Official Protraction Diagram (OPD) lease block Salisbury, NJ 18-05 Lease Block 6325 and OCS OPD lease block Wilmington, NJ 18-02 Block 6936, contingent upon the following conditions:

1. This Authorization is valid from October 1, 2010, through November 15, 2010.
2. This Authorization is valid only for activities associated with the construction of two meteorological data collection facilities in the mid-Atlantic Outer Continental Shelf; one off the coast of Delaware and one off New Jersey, as specified in Bluewater's June 8, 2010, IHA applications.

3. Species Authorized and Level of Takes

(a) The taking, by Level B harassment only, is limited to the species listed under condition 3(b) below. 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 number of marine mammals, by species and location, authorized for taking by Level B harassment are provided in Table 1 below:

Species	No. of Animals Delaware	No. of Animals New Jersey
Bottlenose dolphin ( <i>Tursiops truncatus</i> )	15	15
Spotted dolphin ( <i>Stenella spp.</i> )	35	35
Common dolphin ( <i>Delphinus delphis</i> )	20	20
Atlantic White-sided dolphin ( <i>Lagenorhynchus acutus</i> )	15	15
Risso's dolphin ( <i>Grampus griseus</i> )	15	15
Pilot whale ( <i>Globicephala spp.</i> )	10	10
Harbor porpoise ( <i>Phocoena Phocoena</i> )	15	10
Harbor seal ( <i>Phoca vitulina</i> )	35	30



(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) 713-2332.

#### 4. Mitigation Requirements

- (a) *Establishment Exclusion Zones:* Bluewater will establish and monitor a preliminary 1,000 m exclusion zone (EZ) around the pile hammer in order to eliminate the potential for injury (Level A harassment) of marine mammals. This zone is designed to include all areas where the underwater sound pressure levels (SPLs) are anticipated to equal or exceed 180 dB re: 1 $\mu$ Pa root mean square (rms). If the acoustic survey determines that the area ensounded by sounds exceeding 180 dB extends beyond the preliminary 1,000 m EZ, a larger safety exclusion zone will be established. This new EZ must be reported to NMFS within 24 hours of establishment. Otherwise, the 1,000-meter EZ will remain in place.

Bluewater will establish a 7-km EZ at the Delaware site for ESA-listed marine mammals (i.e., large whales) to avoid Level B (behavioral) harassment to these species. Should acoustic monitoring at the Delaware site determine the estimated distance to NMFS' Level B harassment threshold (i.e., 160 dB rms) isopleth is greater or less than 7 km, this ESA-listed species exclusion zone will be altered for the New Jersey site accordingly, after accounting for depth differences between the two sites.

*Pile Driving Shut-down and Delay Triggers:* At least one protected species observer (PSO) stationed onboard or near the pile-driving vessel will monitor the established 1,000 m EZ for 30 minutes prior to the soft-start of pile driving. If the PSO observes a marine mammal within this zone during this time, the PSO will notify the Resident Engineer (or other authorized individual) who will then delay pile driving. Pile driving will not begin until the PSO has visually observed the marine mammal(s) exiting the EZ and is not likely to return, or has not been seen within the EZ for 15 min for species with shorter dive durations (small odontocetes) or 30 min for species with longer dive durations (mysticetes and large odontocetes, including sperm, pygmy sperm, dwarf sperm, killer, and beaked whales).

If a marine mammal approaches or enters the 1,000 m EZ after pile driving has begun, pile driving will cease until the PSO confirms that the animal has moved out of and on a path away from the EZ or the PSO has not sighted the animal within the EZ for 15 min for species with shorter dive durations (small odontocetes) or 30 min for species with longer dive durations (mysticetes and large odontocetes).

If pile driving ceases for 30 minutes or more, the PSO will observe for an additional 30-minute period before he/she will notify the Resident Engineer (or other authorized individual) that none of the aforementioned situations are triggered and pile driving can commence.

On a separate vessel navigating at approximately 4-5 kms around the pile hammer, PSOs will monitor for ESA-listed species. Should an ESA-listed species be observed within the 7

km EZ, pile driving will be delayed and protocol will follow the procedures described above for the 1,000 EZ.

- (b) *Ramp-up Procedures*: A ramp-up or soft-start will be used upon onset of pile driving in order to provide additional protection to marine mammals near the project area by allowing them time to vacate the area prior to the commencement of full-power pile-driving activities. The soft-start requires an initial set of 3 strikes from the impact hammer at 40 percent energy with a one minute waiting period between subsequent 3-strike sets. The procedure will be repeated two additional times. If marine mammals are sighted within the exclusion zone prior to pile-driving, or during the soft start, the Resident Engineer (or other authorized individual) will delay pile driving until the animal has moved outside the exclusion zone and no marine mammals are sighted for 15 min for species with shorter dive durations (small odontocetes) or 30 min for species with longer dive durations (mysticetes and large odontocetes).
- (c) *Time-of-Day and Weather Restrictions*: Pile-driving will be limited to daylight hours between one-half hour after sunrise and one-half hour prior to sunset. If detection capability of a marine mammal within the EZs is obscured by foul weather (e.g., rough seas, fog), Bluewater will delay or suspend pile driving operations until the EZs are clear.
- (d) *Reduced Hammer Force*: Bluewater will not ramp-up to full power if, at decreased power, the pile can be driven to the desired depth.
- (e) *Use of Sound Attenuation Devices*: Bluewater has conducted a sound attenuation device feasibility study and has concluded that traditional devices (e.g., bubble curtain, wood cap, sleeve) are not practical or feasible for the proposed activity for various reasons (see Bluewater's application). However, Bluewater will continue to explore other options and, if found, will use a sound attenuation device during pile driving.
- (f) *Vessel Transiting and Operation Watch*: Crew aboard all vessels associated with the specified activity transiting to and from the construction site will actively watch for whales and other marine mammals. Vessel operators will abide by NMFS' Northeast Marine Mammal Viewing Guidelines ([http://www.nero.noaa.gov/prot\\_res/mm/v/](http://www.nero.noaa.gov/prot_res/mm/v/)) should a marine mammal be observed close to or on a path towards the vessel.

## 5. Monitoring Requirements

- (a) *Visual Monitoring*
  - (i) At least one PSO will be stationed at the pile hammer to monitor, and implement mitigation if necessary, the preliminary 1,000 m EZ and notify the Resident Engineer (or other authorized person) if shut down is necessary (see Condition 4(a) above).
  - (ii) At least one PSO, in a dedicated visual monitoring vessel circumnavigating the pile hammer at a distance of 4-5 kms, will monitor the Level B harassment zone (i.e., those waters where sound levels are estimated to be at or above 160 dB rms) to



determine take numbers for non-listed marine mammals and call for pile driving shut down should a ESA-listed species enter this zone.

- (iii) PSOs will be stationed at the highest vantage point possible aboard support vessels.
- (iv) A PSO will also be aboard the acoustic monitoring vessel to observe for marine mammals.
- (v) All PSOs will be in contact with each other and the Resident Engineer (or other authorized person) at all times.

(b) *Acoustic Monitoring*

- (i) Bluewater will carry out an acoustic study as described in the application (Attachment 1- Underwater Noise Survey Protocol). The plan includes the use of hydrophone array deployed by vessel within the near field (i.e., within 1,000 m) which provides data in real time and two autonomous recorders in the far field (2km and 5km from the hammer) which will archive sound data until they are retrieved and downloaded.
- (ii) Based on the data collected at the each site, the EZ may be adjusted accordingly (but not less than 1,000 m) and from the autonomous recorders at the Delaware site, estimates to the Level B isopleths may be refined for the New Jersey site after adjustment for water depth differences.
- (iii) Should the Bureau of Ocean Energy Management conduct a concurrent noise survey, Bluewater will cooperate and communicate sightings with BOEM personnel.

6. Reporting

Bluewater will submit a Final Technical Report, which will incorporate PSO sightings and acoustic survey results, to NMFS within 120 days after the expiration of the IHA. After re-establishment of an exclusion zone, if it occurs, a report detailing the field verification measurements will be submitted to NMFS within 7 days of construction.

- (a) *Protected Species Observer Sightings*: PSOs will report on operation and sighting data collected during the period of pile driving at each site location. Data should include, but is not limited to:


- (i) Date, time and weather condition during sighting;
- (ii) Number of marine mammals observed, by species and age class (if possible);
- (iii) Behavior of marine mammal at time of sighting, including direction with respect to hammer location;
- (iv) Any observable changes in behavior, including overt reactions (e.g. tail slapping, breaching, distinct change in direction) during sighting;
- (v) Initial and closest distance of marine mammal to hammer; and
- (vi) Construction activities occurring at time of sighting, specifically noting if pile driving was ramping up or at full power and, if hammering, how long hammering was occurring before sighting.

(b) *Acoustic Survey Results*: The acoustic survey results will be presented in the final report and should include, but is not limited to, the following:

- (i) A detailed account of the methodology employed to collect data (e.g., equipment used, location of vessel in relation to pile during data collection, if the vessel was stationary or drifting, etc.)
- (ii) Hammer operation details (i.e., was data collected during ramp-up, upon onset of pile driving, etc.)
- (iii) The levels, durations, and spectral characteristics of the impact pile driving sounds; and
- (iv) The peak, rms, and energy levels of the sound pulses and their durations as a function of distance, water depth, and tidal cycle.

(c) *Incident Reporting*: Should a marine mammal be observed to display significant behavioral reactions (e.g., fleeing the area) in response to pile driving or incur injury or mortality from the activity (including from ship strike), the incident will be reported to NMFS within 24 hours.

- 7. A copy of this Authorization must be in the possession of each observer or group operating under the authority of this Incidental Harassment Authorization.
- 8. This Authorization may be modified, suspended, or withdrawn if the holder 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 mammal, or if there is an unmitigable adverse impact on the availability of such species or stocks for subsistence uses.

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

  
Date