Supplemental North Atlantic Right Whale Monitoring and Mitigation Plan for Pile Driving

Submitted To:

National Marine Fisheries Service

Office of Protected Resources

Silver Spring, MD

Submitted By:

SouthCoast Wind Energy LLC

January 2024

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1 Introduction

SouthCoast Wind Energy LLC (SouthCoast Wind), a 50/50 joint venture between Shell New Energies US LLC (Shell New Energies) and OW North America LLC (Ocean Winds), is working to develop an offshore wind renewable energy generation project (the Project) located in federal waters off the southern coast of Massachusetts in the Outer Continental Shelf (OCS) Lease Area OCS-A 0521 (Lease Area). This North Atlantic Right Whale (NARW) Monitoring and Mitigation Plan for Pile Driving describes the methods that will be used to monitor the pre-start clearance and shutdown zones as well as the Level B harassment zones during installation of Project foundations that occur within an area of concern initially defined by NMFS as waters within 20 km of the 30 m isobath on the west side of Nantucket Shoals (Figure 1). SouthCoast Wind is initially proposing this supplemental monitoring based on input from NMFS, which may be revised based on the best scientific and commercial data available upon approval from NMFS, consistent with the adaptive management approach incorporated into this plan.

This supplemental monitoring is included in the Mitigation and Monitoring Plan at NMFS' request. SouthCoast Wind believes that supplemental monitoring in the NMFS defined area of concern is not supported by the best available scientific evidence, and we continue to request from NMFS evidence on the necessity of this supplemental zone. Some of the topics raised by SouthCoast Wind were discussed in general terms during phone conversations with NMFS, but to date, no written responses directly addressing our specific questions have been received. Achieving a more complete understanding of the scientific basis for NMFS's concerns with the pile driving planned in the specific location would allow SouthCoast Wind to create a monitoring and mitigation plan tailored to addressing the concerns. Once SouthCoast Wind finalizes this Mitigation and Monitoring Plan and its associated measures, those measures will be subject to an adaptive management approach pursuant to which SouthCoast Wind may propose for NMFS' approval, revisions to the supplemental monitoring and/or the zone in which it is required based on the best available scientific evidence in order to ensure the practicability of monitoring measures while minimizing adverse impacts to NARW.

This monitoring plan for pile driving is meant to supplement the existing monitoring and mitigation measures currently described in the request for Incidental Take Regulations (ITRs), which was deemed Adequate and Complete by NMFS on September 19, 2022. This includes the "Standard" measures that are applicable to all aspects of the proposed activity (see Section 11.1 in the ITR Application), such as PSO and PAM operator qualifications, training requirements and responsibilities, data recording protocols and software, reporting procedures, and noise attenuation systems for foundation installations. The standard conditions will remain applicable to the additional monitoring described in this plan, so they are not repeated here. Additionally, no vibratory pile driving will be used during the installation of the first 72 foundation positions in the northern portion of the Lease Area (Project 1), which includes all locations within the NMFS area of concern.

The monitoring methods and technologies described in this plan are based on what is currently available. Ongoing efforts by various academic, government, non-government and industry entities, from the time of submission of this document to initiation of construction by SouthCoast Wind are likely to produce improved detection methods for NARW. Advances made between now and the anticipated construction of the Project may also reduce uncertainties around current best practices as well as a better

understanding of the abundance, presence and habitat use by NARW in this region. This Mitigation and Monitoring Plan adopts an adaptive management approach pursuant to which SouthCoast Wind may propose for NMFS' approval revisions to the monitoring and mitigation methods and technologies described in this plan. Such modifications would be based on the best available scientific evidence in order to ensure the practicability of monitoring and mitigation methods and technologies while minimizing adverse impacts to NARW, reducing risk to human safety, and maintaining consistency with the latest best practices and mitigation requirements from regulatory agencies to deliver the Project in the safest and most efficient way to meet State and Federal targets.

The methods described in this plan are primarily focused on times with sufficient daylight to conduct observations. If pile driving at night is determined to be feasible, a separate Nighttime Monitoring Plan that builds off this plan and describes the additional monitoring tools and methods to be implemented at night will be submitted to NMFS for review and approval.

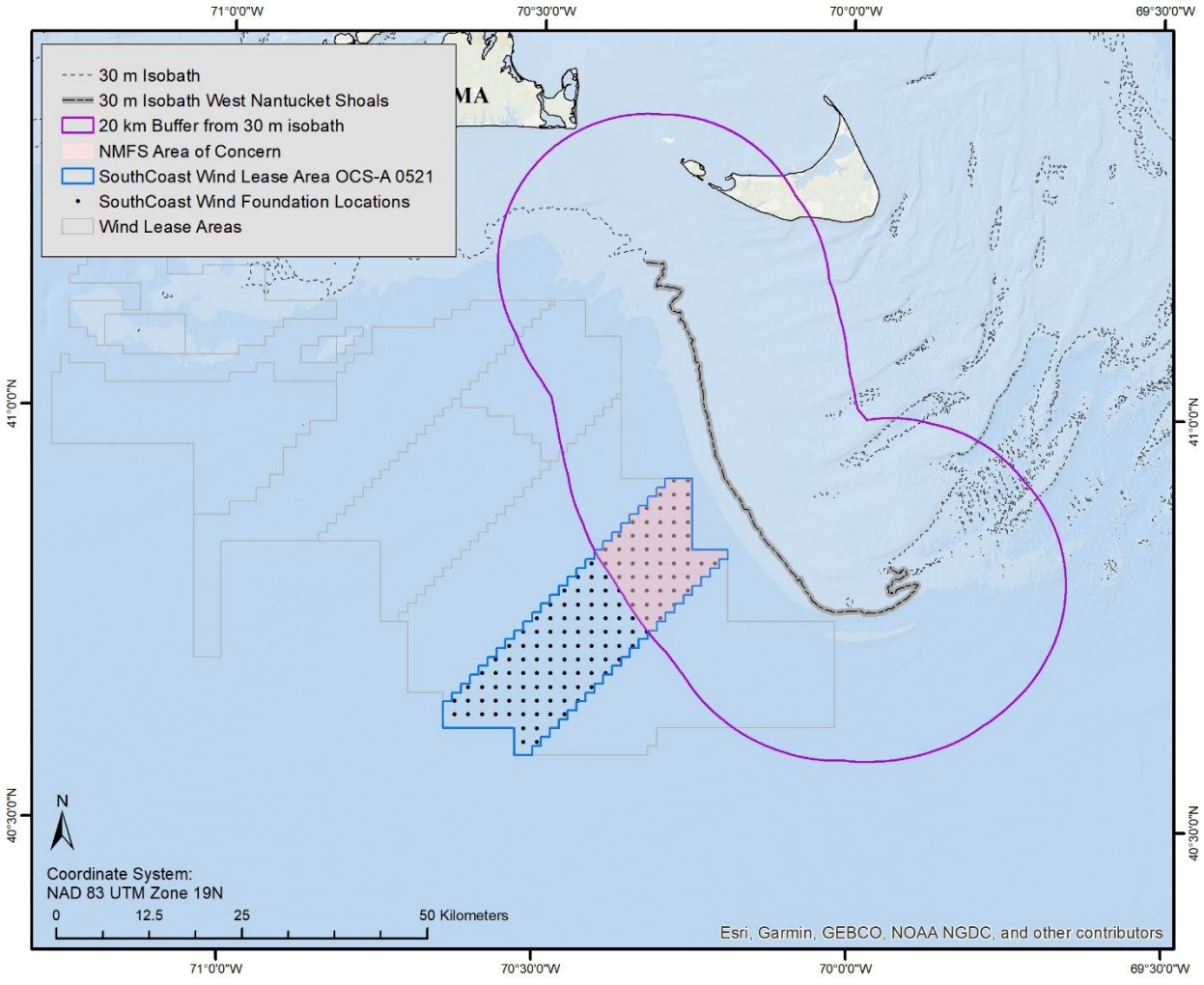

Figure 1. Map showing the OCS-A 0521 Lease Area, 30-m isobath on Nantucket Shoals, and a 20-km buffer around that line creating the NMFS defined area of concern.

2 WTG and OSP Foundation Installations – Anywhere in the Lease Area

The following monitoring and mitigation measures will apply to pile driving during the installation of both WTG (monopiles and/or pin piles) and OSP pin pile foundations installed anywhere in the Lease Area, including those located inside and outside of the area of concern identified by NMFS.

2.1 Seasonal Restrictions

As described in the ITR Application, no pile driving for foundation installations will occur from January 1 through May 14 each year[1].

2.2 NARW Clearance and Shutdown Zones

The clearance and shutdown zone for NARW will be extended to include a visual detection of a NARW by SouthCoast Wind monitoring activities at any distance from the pile driving platform and dedicated PSO vessels. Similarly, the PAM clearance and shutdown zone will be extended to include an acoustic detection of a NARW localized within the relevant Level B harassment zone of the specific activity about to be or being conducted. As stated in the ITR application, shutdowns will occur unless doing so poses a risk to human or vessel safety or jeopardizes the installation process.

Additionally, any large whale sighted by a PSO or detected by a PAM operator that cannot be identified as a non-NARW will be treated as if it were a NARW and appropriate mitigation measures requested.

2.3 Vessel-based Monitoring

2.3.1 Installation Vessel

The number of PSOs on duty (conducting watch) from the installation vessel during the pre-start clearance period and active pile driving will be increased from 2 to 3. This is intended to improve coverage of the pre-start clearance and shutdown zones in all directions around the stationary installation vessel.

2.3.2 Monitoring Vessels

To increase the probability of detecting NARW in the applicable shutdown zones, 3 monitoring vessels will be used. Each vessel will operate in such a way as to provide visual coverage of waters beyond the 2–3 km effective monitoring range[2] of PSOs on the installation vessel. For example, to cover the 3.5 km shutdown zone around WTG monopiles installed using impact pile driving during summer months, each monitoring vessel will circle the pile location at a distance of approximately 4 km. This 3.5 km shutdown zone size is based upon the modeled maximum non-fin whale Level A exposure range, which for WTG monopiles installed during the summer months is for the humpback whale. This will provide additional visual coverage of the outer range of the shutdown zone as well as portions of the Level B harassment zone (Figure 2).

[1] Additional monitoring, detailed in Section 3, will be required during pile driving in the Lease Area from May 15-31 and in December.

[2] Effective monitoring range (2–3 km) represents a distance within which an individual large whale is highly likely to be detected.

Since the monitoring vessels will be underway, each vessel will have 3 PSOs on duty during pre-start clearance and pile driving periods. The use of 3 PSOs searching for marine mammals at longer ranges from a vessel underway is more than the monitoring typically conducted during NMFS abundance surveys for marine mammals (NMFS 2018, 2019a,b). Monitoring will be conducted using the standard handheld reticle binoculars and big-eye binoculars. Alternative visual monitoring tools will be available when monitoring during low-light conditions (assuming the minimum visibility zone requirement is met).

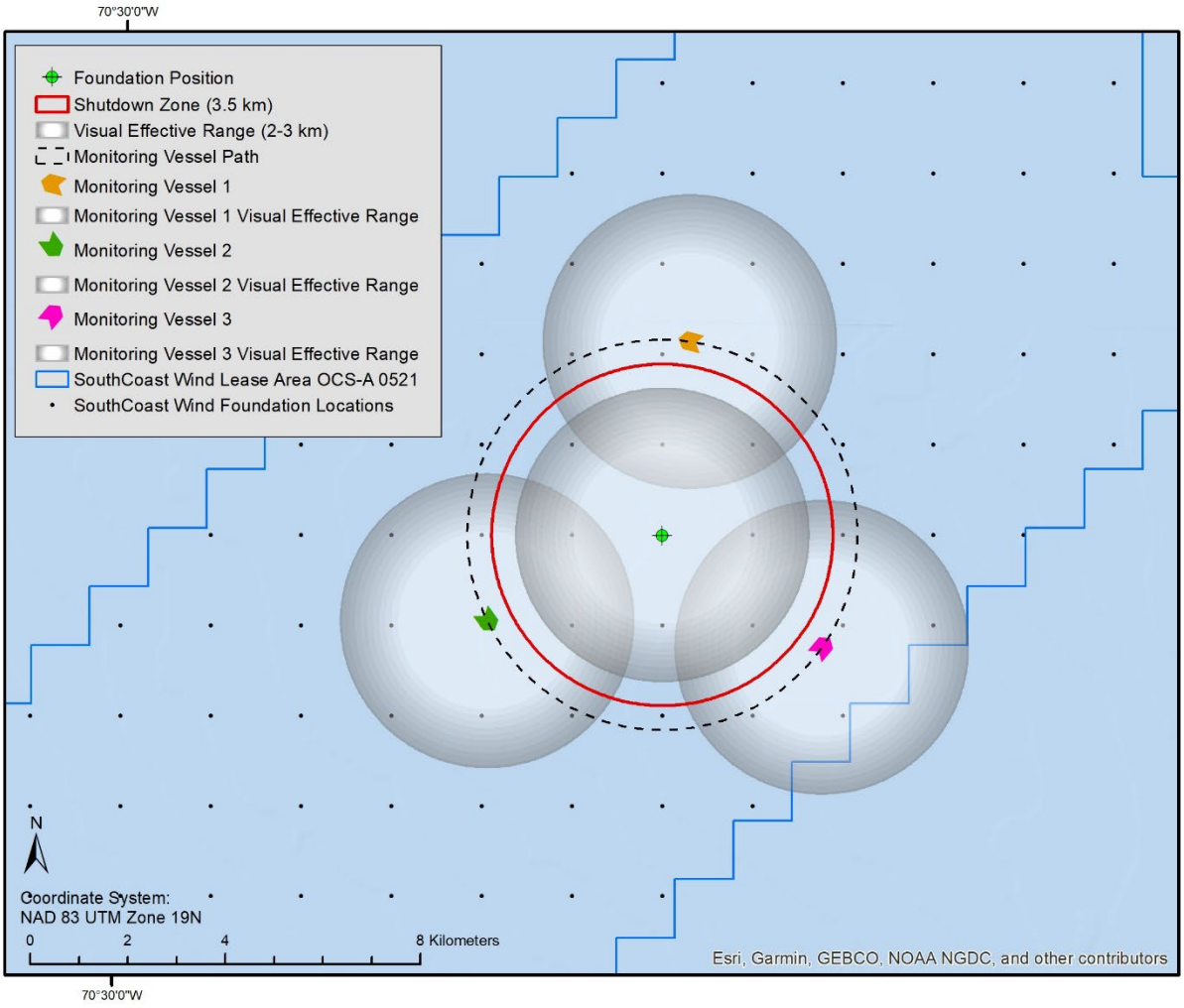

Figure 2. Map showing the path of 3 monitoring vessels circling the installation site at a distance of 4 km to provide additional visual coverage of the shutdown zone for installation of a 9/16 m (tapered) WTG monopile installed using impact pile driving in summer.

2.4 Acoustic monitoring

The acoustic monitoring described in the ITR Application (Section 11.1.4) is designed towards detecting marine mammals in or near the shutdown zone. To reduce potential impacts to NARW at the somewhat larger distances associated with the relevant Level B harassment zone, a sufficient number of near-real-time acoustic monitoring systems with the ability to localize whale calls will be deployed within

or around the Lease Area to detect NARW vocalizations. Per NMFS request, SouthCoast Wind will acoustically monitor a larger distance than the Level B harassment zones by deploying a PAM array to cover a 15-km zone for monopile installation and a 10-km zone for pin pile installation. NARW calls localized within the relevant PAM monitoring zone will result in a delayed start or shutdown of pile driving.

3 WTG and OSP Foundation Installations – Inside the 20-km Area of Concern and Outside the 20-km Area of Concern between May 15-31 and in December

The following monitoring and mitigation measures will apply to pile driving during the installation of WTG and OSP foundations located within the area of concern identified by NMFS (Figure 1) from August 1 through October 15 and outside the area of concern from May 15–31 and in December. Foundation installations within this area that occur in June and July will only require the monitoring described above in Section 2 of this plan.

3.1 Seasonal Restrictions

On top of the seasonal restrictions described above in Section 2.1, no pile driving for WTG or OSP foundation installations will occur within the area of concern during the month of May or after October 15. As noted above, foundation installations in the months of June and July will utilize the same monitoring and mitigation measures described above in Section 2.

3.2 Installation Sequencing

Beginning on June 1, installations within the 20-km area of concern will begin at the northern-most position within the Lease Area and will progress in a north to south direction moving away from Nantucket Shoals. During foundation installation within the area of concern between August 1 and through October 15, additional monitoring will occur as described below. If alternative technologies for conducting the monitoring described here become feasible (e.g. uncrewed aircraft), this plan may be revised to incorporate those methods, subject to further review and approval by NMFS.

3.3 Vessel-Based Monitoring

Vessel-based monitoring during Project 1 will be used to clear the relevant WTG and OSP Level B harassment zones of NARW prior to pile driving for foundation installations.

- One additional dedicated vessel (for a total of 4 monitoring vessels) will conduct visual monitoring for NARW and other marine mammals within NMFS-requested zone of approximately double the relevant Level B harassment zone for WTG and OSP foundations in summer using impact pile driving only.
    - WTG foundation installation (9/16 m, up to 2/day): 15 km for monopiles and 10 km for jacket pin piles.
    - OSP jacket pin pile installation (4.5 m, 4/day): 10 km for jacket pin piles.
- Each monitoring vessel will have three PSOs on duty during all monitoring activity.

- During WTG monopile installations in summer, 2 monitoring vessels will travel at less than 10 knots along a circular path ~10 km from the pile driving location to clear the 15 km zone while 2 vessels travel at less than 10 knots along a circular path ~4 km from the pile to help clear both the Level A and 15 km zones (Figure 3).
    - The visual detection range (5–10 km) represents the range within which large whales can be detected, especially when in groups or engaged in certain behaviors such as feeding or social activity. Detection of single individuals is less likely at these longer distances compared to the 2–3 km visual effective range shown in Figure 2.
- During OSP pin pile installations in summer, 2 monitoring vessels will travel at less than 10 knots along a circular path ~8 km from the pile driving location to clear the 10 km zone while 2 vessels will travel at less than 10 knots along a circular path ~4 km from the pile driving location to help clear both the Level A and 10 km zones (Figure 4).

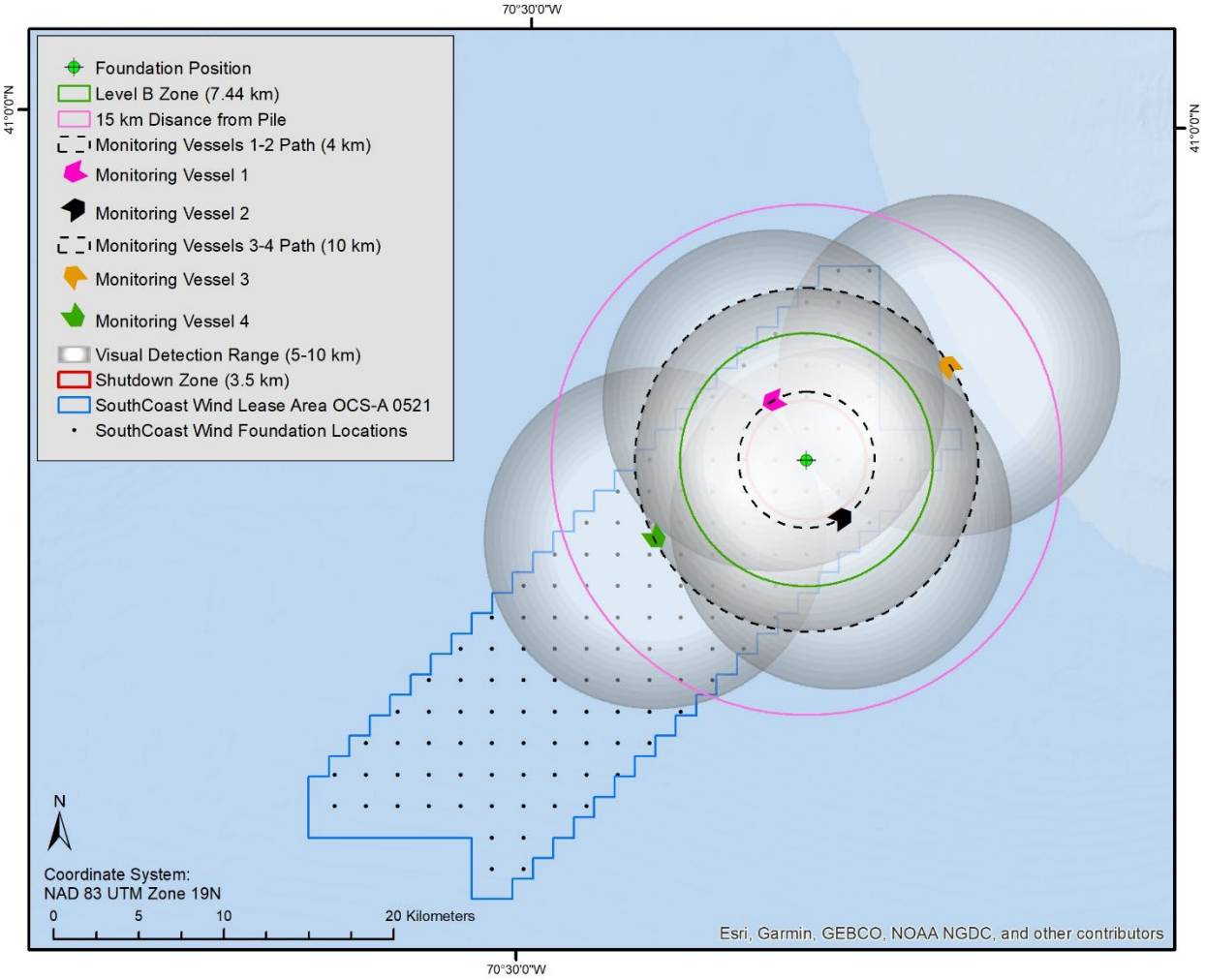

Figure 3. Map showing example monitoring vessel paths for clearance of the installation of a 9/16 m (tapered) WTG monopile installed using impact pile driving between August 1 – October 15.

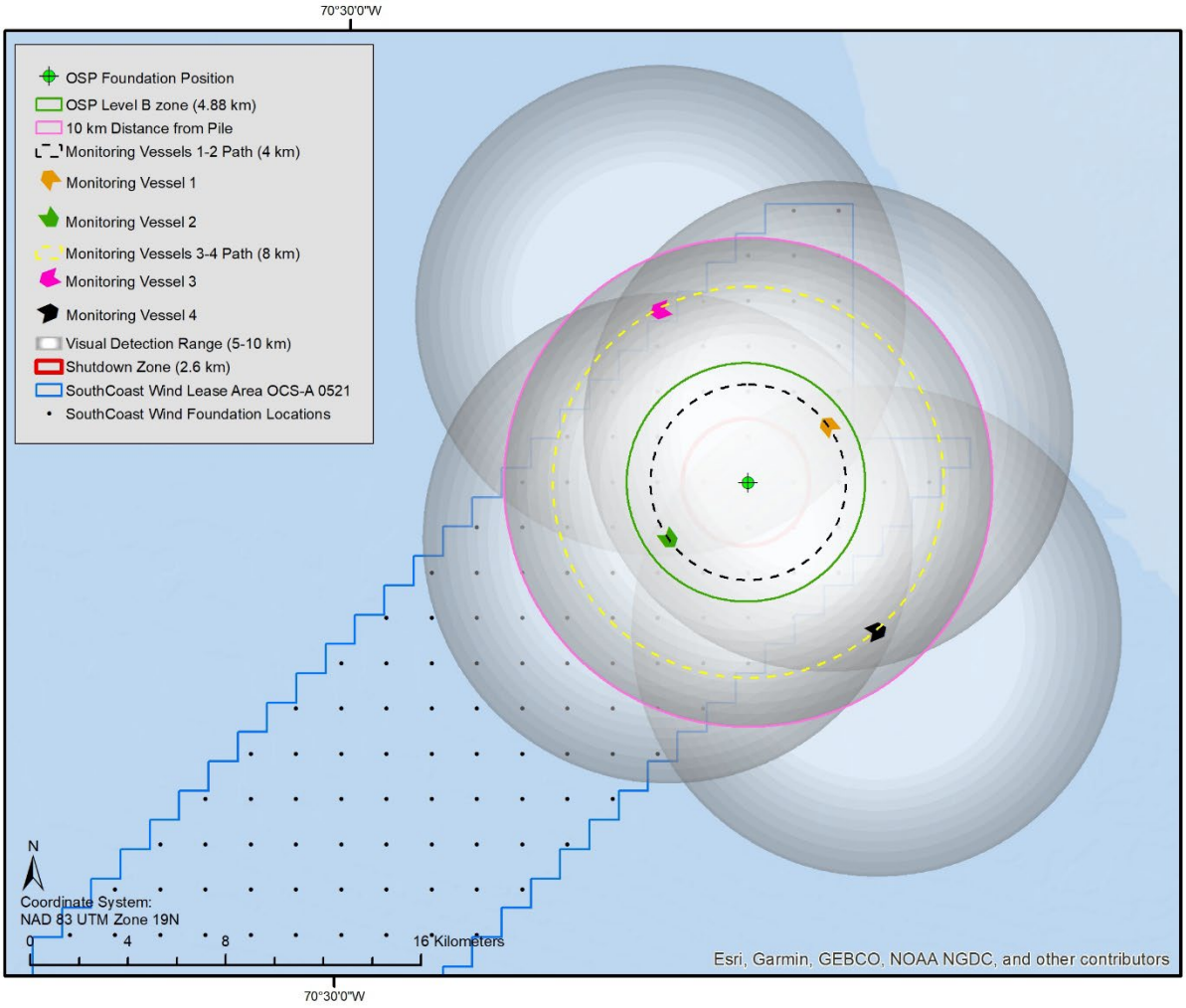

Figure 4. Map showing example monitoring vessel paths for clearance of the installation of 4.5 m OSP jacket pin pile foundation installed using impact pile driving between August 1 – October 15.

3.4 Acoustic Monitoring

The acoustic monitoring that will be conducted for installations will be the same as that described in Section 2.4 for installations anywhere in the Lease Area.

3.5 Mitigation Measures

The following mitigation measures will be implemented for detections of NARW by monitoring efforts related to foundation installations:

- If a delay or shutdown of pile driving is triggered by a visual observation of fewer than 3 NARWs, pile installation may not resume until the following day, and must be preceded by a vessel-based survey of an area out to the 15-km zone for monopiles or the 10-km zone for pin piles wherein no NARWs are detected.
- If a delay or shutdown of pile driving is triggered by a visual observation of 3 or more NARWs, pile installation may not resume for two days, and must be preceded by a vessel-based survey out

to the 15-km zone for monopiles or the 10-km zone for pin piles wherein no NARWs are detected.

- If a delay or shutdown of pile driving is triggered by an acoustic detection localized within the 15-km zone for monopiles or the 10-km zone for pin piles, pile installation may not resume until the following day, and must be preceded by a vessel-based survey of the 15-km zone for monopiles or the 10-km zone for pin piles wherein no NARWs are detected.

4 Literature Cited

NMFS. 2018. Cruise Report NOAA Ship Gordon Gunter Cruise GU18 03 January - March 2018, GoMMAPPS Winter 2018 Research Cruise (NOAA, National Marine Fisheries Service, Southeast Fisheries Science Center). U.S. Department of Commerce. https://www.boem.gov/sites/default/files/environmental-stewardship/Environmental-Studies/GOMR/Oceanography/GoMAPPS/NOAA-Ship-Survey-January-March-2018.pdf

NMFS. 2019a. Annual Report of a Comprehensive Assessment of Marine Mammal, Marine Turtle, and Seabird Abundance and Spatial Distribution in US Waters of the Western North Atlantic Ocean - AMAPPS II , 2020. https://doi.org/10.25923/v2pq-ht50

NMFS 2019b. Cruise Report. NOAA Ship Pisces Cruise PC18-05 August - October 2018 GoMMAPPS Summer/Fall 2018 Research Cruise (NOAA, National Marine Fisheries Service, Southeast Fisheries Science Center). U.S. Department of Commerce. https://www.boem.gov/sites/default/files/documents/environment/environmental-studies/GoMMAPPS%20Summer-Fall%202018%20Research%20Cruise%20Report.pdf