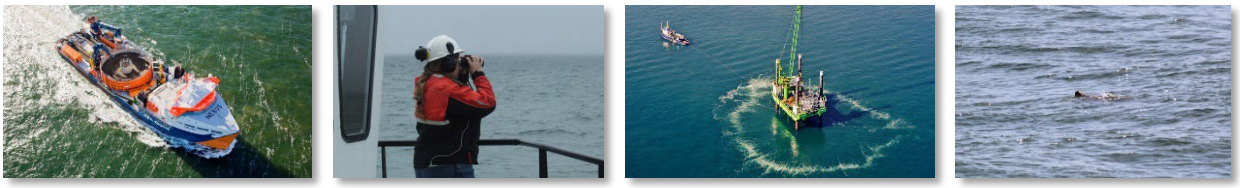
A.I.S., Inc.

Protected Species Monitoring Final Report

PROTECTED SPECIES MONITORING SERVICES DURING 3D HIGH RESOLUTION TESTING CAMPAIGN IN WEST DELTA AREA

FINAL REPORT



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Confidentiality The information summarized in this Final Report was collected by A.I.S., Inc. for Fugro U.S.A. Marine, Inc to be distributed to their client and the National Marine Fisheries Service as required by the Letter of Authorization granted to them on July 23, 2025.

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APPENDICES

Appendix A: A.I.S. Inc., Final Activity Report Summary

List of Abbreviations

AIS	A.I.S., Inc.
BOEM	Bureau of Ocean Energy Management
BSS	Beaufort Sea State
BZ	Buffer Zone
ESA	Endangered Species Act
EZ	Exclusion Zone
Fugro	Fugro U.S.A. Marine, Inc.
LOA	Letter of Authorization
MMPA	Marine Mammal Protection Act
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
PSO	Protected Species Observer
TI	Thermal Imaging
USFWS	United States Fish & Wildlife Service

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1. EXECUTIVE SUMMARY

This report summarizes protected species monitoring and observations during the Fugro U.S.A. Marine, Inc. (Fugro) West Delta Area geophysical testing operation completed in August of 2025 off the coast of Louisiana. This survey campaign was completed to test a new *Sercel Mini G-source array* in an area in which the substrate is already thoroughly documented. The campaign took place in the West Delta Area in block 124. The Letter of Authorization (LOA) (LOA; 90 FR 35509) issued by National Marine Fisheries Service (NMFS) on July 23, 2025 with effective dates of August 20, 2025 through August 21, 2025, contains stipulations requiring monitoring and mitigation for marine mammals during geophysical survey operations. To comply with these requirements, Fugro contracted A.I.S., Inc. (AIS) to provide Protected Species Observers (PSO) to monitor for marine mammals and sea turtles during on-water survey operations.

The PSO team was mobilized to the project site and maintained watch for a period of two days, between August 20, 2025 and August 21, 2025. Geophysical survey operations were only conducted for 15 minutes on August 21, 2025. Due to the potential for harassment of listed or otherwise protected marine species as a result of the sound generated by these operations, a team of three PSOs were deployed to Port Fourchon, LA. PSOs were stationed on the survey vessel, *M/V Holiday*, and were able to view the entirety of the exclusion zone surrounding the sound source at all times monitoring efforts were underway. The PSOs monitored in accordance with regulations set forth within the LOA.

During this campaign, two protected species were detected. However, these detections did not result in operational shutdowns or require a pre-clearance delay, and resulted in no time lost due to protected species. Furthermore, none of the detections met the criteria for Level B takes. Additional information about the two protected species detections are provided in Section 5 of this report.

Table 1 Campaign Overview

Client	Fugro U.S.A. Marine, Inc.
Lease Number	G27958 (EXPIR) per BOEM
Survey Area	West Delta Area Block 124
Dates	August 20, 2025 through August 21, 2025
Geophysical Survey Contractor	Fugro U.S.A. Marine, Inc.
Protected Species Observer Contractor	A.I.S., Inc.
Protected Species Observers	Ruth Cerda Vega, Jessica Roberts, McKenna Schnaubelt

2. INTRODUCTION

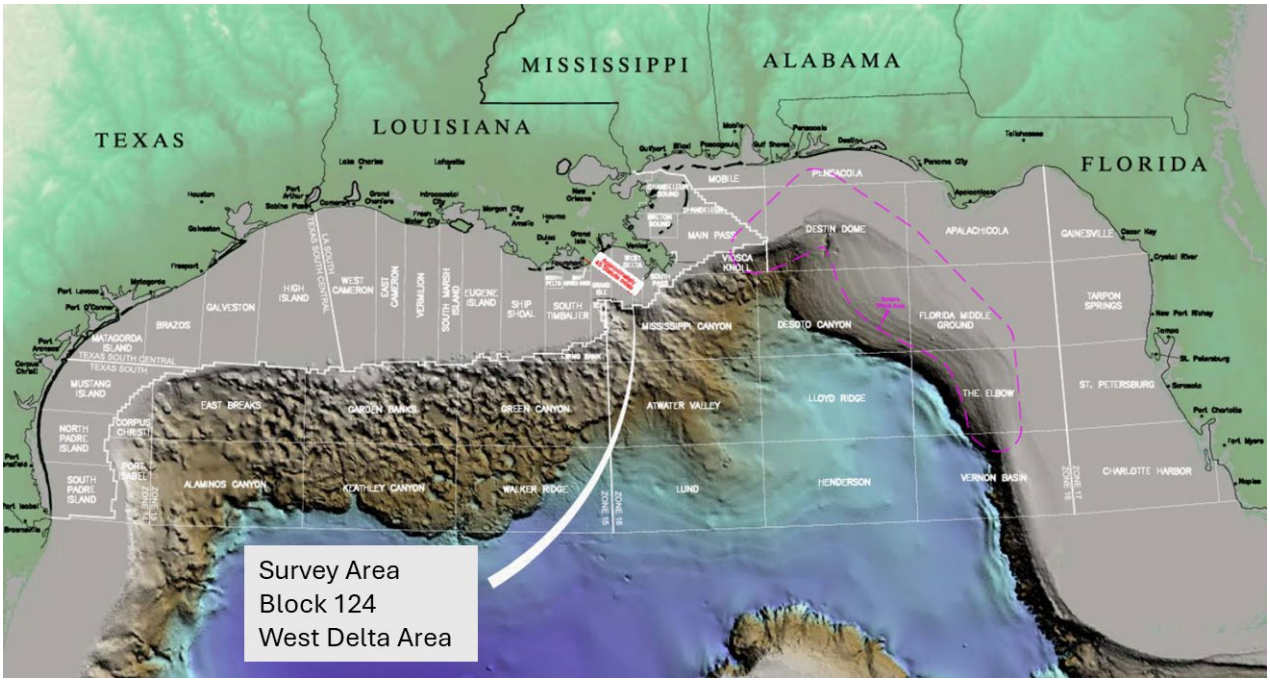

Figure 1 Overview of the West Delta Area in block 124

The Endangered Species Act (ESA) and Marine Mammal Protection Act (MMPA) were enacted to protect endangered species and marine mammals respectively, and both prohibit the "taking" of these animals. They are administered by the National Oceanic and Atmospheric Administration (NOAA), NMFS and United States Fish & Wildlife Service (USFWS) which issue authorizations for activities that have the potential to incidentally "take" by harassment members of a protected species. Under section 7 of the ESA, federal agencies are required to consult with NOAA and USFWS if the authorized activities that are being undertaken may adversely affect or result in an incidental take of protected species (NOAA Fisheries, 2023). On July 23, 2025, Fugro U.S.A. Marine, Inc. was issued an LOA (LOA; 90 FR 35509) for activities related to the geophysical campaign within the West Delta Area lease block 124. The project specific LOA outlined the monitoring, mitigation, and reporting requirements for three specific marine protected species, with additional requirements laid out for reporting sightings injured, stranded, or entangled protected species. These were species specific to the area with the highest potential to be affected by acoustic disturbance from planned in-water operations. This report reviews the complete results from the August 2025 geophysical campaign efforts in waters of the West Delta Area lease block 124.

3. PROTECTED SPECIES OBSERVATION METHODS

Monitoring and mitigation measures were designed to minimize potential impacts of sound produced by testing operations on protected species and were implemented in accordance with the LOA and specific client requirements. The mitigation and monitoring measures associated with these testing operations were as follows:

- **PSO Monitoring Schedule and Time of Day Restrictions:** During regulated survey operations utilizing the acoustic source, or when acoustic sources will be in the water, a minimum of two PSO must be on

duty and conducting visual observations during all daylight hours. Daylight hours are defined by the regulator as the time from 30 minutes prior to sunrise through 30 minutes following sunset. PSOs are scheduled to work in shifts to ensure that each individual does not exceed two consecutive hours of watch followed by a minimum of a one-hour break and does not go over 12 hours of watch in a 24-hour period.

- **Pre-Start Clearance Observation (Pre-Start Clearance):** PSOs will implement a 30-minute pre-start clearance of the shutdown zone, monitoring around the area prior to the startup of any in water sound producing equipment for the day, after pauses of 30-minutes or more (without continuous PSO monitoring) and after periods of inclement weather or other factors that cause the shutdown zone and adjacent waters to be non-observable. During this period, the zone will be monitored by two PSOs equipped with the appropriate visual monitoring technology. Regulated sound sources will not be activated if any protected species are observed within the exclusion zone and/or buffer zone. If protected species are observed entering or within the established mitigation zones within the 30 minutes prior to activation of equipment, regulated survey activities will be delayed and may not commence until either the animal(s) has voluntarily left and been visually confirmed beyond the shutdown zone or 15 minutes for small delphinids and 30 minutes for all other species have elapsed without subsequent detection.

- **Ramp-up/Soft Start Procedure:** There was no ramp up for this campaign as there was no requirement for ramp up in the provided NMFS LOA.

- **Shutdown zones:** PSOs will establish shutdown and monitoring zones prior to the start of operations, as follows:
  - Standard exclusion zone (EZ) of 0-100 meters during survey operations
  - Buffer zone (BZ) of 100-200 meters during pre-start clearance

- **Shutdowns:** If a listed or otherwise protected marine species for which takes have not been authorized, is sighted entering or observed within the relevant shutdown zone during active survey operations, an immediate shutdown of regulated sound source equipment will be required. Regulated survey activities will not resume until the animal(s) has been confirmed to have left the relevant shutdown zone or 30 minutes have elapsed without subsequent detection.

- **Post-Survey Activity Observation (Post-Watch Clearance):** Following the completion of survey activities using acoustic sound sources PSOs will implement a 60-minute post-watch of the shutdown zones. During this period, the zone will be monitored by at least two PSOs equipped with the appropriate visual monitoring technology. Any protected species that are observed entering or within the established zones during these 60-minutes will be noted in the data.

- **Vessel Strike Avoidance:** Vigilant watch will be maintained during transits to ensure vessel operators will reach their destination safely and without causing harm to any protected species. PSOs and vessel crew are trained to distinguish and identify marine mammals, especially in the detection of Rice's Whale. Vessel strike avoidance watch will be completed by either one PSO or one member of the vessel crew that has been trained to identify marine mammals into broad categories.

- **Harassment, Harm, Injury and Disturbance Reporting:** PSOs will immediately report instances of harassment, harm, or injury to protected species as well as instances of unidentified whale detections or any entangled or dead protected species.

3.1. Protected Species Observer Training and Compliance

A team of three NMFS-approved PSOs were provided by AIS for monitoring aboard the *M/V Holiday* during geophysical survey operations in the West Delta Area lease block 124. All PSOs attended a dedicated pre-project training course on Monday August 11, 2025, prior to deploying. PSO training involved a detailed review of the following:

- Permits relevant to the project
- Environmental compliance requirements
- Health and safety requirements
- PSO requirements and scheduling
- Listed and Protected species mitigation methods
- Communication
- Data forms
- Use and maintenance of PSO equipment
- Protected species identification.

3.2. Monitoring Methods and Equipment

To fulfill protected species monitoring and mitigation requirements, three PSOs deployed offshore and rotated monitoring shifts to ensure that each individual did not exceed two consecutive hours of watch followed by a minimum of a one-hour break. Watches overlapped as required but never exceeded the regulatory requirements. In accordance with the LOA, at least two visual observers maintained a 360° visual watch of the shutdown zone surrounding the operational area during survey operations. PSO duties included:

- Maintaining vigilant watch for marine protected species and communicating any sightings in the strike zone to vessel operators during all vessel transits, ensuring strike avoidance measures were met;
- Visually monitoring the EZ, BZ and monitoring zone 360° around the sound source during survey operations for the presence of marine protected species (marine mammals, sea turtles and ESA listed fishes);
- Documenting all marine protected species sightings, observer effort, and environmental conditions on standard data forms and reporting all incidents to proper personnel;
- Recording operational activities during monitoring effort;
- Informing vessel and survey operators if a protected species is heading towards the shutdown zone;
- Calling for a shutdown if a marine protected species is observed entering or surfaces within the shutdown zone;
- Advising operators on mitigation requirements in the event of marine protected species detections;
- Ensuring all mitigations actions (pre-start clearance, delay ramp-up, ramp-up and shutdown) are enacted;
- Summarizing daily monitoring effort and submitting data forms to the appropriate staff.

PSOs were equipped with a range of visual monitoring equipment, including the following:

- Hooway/Bushnell 7X50 Marine Reticle Binoculars with compass;
- FLIR Scout III 640 (640x512) Thermal Imaging (TI) Monocular;

- Canon Rebel T6 with 300mm Image Stabilized lens;
- Garmin Etrex 20 Global Positioning Unit (GPS);
- Uniden MHS126 Marine Radio.

4. OPERATIONAL & PSO EFFORT SUMMARY

A brief overview of operational activities including vessel deployments, operations utilizing regulated geophysical sound sources and PSO effort is included in the below sub-section. A detailed timeline of all PSO effort and survey activities can be found in the Microsoft Excel file accompanying this report (AIS_FUGRO_BP_MVHoliday_20250821_FinalData).

4.1. Operational Activity Summary

Three PSOs deployed onboard the operational vessel *M/V Holiday* each day in order to comply with the monitoring requirements set forth in the aforementioned LOA requiring two PSOs to be on watch during operations. All monitoring occurred onboard the survey vessel, *M/V Holiday,* pictured in **Figure 2** below. PSOs were stationed at the bridge level of the vessel while monitoring, resulting in a base height of 14.9 meters above the water's surface.

Figure 2 Operational vessel *M/V Holiday* where PSOs were stationed and maintained watch

The *M/V Holiday* was offshore from the 20th to the 22nd of August but only conducted geophysical testing operations on August 21st, 2025. PSOs were on station and maintained watch as required by the LOA, during active operations including a pre-start clearance period and a post-watch. **Figure 3** details the amount of time spent offshore per operational activity.

The only regulated geophysical survey equipment in use for this survey was the *Sercel Mini G-source array,* which housed two units, each containing four impulsive sources totaling 160 in^3 in size. Before the activation

of the sound source PSOs conducted pre-start clearance monitoring for a minimum of 30 minutes. Throughout the campaign pre-start clearance occurred once and totaled 30 minutes (**Figure 3**). There were no delays of pre-start clearance due to protected species observations. Testing of the sound source array consisted of periods of partial power acquisition and totaled just 15 minutes. No other geophysical survey activities requiring PSOs occurred during this deployment.

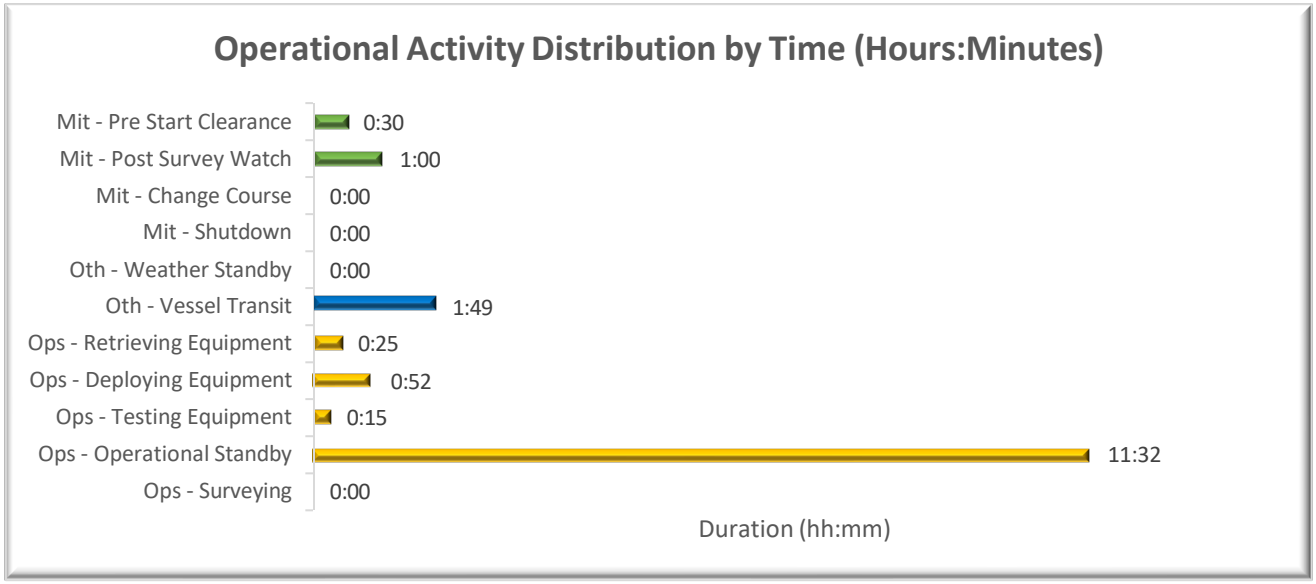

Figure 3 Operational Activity Distribution by Time (hh:mm)

A one-hour post-survey watch was conducted following the completion of geophysical testing activities. It occurred only once and lasted for one hour. Over the course of this campaign, equipment was deployed and retrieved for 52 minutes and 25 minutes, respectively. PSOs remained on watch through the one hour and 49 minutes of vessel transit. Most of the time spent by the PSOs monitoring efforts was conducted during operational standby while the vessel was on site and waiting for the vessel to begin testing operations. The majority of this time was spent waiting for the nodes to be placed[1] which totaled 11 hours and 32 minutes. Full power of the sound source did not occur during the testing of the *Sercel Mini G-source array*. There were zero shutdown of testing operations as no protected species were observed within the exclusion zone during the 15 minutes the sound source was active. As illustrated below in **Figure 4** all periods of data acquisition occurred at partial source volume. The remaining 16 hours and eight minutes that the PSO team was deployed and actively collecting data, the sound source was silent.

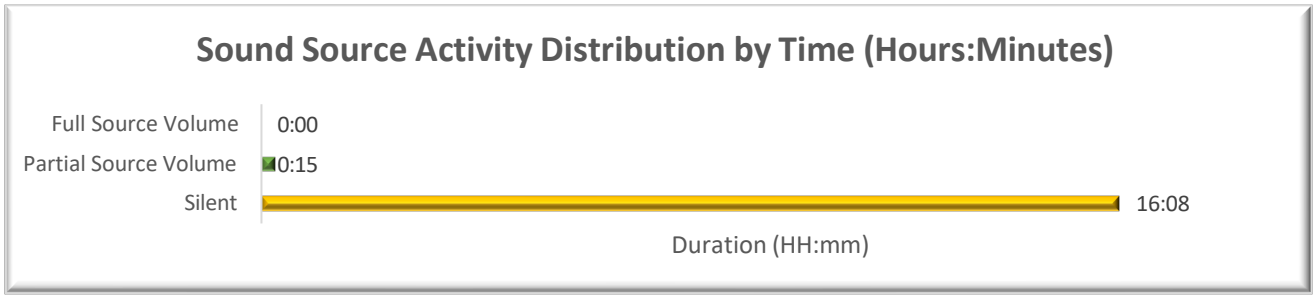

Figure 4 Sound Source Distribution

[1] Please note that while the LOA granted permission for an ocean bottom node (OBN) survey the nodes were not placed due to time constraints. The sound source was tested without the nodes.

The GIS georeferenced, time-stamped vessel tracklines were not collected due to the limited testing of the sound source. The PSO team collected detailed operational information during all sound sources testing operations. From this information, the time and location of each testing line is as follows. The first test line began at 14:45 UTC at location, 28.77581 degrees north and -89.60645 degrees west and ended at 14:55 UTC at location, 28.77931 degrees north and -89.62216 west. The second and final test line began at 15:40 UTC at location 28.76688 north and -89.61675 degrees west and ended at 15:45 UTC at location 28.76687 degrees north and -89.61672 degrees west.

4.2. Protected Species Observer Effort Summary

All PSOs working on this project were submitted for review and approved by NMFS prior to deployment on the campaign. During the course of the survey PSOs visually monitored the area around the source vessel for a total of 15 hours and 51 minutes. During this campaign there were always two PSOs on watch while the sound source was in the water. Further, each PSO maintained a work schedule which allowed all PSOs to perform no more than two hours of watch followed by a one-hour break. No PSOs maintained watch for greater than 12 hours at any point during the campaign. Visual watches during this project occurred during both daylight and nighttime hours, therefore PSOs used a combination of unaided eyes, reticular binoculars and handheld IR thermal imaging as an alternative monitoring technology. While there were only daylight testing operations there was one instance that alternative monitoring technology was used for a nighttime watch. This occurred during the vessel transit to the testing site. Because works were only planned for daylight hours, in the late evening of August 20, 2025 vessel representatives took over the strike avoidance watch until the next morning when PSOs returned to their stations. Monitoring using alternative monitoring technology accounted for 11% of the total observational effort as noted below in **Figure 5**.

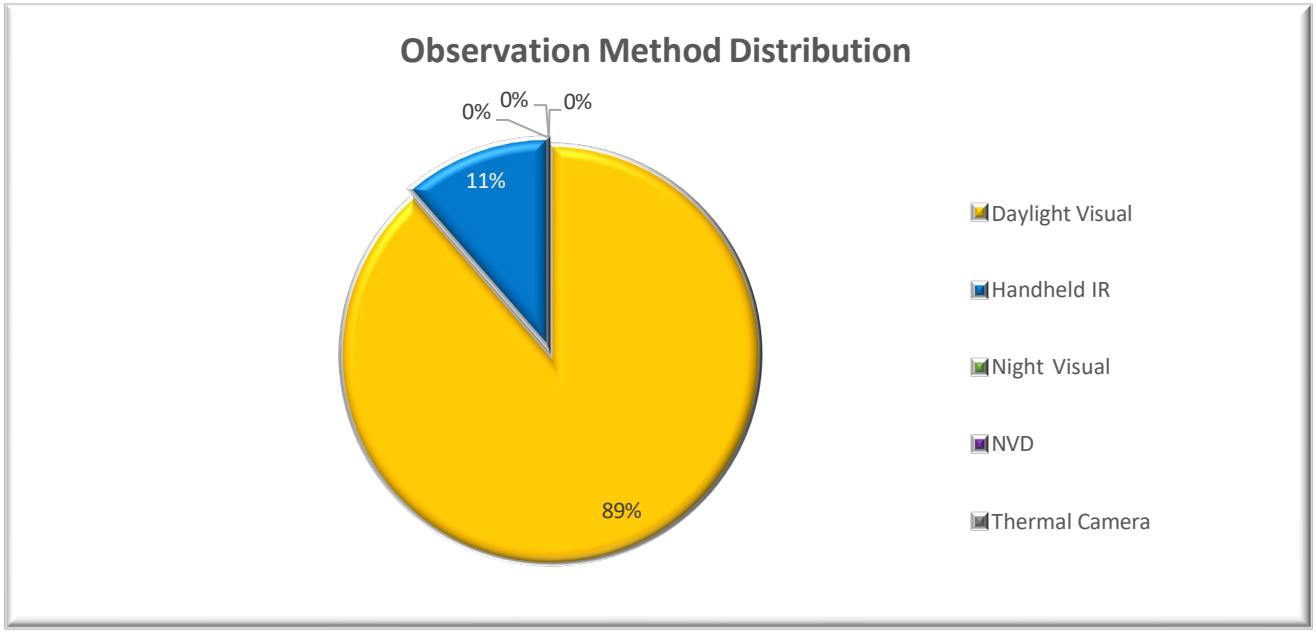

Figure 5 Observation Method Distribution by Type of Monitoring

As required by the LOA, during strike avoidance watch one PSO or vessel representative was monitoring for protected species and implementation of vessel strike avoidance[2]. **Figure 6** below breaks down the amount of

[2] Monitoring done by vessel representatives is not included in PSO data collection and thus not on the data sheet.

time that PSO monitoring occurred. On August 21st, 2025, to ensure that the PSO team could appropriately support planned testing operations only one PSO was on watch until the pre-watch monitoring begun prior to active operation began.

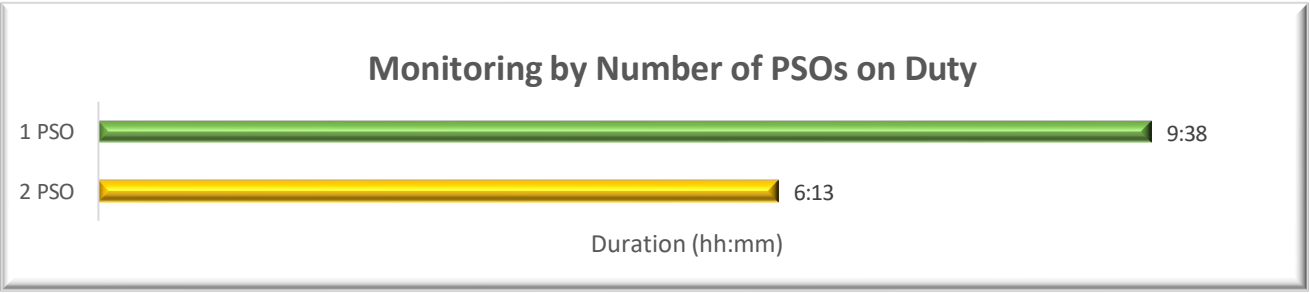

Figure 6 Active Monitoring Effort by Number of PSOs on Duty (hh:mm)

5. PROTECTED SPECIES DETECTION SUMMARY

During the course of the campaign PSOs recorded two detections of protected species totaling nine individual animals as referenced in **Figure 7**. All detections were of bottlenose dolphins (*Tursiops truncatus*), and none of them occurred during active testing operations or triggered a shutdown. For this campaign the detection rate for bottlenose dolphins was 0.13[3]. More detailed information for each sighting are in the "Detections-VSA" of the (AIS_FUGRO_BP_MVHoliday_20250821_FinalData) file. No dead, injured, or stranded protected species or animals were observed by PSOs during monitoring efforts during this campaign.

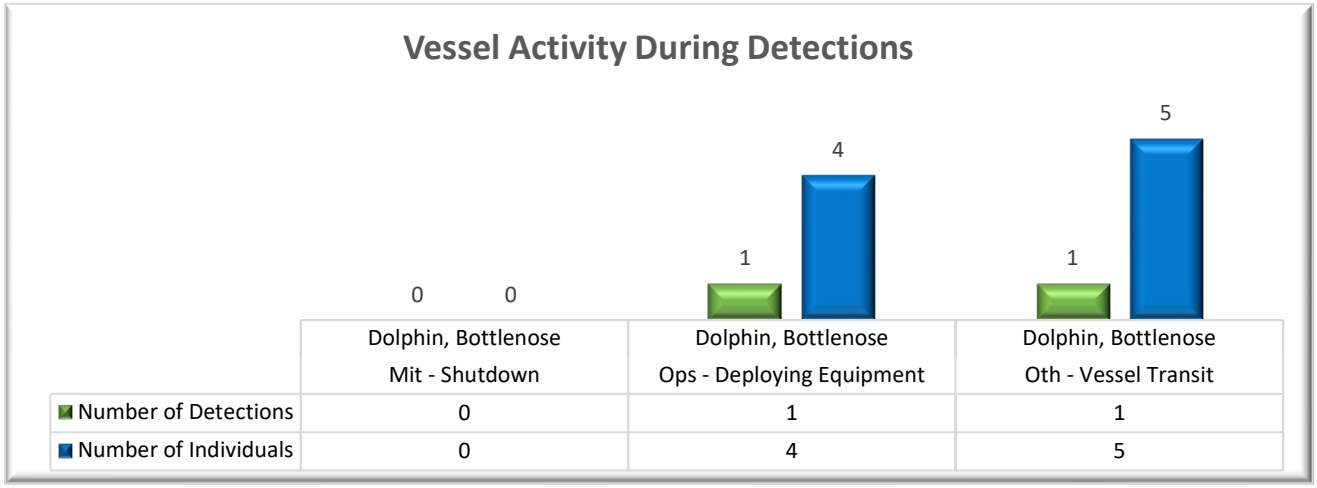

Figure 7 Protected Species Detection Breakdown by Vessel Activity and Number of Individual Animals Sighted

The first detection occurred at 04:05 UTC on August 21st, 2025, while the vessel was transiting to the survey area. A group of five bottlenose dolphins was sighted approximately 100 meters directly off the bow of the vessel. The group traveled towards the vessel before diving underneath. This group was last observed at 04:05 UTC approximately five meters from the vessel and was not seen again. The closest point of approach, five meters, occurred at the time of last sighting (**Figure 8**). No VSA mitigation was required since the dolphins

[3] Detection rate is calculated by dividing the number of detections by the total number of active monitoring hours.

voluntarily approached the vessel. No shutdown mitigation was required or enacted because the source was inactive at the time of the sighting.

The second detection occurred at 20:30 UTC on August 21st, 2025. A pod of four bottlenose dolphins was sighted at approximately 10:00 (with the bow of the vessel being 12:00) approximately 80 meters from the vessel while the operational team was deploying geophysical equipment in the testing area. This pod was actively traveling towards the vessel. The dolphins were seen surfacing, traveling and diving during the sighting. The last observation was at 20:35 UTC, when the dolphins dove out of sight approximately 350 meters from the vessel. The closest point of approach, 80 meters, occurred at the time of last sighting (**Figure 8**). At 20:30 UTC the animals entered into the inactive BZ and left it at 20:35 UTC. The sound source was not operational until 20:40 UTC. No VSA mitigation was required because the dolphins voluntarily approached the vessel. No shutdown mitigation was required or enacted because the sound source was inactive at the time of the sighting.

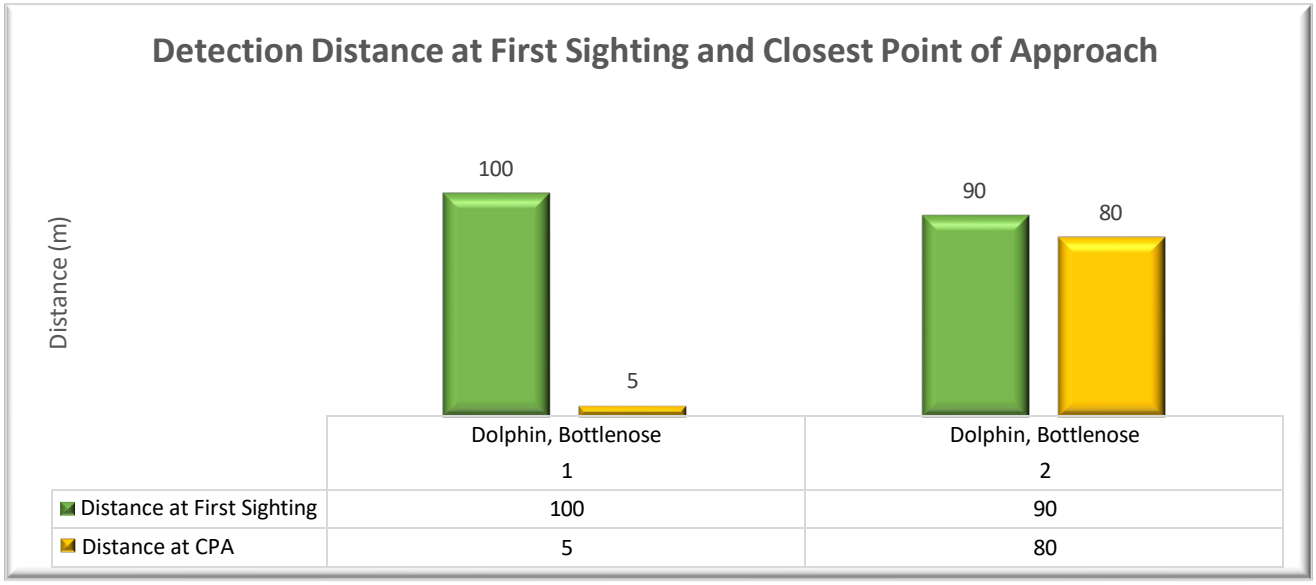

Figure 8 Distribution of Protected Species Detection Distances

No other protected species were observed for the duration of this campaign.

5.1 Potential Takes

During the course of this campaign there were no detections which could have constituted potential level B takes.

Table 2 LOA take list

LOA - Marine Mammals Take Authorization					
Name	**Level A** Occurrence (#)	**Level A** Authorized (#)	Name	**Level B** Occurrence (#)	**Level B** Authorized (#)
Rough-toothed dolphin	**0**	**0**	Rough-toothed dolphin	**0**	**14**
Bottlenose dolphin	**0**	**0**	Bottlenose dolphin	**0**	**109**
Atlantic spotted dolphin	**0**	**0**	Atlantic spotted dolphin	**0**	**26**

6. SUMMARY OF WEATHER & ENVIRONMENTAL CONDITIONS

Part of the data collection associated with PSO operations includes various weather and environmental conditions including cloud cover, wind speed, wind direction, precipitation, sun glare and visibility during observations. These factors can affect the PSOs ability to observe the required zones effectively, inhibiting shutdown and monitoring zone clearance and ultimately delaying operations. **Figures 9-11** illustrate the distribution of weather variables during PSO monitoring onboard the *M/V Holiday* over the course of the campaign.

Weather conditions were relatively favorable for visual observations with 78% of visual observations occurring with no precipitation. Light rain only occurred 17% of the time PSOs conducted watch with a small amount of heavy rain encompassing five percent of the watch period. The entire period of heavy rain coincided with operational standby, and this did not disrupt PSO monitoring efforts and potential calls for mitigation. There were no instances of fog that disrupted PSO monitoring efforts during this campaign.

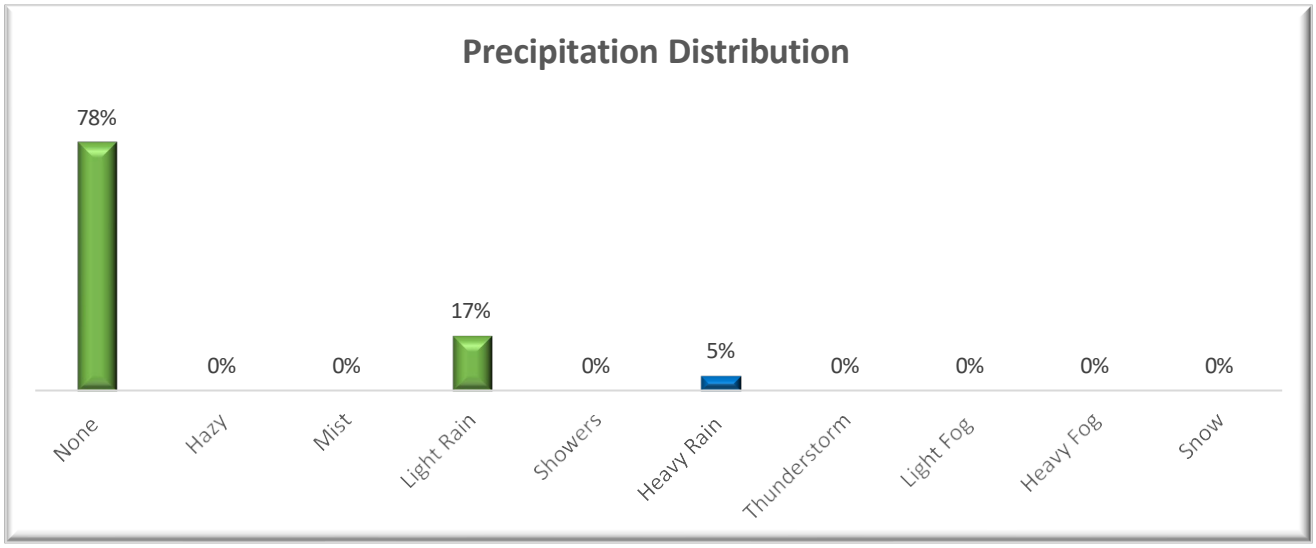

Figure 9 Precipitation Distribution

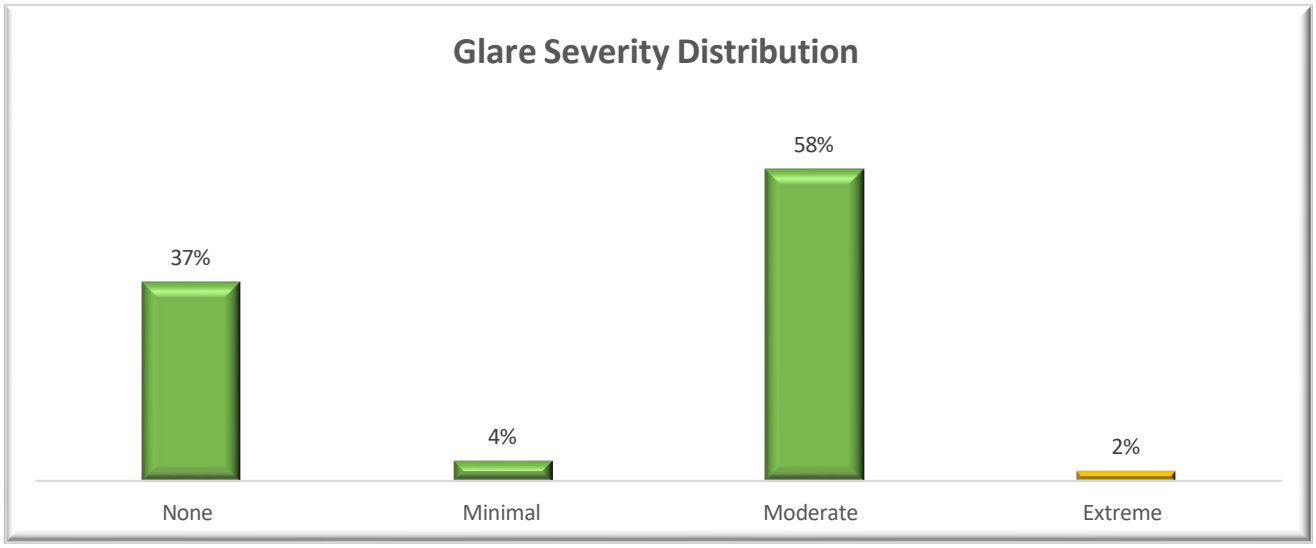

Figure 10 Glare Severity Distribution (None=0%, Minimal=<25% Moderate=25-50%, Extreme=>50%)

Figure 10 illustrates glare severity encountered throughout monitoring operations. Moderate glare occurred the most and was present for 58% of the PSO monitoring effort. Extreme glare occurred only once after testing operations had already concluded and accounted for only two percent of monitoring. Despite the presence of elevated glare conditions, there was not a significant negative impact on operations as PSOs reported overall visibilities of greater than 4,000 meters during these instances. Minimal and no glare were recorded for the remaining 41% of the operations.

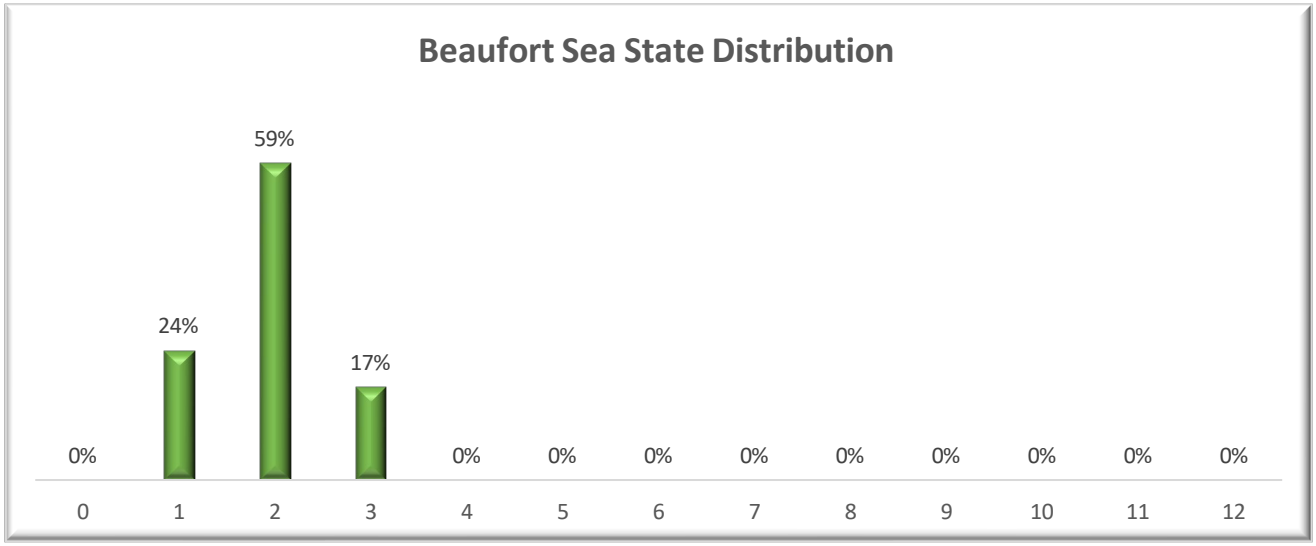

Figure 11 Beaufort Sea State Distribution

Beaufort Sea State (BSS) recorded during visual monitoring ranged from level one to level three over the course of the monitoring period (**Figure 11**). No visual observations were undertaken during elevated weather conditions, considered as instances when the BSS was level four or above. Overall, the BSS conditions the team worked under are considered good for protected species monitoring.

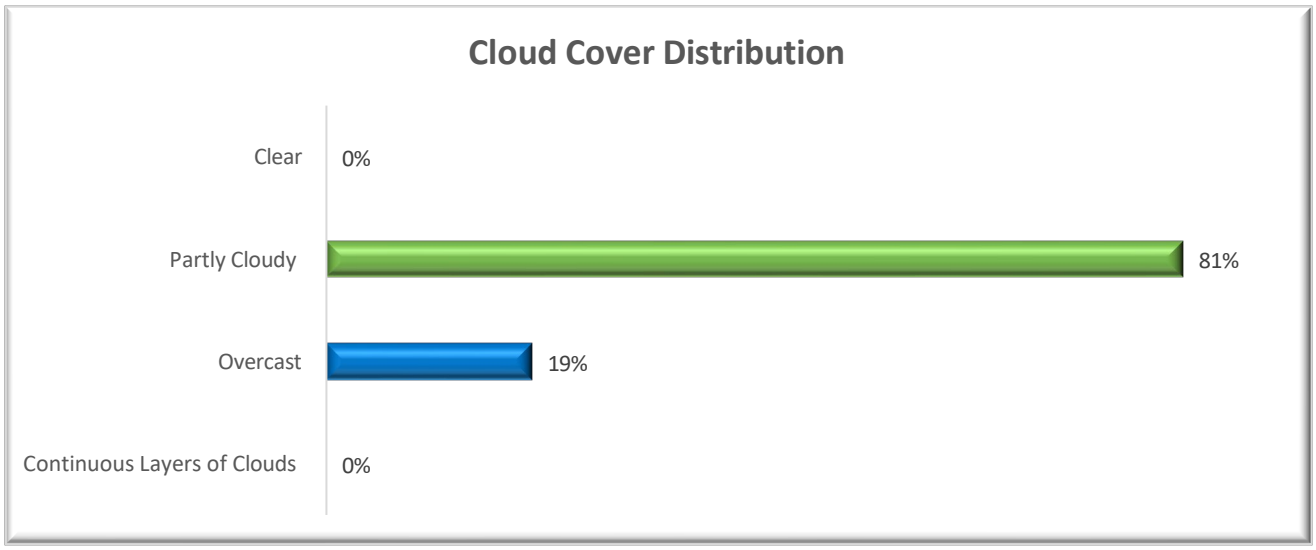

Figure 12 Cloud Cover Distribution

Cloud cover did not disrupt observation efforts as 81% of observational efforts occurred during partly cloudy conditions. The remaining 19% of the observational period occurred during overcast conditions (**Figure 12**).

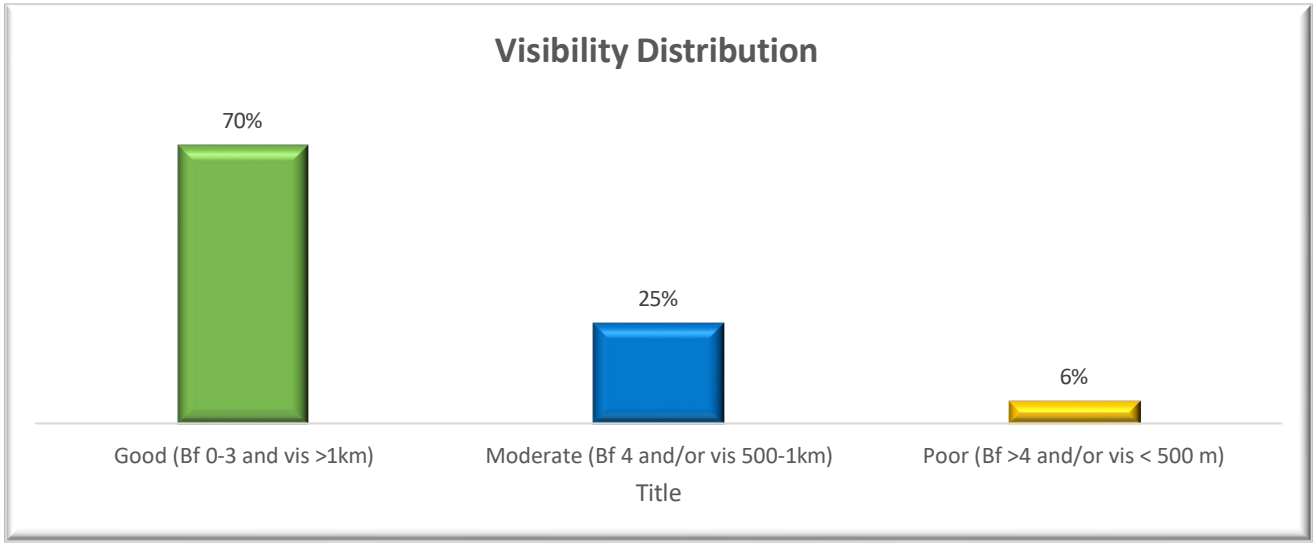

Figure 13 Visibility Distribution (Good = >1,000m, Moderate= 1,000 – 500m, Poor= <500m)
(Bf = Beaufort, vis=visibility)

Through most operations visibility was recorded as good, as illustrated in **Figure 13.** The good delineation was given during periods in which the BSS was between zero and three, and/or the visibility was greater than 1,000 meters. Although there were instances where factors such as extreme glare and heavy rain temporarily affected visibility, these adverse conditions did not hinder the PSOs from fully visualizing the shutdown zone of 100 meters around the sound source. The lowest visibility recorded herein was 200 meters. This occurred after the vessel had completed testing operations and was due to nighttime monitoring for three minutes without alternative monitoring technology. In conclusion, the PSO Team is confident that no marine protected species observations were disrupted by adverse weather conditions during these operations.

7. ASSESSMENT OF MONITORING METHODS

Operations were monitored by two on watch PSOs to effectively observe the shutdown and monitoring zones from the bridge level of the survey vessel *M/V Holiday*. As indicated above in Section 3, to remain consistent with LOA stipulations the PSOs began monitoring at sunrise and performed solo watches for vessel strike and dual watched for active operations. These rotational watches continued until operations were complete. Visual monitoring was completed to comply with the LOA monitoring and mitigation stipulations as well as vessel strike avoidance measures, pre-start clearances, and post survey watch requirements. There was never an instance in which a PSO monitored for longer than the required two hours without at least a one hour break in between.

Throughout all operational hours the PSOs conducted observations encompassing 360˚ around the vessel. This allowed for the PSOs to appropriately visualize and clear the shutdown zone and allow for continuous operations meeting the standards outlined in the regulatory documents and consistent with client requirements. The monitoring and mitigation measures required proved to be an effective means of monitoring marine protected species, none of which were encountered during operations.

8. ACKNOWLEDGEMENTS

We would like to extend our sincere thanks to the operations crew and team members at Fugro for their assistance and hospitality for the duration of this brief testing period.

We are especially grateful to the following individuals for their considerable contributions to the success of this deployment.

- Jarrot Spurlock (Fugro) for his dedicated support, including logistical coordination, planning, and preparation.
- The AIS PSOs for their continuous effort and unwavering commitment to accurate data collection

Finally, we extend our deepest gratitude to all of the individuals who helped support this project. It would not have been possible without the efforts and assistance of everyone involved.

Appendix A.
A.I.S. Inc., Final Activity Report Summary

REPORT SUMMARY

Client	Fugro BP		Report	DAILY	
Project	Mini Airgun Testing		Date	(20-Aug-25)	to (22-Aug-25)
Vessel Name	M/V Holiday		Project Type	HRG/Seismic	

Total Operational Time	(hh:mm)	16:23	Total Visual Monitoring Time	(hh:mm)	15:51
Total Mitigation Downtime	(hh:mm)		Total Number of Detections	(#)	2
Total Standby Time	(hh:mm)	11:32	Total Number of Individual(s) Detected	(#)	9

(Mitigation Downtime = Delay Soft Start + Shutdown + Power Down)

DPR - Operations Summary

Vessel started the day docked at Port Fourchon. At 22:11 CDT (03:11 UTC) vessel dropped lines and began to transit to the testing area. PSO went off watch at 23:59 CDT (04:59 UTC). Vessel crew-maintained watch. The vessel arrived at the testing site while PSOs were off watch. PSO watch began at 06:00 CDT (11:00 UTC). The first air gun test began at 14:45 CDT (19:45 UTC) and was complete at 14:55 CDT (19:55 UTC). The second test began at 15:40 CDT (20:40 UTC) and was completed at 15:45 CDT (20:45 UTC). The vessel recovered the source at 15:46 CDT (20:46 UTC) and started testing autopilot. At 19:10 CDT (00:10 UTC), the vessel deployed and retrieved air guns without firing. PSO's went off watch at 20:02 CDT (01:02 UTC).
Vessel sailed back to Port Fourchon overnight.

DPR - Detections Summary

Detection (1) of five individual Bottlenose Dolphins while vessel was transiting out of port. No mitigation required. Detection (2) of four possible bottlenose dolphins. The animals entered BZ a at 15:30 CDT (20:30 UTC) and left the BZ at 15:35 CDT (20:35 UTC). The vessel was deploying the source. No VSA mitigation was required since the dolphins voluntarily approached the vessel. No mitigation action was required since the source was silent.

Survey Activity - Monitoring - Detections

	Occurrence (%)	Duration (hh:mm)	Detection (#)	Individual (#)		Occurrence (%)	Duration (hh:mm)	Detection (#)	Individual (#)
Mit - Change Course					Ops - Anchoring/Station keeping				
Mit - Pre Watch Clearance	3.05%	0:30			Ops - Full Power Acquisition				
Mit - Delay Soft Start					Ops - Full Power Line Change				
Mit - Soft Start					Ops - Partial Power Line Change				
Mit - Shutdown					Ops - Mitigation Source Line Change				
Mit - Power Down					Ops - Silent Source Line Change				
Mit - Post Survey Watch	6.10%	1:00			Ops - Deploying Equipment	5.29%	0:52	1	4
Oth - Weather Standby					Ops - Testing Equipment	1.53%	0:15		
Oth - Other Standby					Ops - Retrieving Equipment	2.54%	0:25		
Oth - Vessel Transit	11.09%	1:49	1	5	Ops - Operational Standby	70.40%	11:32		

Acoustic Source Status

Active (Not Mitigated Source)	(% | hh:mm)			Source Silent	(% | hh:mm)	98.47%	16:08
Source at Partial Power	(% | hh:mm)	1.53%	0:15	Source at Mitigation Power	(% | hh:mm)		
Source at Full Volume	(% | hh:mm)			Sequential Power Increase of Source	(% | hh:mm)		

Species Detections [Number of Individual(s) Detected]

Name	Day Visual (#)	Night Visual (#)	Handheld IR (#)	NVD (#)	Name	Day Visual (#)	Night Visual (#)	Handheld IR (#)	NVD (#)
Unidentified, Marine Mammal					Whale, Unidentified				
Unidentified, Not Likely Large Whale					Whale, Unidentified - NON NARW				
Delphinidae (size unknown)					Whale, Large Whale (unknown)				
Delphinidae, Large (NSE)					Whale, Blainville's Beaked				
Delphinidae, Small (SE)					Whale, Bryde's				
Dolphin, Atlantic Spotted					Whale, Cuvier's Beaked				
Dolphin, Bottlenose	4	5			Whale, Dwarf Sperm				
Dolphin, Clymene					Whale, False Killer				
Dolphin, Fraser's					Whale, Fin				
Dolphin, Pantropical Spotted					Whale, Gervais' beaked				
Dolphin, Risso					Whale, Humpback				
Dolphin, Rough-Toothed					Whale, Killer				
Dolphin, Short Beaked Common					Whale, Melon-headed				
Dolphin, Spinner					Whale, Minke				
Dolphin, Striped					Whale, North Atlantic Right				
Manatee					Whale, Pygmy Killer				
Sea Turtle, Unidentified					Whale, Rice				
Sea Turtle, Green					Whale, Sei				

REPORT SUMMARY

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Total Standby Time	(hh:mm)	**11:32**	Total Number of Individual(s) Detected	(#)	**9**

(Mitigation Downtime = Delay Soft Start + Shutdown + Power Down)

Sea Turtle, Hawksbill					Whale, Short-finned Pilot				
Sea Turtle, Kemp's Ridley					Whale, Sowerby's beaked				
Sea Turtle, Leatherback					Whale, Sperm				
Sea Turtle, Loggerhead									
Others:									
Ray, Giant Manta					Sawfish, Smalltooth				
Sturgeon, Atlantic					Shark, Scalloped Hammerhead				
Sturgeon, Shortnose					Shark, Oceanic Whitetip				

(SE: Shutdown Exempt; NSE: Not shutdown Exempt)

Detections Summary

Species	Detection Method	Enter SZ/EZ (hh:mm)	Exit SZ/EZ (hh:mm)	CPA	Vessel Activity	Individual (#)	Mitigation Type
Dolphin, Bottlenose	Daylight Visual			80	Ops - Deploying Equipment	4	Mit - No Mitigation Required
Dolphin, Bottlenose	Nighttime Visual			5	Oth - Vessel Transit	5	Mit - No Mitigation Required

Environmental Conditions

Cloud cover Scale	Clear	Part Cloudy	Overcast	Cloudy	**Glare Scale**	None	Minimal	Moderate	Extreme
Cloud Cover	**4.17%**	**70.83%**	**20.83%**	**4.17%**	Glare	**37.50%**	**8.33%**	**45.83%**	**8.33%**
Beaufort Scale	0-2	3-5	6-8	9-12	**Beaufort Scale**	0-2	3-5	6-8	9-12
Wind Force	**57.58%**	**18.18%**	**12.12%**	**12%**	Sea State	**57.58%**	**21.21%**	**9%**	**12%**

Note:
This report contains final data collected during operations. This data has undergone additional rounds of quality assurance/quality control (QA/QC) and analysis and should be considered final.

Please note that only regulatory agencies can make take determinations and the information included within indicating potential take is for IHA/LOA tracking purposes only and should not be considered an official accounting of takes.