ENVIRONMENTAL IMPACT ASSESSMENT "3D" OFFSHORE SEISMIC RECORD CAN_100, CAN_108 AND CAN_114 AREAS, ARGENTINA CHAPTER 8 - MITIGATION MEASURES AND ENVIRONMENTAL MANAGEMENT PLAN

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CHAPTER 8 – MITIGATION MEASURES AND ENVIRONMENTAL MANAGEMENT PLAN

This chapter contains the environmental management measures necessary to prevent, reduce and control the negative effects identified in the previous chapter (Chapter 7), structured in the Environmental Management Plan, aimed at developing the project with the least possible impact in the environment and complying with the applicable Environmental Regulatory framework.

1 INTRODUCTION

The Mitigation Measures and the various Programs that comprise the Environmental Management Plan (EMP) presented here correspond to the Offshore 3D Seismic Record project in the CAN_100, CAN_108 and CAN_114 Areas, offshore of the Argentine Republic. These instruments provide a useful environmental management tool to protect the environment during the execution of the Project.

An assessment of the environmental impacts associated with the project actions was carried out in the previous chapters. Based on its characterization and study, it was possible to establish a series of environmental protection measures aimed at preventing, mitigating or compensating for potential impacts.

The stage of identifying the measures to be taken constitutes a fundamental aspect of the process of preparing any project, as it allows defining said measures, forecasts and requirements, which depends, on the one hand, on adequate planning and scheduling of activities of the allocation of human and material resources, of monitoring, of management control and of quality control, and on the other, of an adequate management and timely decision-making that can only arise from an efficient organization and true commitment. These measures are structured through programs, which shall integrate the Environmental Management Plan (EMP).

The Environmental Management Plan provides the guidelines required for the implementation of the proposed mitigation measures, and the general procedures necessary to ensure that the project is carried out in compliance with current environmental regulations and good environmental practices.

2 ENVIRONMENTAL MANAGEMENT PLAN

Each Program shall present the following data in order to facilitate the reading and understanding of the indicated information:

1. **Activity.** Description of the activities that may have an environmental impact.

2. **Impact (s).** Description of the potential environmental impacts.
2.1.1.1

3. **Mitigation Measures.** Actions to be taken to avoid or reduce negative impacts, or actions to further improve the positive ones.

4. **Management Program.** Programs that describe how mitigation actions shall be carried out and their proper follow-up.

2.2 ONBOARD SEA WILDLIFE OBSERVERS PROGRAM

2.2.1 Activities

- **Planned activities:**
  - Operation of seismic sources (compressed air emissions).
  - Navigation of seismic and support vessels and physical presence of the seismic equipment.

2.2.2 Impact (s)

- **Potential effects of noise generated by seismic operations on marine organisms.**
- **Potential physical risk to marine fauna due to collision.**

2.2.3 Mitigation Actions

2.2.3.1 General

- Minimize the sound level at the source, using only the level necessary based on site conditions.
- Do not discharge compressed air other than the necessary for normal seismic recording operations.

2.2.3.2 Soft start procedure and visual (and acoustic) monitoring of marine mammals and sea turtles.

According to the “Guide for the Monitoring of Marine Fauna in Marine Seismic Studies” of the Brazilian Institute of Environment and Renewable Natural Resources (IBAMA) of the Ministry of the Environment of Brazil, (2018), the contractor Prospector PTE Ltd Argentine Branch (hereinafter referred to as the Contractor), shall use a procedure for gradually increasing the seismic pulse called "Soft Start*”.* This procedure shall take place prior to the beginning of each line, and after a 30-minute observation period by the Marine Fauna Observers (MFO) without having detected the presence of any individual.

The soft start procedure enables a progressive increase in the sound levels generated by the compressed air sources until reaching full operating power for a minimum period of 20 minutes and

a maximum period of 40 minutes until the start of the line, in order to provide adequate time for marine organisms to leave the area. The soft start procedure is normally used in seismic survey works carried out by the ship, which implies that those who perform these operations are familiar with the method.

Surveys are thoroughly planned to avoid unnecessary compressed air discharges before the start of a survey line and for data compilation to begin as soon as possible once full operational power is reached.

Visual monitoring and passive acoustic monitoring prior to soft start

- 3 OFM and 1 Passive Acoustic Monitoring Operator (PAM) shall be present.
- Observers shall be at a high point on the BGP Prospector seismic vessel, with a clear view of the horizon, the Exclusion Zone and ahead of the vessel.
- The Observers shall perform a careful visual and listening check to detect the presence of marine fauna in the defined mitigation radius around the emission source during the entire duration of the preliminary search and the soft start procedure.
- According to the Acoustic Modeling presented in Chapter 6, whose results for the group of mammals are summarized in Table 1 for the CAN_100-108 area, and in Table 2 for the CAN_114 area, the most demanding SPL condition pk (0 - p) corresponds with the threshold of temporary hearing loss (TTS) of cetacean marine mammals of very high hearing frequency (VHF). This threshold is reached in a radius of about 1006 meters with center on the source in the CAN_100-108 area, and in a 945 meter-radius for the CAN_114 area. The most restrictive permanent hearing loss threshold (PTS) is also for the VHF group, which is reached at about 391 meters for CAN_100-108 areas, and at 377 meters for the CAN_114 area. These last distances, the ones corresponding to the PTS criterion, are those used to establish the mitigation zones that in this case could be established at 400 meters for both CAN 100-108 and CAN_114 areas. However, and according to the usual recommendations (JNCC, 2017), it is convenient to extend this distance to 500 meters, which is a common standard used in the industry.

Table 1. Distances to the source (in meters) to reach the various thresholds and hearing groups assessed. CAN_100-108 area, based on Point SO-1000.

Auditory Group	SPL pK (0-p) (dB re 1 μPa)	Soil Mud F1variant on Gravel G3 variant		Soil Sand AB "base" on Gravel GB "base"	
		Azimut 0º Dip 70º	Azimut 90º Dip 70º	Azimut 0º Dip 70º	Azimut 90º Dip 70º
PTS – LF	219	<50	50	<50	50
PTS – HF	230	<50	<50	<50	<50
PTS – VHF	202	205	**391**	205	**391**
PTS – PW	218	<50	52	<50	52
PTS – PO	232	<50	<50	<50	<50
Fish **WITHOUT** swim bladder	213	50	97	50	97
Fish **WITH** swim bladder	207	106	206	106	206
TTS – LF	213	50	97	50	97
TTS – HF	224	<50	<50	<50	<50
TTS – VHF	196	514	1006	524	1006
TTS – PW	212	55	110	55	110
TTS – PO	226	<50	<50	<50	<50
Conventional limit of affectation	190	2144	4240	2200	3737

Table 2. Distances to the source (in meters) to reach the various thresholds and hearing groups assessed. CAN_114 area, based on Point O-1000.

Auditory Group	SPL pK (0-p) (dB re 1 μPa)	Soil Mud F1 variant on Gravel G3 variant	
		Azimut 0º Dip 70º	Azimut 90º Dip 70º
PTS – LF	219	<50	50
PTS – HF	230	<50	<50
PTS – VHF	202	200	**377**
PTS – PW	218	<50	52
PTS – PO	232	<50	<50
Fish **WITHOUT** swim bladder	213	50	96
Fish **WITH** swim bladder	207	104	200
TTS – LF	213	50	96
TTS – HF	224	<50	<50
TTS – VHF	196	505	945
TTS – PW	212	54	109
TTS – PO	226	<50	<50
Conventional limit of affectation	190	2149	4314

2.2.3.3 Monitoring of seabirds, marine mammals and sea turtles

OFMs shall serve two roles during prospecting. One corresponds to the observation prior to the soft start in order to mitigate and ensure the maintenance of distances between vessels and marine fauna (see **Error! Reference source not found.**).

The other corresponds to the monitoring of birds, mammals and sea turtles. To that effect, the OFM

shall collect data, following sampling procedures, on the abundance and distribution of seabirds through transects. This can be done both during the seismic acquisition and when the ship is in transit.

The study of birds, mammals, and sea turtles is not secondary to the observation of marine fauna during soft start operations, and resources shall be focused on both tasks in the presence of OFMs, where at least one of them shall be in charge of the observation, and another of the monitoring of birds, mammals and sea turtles.

2.2.3.4 Mitigation of random impacts upon occasionally discovered species

As a result of the elaboration of the Environmental Baseline of this study for the project area, 49 potentially present species were counted, with confirmed occurrences for 46 of them in recent years. Twelve (12) species are very frequent and abundant in the region: Patagonian Penguin (Spheniscus magellanicus), Wandering Albatross (Diomedea exulans), Dusky Albatross (Phoebetria fusca), Atlantic yellow-nosed Albatross (Thalassarche chlororhynchos),Black-browed Albatross (Thalassarche melanophris), Southern Giant Petrel (Macronectes giganteus), Northern Giant Petrel (Macronectes halli), Atlantic Petrel (Pterodroma incerta), White-chinned Petrel (Procellaria aequinoctialis), Sooty Shearwater (Ardenna grisea), Great Shearwater (Ardenna gravis) Wilson´s Storm Petrel (Oceanites oceanicus). Regarding marine mammals, 41 potentially present species were counted for the study area, with confirmed occurrences for only 13 of them. Four species have been recorded as to Pinnipeds (Carnivora): South American Fur Seal (Arctocephalus australis), the Antarctic fur seal (Arctocephalus gazella), South-American sea lion (Otaria flavescens) and the southern sea elephant (Mirounga leonina). Regarding Cetaceans (CetartiodLawyla), there are records of 4 species of whales - the right whale, the blue whale, the sei whale and the fin whale, 4 species of dolphins - Long-finned Pilot Whale (Globicephala melas), the bottlenose dolphin (Tursiops truncatus), dusky dolphin (Lagenorhynchus obscurus) and killer whale (Orcinus orca) and sperm whale (Physeter macrocephalus). The area is not characterized by the especially frequent presence of sea turtles, and only 3 of the 7 species currently known are potentially present in the detailed study area: the green sea turtle (Chelonia mydas), the leatherback turtle (Dermochelys coriacea) and the loggerhead turtle (Caretta caretta). Only the last-mentioned species has been recorded within the operational area and that of direct influence of the CAN_100 - CAN_108 areas.

In the event that during the prospecting works, the occasional discovery of an unreported species in the study area occurs, and immediately after visualization in the field and the record, the individual / s shall be characterized, checking whether it belongs / to a vulnerable, endangered or threatened species. Said species shall be added to the list of those already identified on the site, along with the analysis of evaluations and measures considered for them. The necessary measures to mitigate the potential impacts on said species shall be incorporated into the project, If applicable.

In general, the observation and monitoring tasks related to the development of the project, provide the opportunity to obtain relevant information regarding the presence of marine species and their habitat; particularly on their behavior upon the development of this type of activities. This contribution to knowledge also increases the possibility of developing assessments with a greater degree of certainty.

2.2.4 Management Program

The Geophysical Contractor in charge of executing the project shall develop the following program under the supervision of EQUINOR:

Aim

- Ensure the application of the corresponding mitigation measures in order to avoid the possible impacts of seismic activity on marine fauna through observation and registration. The process shall be carried out by trained observers to recognize the species present in the study area so as to assess the possible changes in behavior or affectations derived from the project.

- Monitor the effective compliance with the soft start measures, stopping the operations of the compressed air sources in the event that the presence of mammals and / or sea turtles is detected in the exclusion zone.

- Obtain data on the presence and behavior of marine fauna to deepen the understanding of the possible effects caused by compressed air sources.

Scope

Observations shall be made to record the presence of marine fauna prior to the survey, during its execution and after its completion.

Procedure

Selection and training of Marine Fauna Observers (MFO) on board

The MFOs on board shall meet the following criteria:

- Have higher education according to their responsibility (biology, oceanography, fisheries engineering, or veterinary medicine). Previous academic experience with marine mammals and turtles is preferred.
- Receive training in procedures for observing marine biota and internal communication.
- At least 2 (two) MFO professionals shall carry out the observation process simultaneously throughout the daytime period.
- At least 2 (two) MFO professionals shall have previous experience in observing marine biota in the same position on board seismic vessels for at least 100 days.
- At least 2 (two) professionals shall speak English fluently so that there is clear communication with the other members of the crew.
- The contractor shall be responsible for ensuring that the hiring of the MFO team complies with the applicable labor laws, even if the hiring is done through a consulting firm. It is also the responsibility of the contractor to provide the MFOs on board with the safety training that is required as a minimum requirement to carry out activities on the high seas. However, EQUINOR shall be responsible for the supervision of the contractor´s activities.

It should be noted that the MFO shall have the training and qualification defined by the corresponding institution: Marine Mammal Laboratory of the National University of Mar del Plata; reference institution for the identification of trained personnel (until a National Registry of Marine Fauna Observers for offshore seismic acquisition activities is officially established).

This institution determines that MFOs are professionals in biological sciences specialized in visual detection and their role is primarily associated with mitigating the potential impacts of anthropogenic activities on marine fauna 1, particularly in the offshore industry.

They also specify that said professionals, in addition to having a bachelor's, master's or doctorate degree in Biological Sciences, have a PSO / MMO certificate, approved by BOEM (Bureau of Ocean Energy Management), specialized in Southwest Atlantic species by MMO Argentina, as well as a safety certificate on board STCW / 78 ships approved by the Argentine Coast Guard (PNA).

Sampling methodology:

This Program shall comply with OFM guidelines described in the “Guide for the Monitoring of Marine Fauna in Marine Seismic Studies” of the Brazilian Institute of Environment and Renewable Natural Resources (IBAMA) of the Ministry of the Environment of Brazil, (2018), which addresses the roles and responsibilities of MFOs and those of the licensed Company, respectively.

Monitoring shall always be carried out, as already mentioned, simultaneously by at least two MFOs, regardless of whether the vessel is operating compressed air sources or not, for example, during line change maneuvers, in case of technical problems with the sound sources or during navigation between the support port and the operational area.

The continuous effort of observation and recording is extremely important to improve the observation technique and expand the knowledge about the distribution of marine fauna, in addition to allowing comparative analysis of sightings in different operational conditions.

EQUINOR, together with the Contractor, shall be responsible for providing the MFO with all the necessary material for the full performance of their duties, such as: binoculars, cameras, portable radios, among others. Such material shall be compatible with the work to be performed, for example, cross-linked binoculars and digital cameras with adequate resolution, optical zoom and memory. In turn, identification guides including the species found in the study area shall be available onboard.

1 http://argentinammo.com/servicios/observadores-de-mamiferos-marinos/

The observer shall also use a diagram to illustrate the position of the individual (s) and their movement (s) throughout the sighting. Information such as the time and positions of the main observed events shall be jointly recorded (for example: the first position sighted, the last position sighted, the first observation within the operational area and the shortest distance from the seismic source). The referenced diagram is hereinbelow displayed.

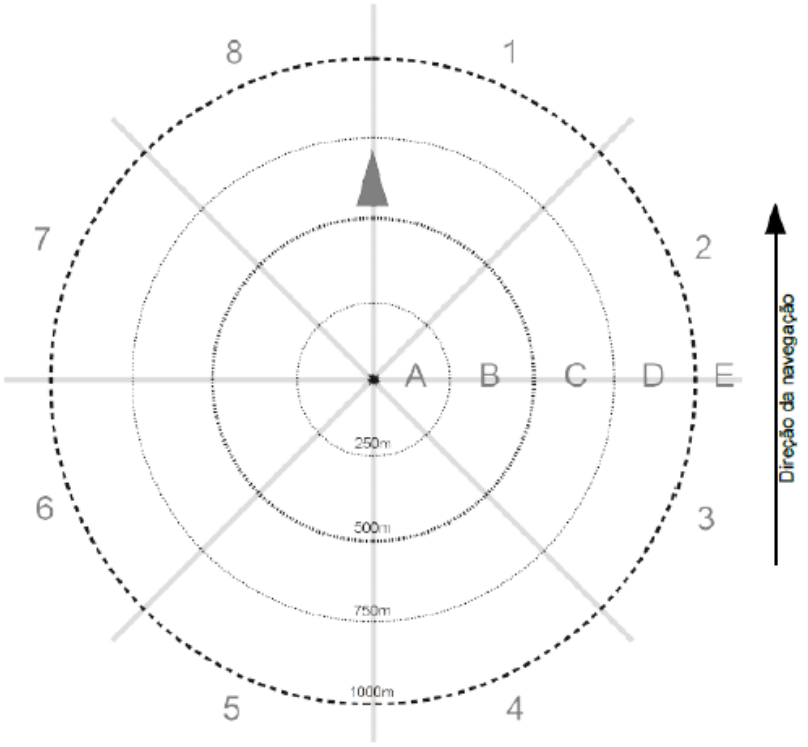

Figure 1. Marine biota observation diagram. The center symbolizes the arrangement of the air-guns, the distances from the center of the seismic source (letters A-E) and the sectors corresponding to the direction of the observation in relation to the seismic source (numbers 1-8). Thus, a specific position can be registered as A1 or E7, for example. The position of the ship varies with each activity and shall be drawn by the observer. Fuente: Source: "Guidelines for the Monitoring of Marine Fauna in Marine Seismic Studies" (IBAMA, 2018).

The main procedures established in the aforementioned guidelines are presented below to ensure the effectiveness of the observation effort:

- Each team of observers shall have 3 (three) MFOs on board so that at least 2 (two) can simultaneously divide the visual field into two parts, and thus cover the entire Exclusion Zone.
- The MFOs shall seek positioning in the high points of the vessel for the observation effort, allowing the greatest possible range and coverage of the Exclusion Zone.
- The best positioning, angle and range of view shall be demonstrated in the report, including the corresponding photographic records.
- The observer's work plan shall alternate periods of observation effort with rest periods and meal breaks. The maximum time spent in a continuous observation effort is 2 (two) hours, to avoid loss of quality of work due to fatigue. This maximum period can be extended in case of observation of animals in the activity area. The rest period shall be at least 30 minutes without any work-related tasks.
- Reticle binoculars shall be used to allow estimation of the observation distance.

- Since the distance between the seismic vessel and the compressed air devices can vary between different operations, the MFO team on board shall "calibrate" the binocular before each activity to obtain more accurate distance estimates. The safety distances established in relation to the acoustic impact shall also be calibrated, since they are important for the evaluation of the relative distances of the animal with respect to the seismic source.
- The observation effort shall begin as soon as possible, if daylight allows for it, and shall continue steadily until the afternoon lights turn observation impossible. The standard time for the beginning and end of the observation effort shall be determined by the sunrise and sunset times, indicated by the Navigational instruments. Said times shall be verified weekly and communicated to the Head of the seismic team.
- All animals sighted shall be recorded on the standardized forms, even if they are beyond the Exclusion Zone.
- Whenever possible, a photographic or video recording of the observations shall be advisable. Video recording can be especially useful in helping MFOs on board to determine the species sighted.
- Any extraordinary reason proving the interruption of the observation effort shall be reported in the Registration Effort Form, including an "Observations and comments" field".
- Any observation of mammals and / or sea turtles made by the crews of the support vessels shall be immediately reported to the MFOs on board to try to detect, record and identify the animals, and adopt mitigation measures when appropriate.

Interruption of discharges from compressed air devices

The main mitigation procedure during seismic studies in relation to marine fauna is interruption, which shall comply with the following guidelines:

- The communication procedure between the MFOs on board and the MAP operator and the person in charge of the seismic record shall be clear and simple, so that the operation can be suspended at any time. There shall be no intermediate procedures that delay the interruption of the discharges of the compressed air devices. Mitigation is the priority, so questions and discussions shall only take place once compressed air discharges and the complete detection log have ended.
- The interruption of compressed air discharges is the priority mitigation procedure, and it shall be carried out in any situation in which mammals and / or sea turtles are detected in the Exclusion Zone, even at night or in poor visibility conditions.

The soft start procedure shall take place whenever compressed air sources are to begin to discharge, either for normal operation or for testing purposes.

The operation should start with low intensity discharges to give marine organisms with avoidance capacity the opportunity to get away from the noise source.
The main steps to follow are as follows:

- Notify the MFO on board and the MAP operator to start the procedure at least 30 minutes in advance.

- The MFO on board and the MAP operator shall scan for at least 30 minutes before the start of the compressed air sources to verify the presence of marine fauna in the Exclusion Zone.
    - If no individual is detected, the soft start procedure can be started.
    - If any specimen is detected within the Exclusion Zone, the initiation of unloading the compressed air sources shall be delayed until none are detected for at least 30 minutes. Under no circumstances shall an attempt be made to intentionally approach or expel marine fauna.
- The gradual procedure shall last a minimum of 20 minutes until full power is reached, and it should not last more than 40 minutes in order to minimize the emission of sound energy in the marine environment.
- If marine fauna is detected within the Exclusion Zone during the soft start procedure, it shall stop immediately until the organisms spontaneously move away and 30 minutes elapse without being detected within the Exclusion Zone, at which point the soft start procedure shall start over (during 20 minutes, at the least).
- The gradual increase shall be planned so that full power is reached as close as possible to the beginning of the seismic line (including the route). Long periods at full power before the real start of data acquisition shall be considered abusive.
- If for any reason during ramp-up or full power, testing, maneuvering, or acquisition procedures, compressed air sources were suspended and not resumed within 5 minutes, scan (30 minutes) and gradual increase (20 minutes minimum) processes should be adopted before resuming the activity of the seismic source. If the interruption lasted less than 5 minutes, the activity could be resumed with the same power. If animals were detected in the exclusion zone during this 5-minute interval, new exploration, scan, and ramp-up procedures should be initiated.

Seismic line change.

When moving from one seismic acquisition line to another, the vessel could be delayed from a few minutes to a few hours, depending on its acquisition typology and geometry, as well as oceanographic and meteorological conditions.

Regarding the scanning procedures and the gradual increase during the line change, the following should be observed:

- Line change in less than 20 minutes: discharges from compressed air sources shall not be interrupted, maintaining maximum power throughout the maneuver.

- Line changes longer than 20 minutes: Discharges from compressed air sources shall be suspended at the end of each line and restarted according to the normal scan procedure (30 min) and ramp-up (minimum 20 min). If the line change lasts more than 20 minutes and less than 50 minutes, the scanning (30 min) can start at the end of the previous seismic line during full power operation.

Night operation or with poor visibility.

At night or in low visibility conditions, it is not possible to visually monitor the presence of marine fauna through Passive Acoustic Monitoring (PAM).

During the day period, when visibility conditions deteriorate, it is possible that the visual detection capacity of the animals is very restricted to the proximity of the seismic vessel, in which case, the situation shall be recorded.

In this sense, the following parameters shall be considered to help define which visibility conditions are more precise:

- The state of the sea and the wind: with a 26- knots wind speed on the Beaufort 6 scale. In these conditions, the surface of the sea has waves, foam and water spray that prevent the observation of fauna on the surface; or
- The fog or rain around the boat: when there is dense fog or heavy rain around the boat, forming a "curtain" that makes it impossible to observe the entire Exclusion Zone; or
- The horizon line visibility: when it is not possible to identify said line, making it impossible to use the binocular sight to determine the Exclusion Zone.

Despite these benchmarks, the MFO team on board holds autonomy and authority to determine the visibility situation, even if the above parameters have not been achieved.

The MFOs on board shall simultaneously maintain visual scanning, if conditions allow. If the MAP Operator is not in charge, the scan cannot be performed and the tasks cannot be started.

Activities shall start over through a gradual increase procedure, in case of absence of visual or acoustic detection for at least 30 minutes.

The periods of low visibility shall be indicated in the Operations and Monitoring Efforts Records. (See Annex)

The following are guidelines for specific operational situations related to night or low visibility operation:

- Seismic acquisition can be started at night or in low visibility conditions with a fully operational MAP, as long as established procedures for scanning (acoustic) and ramping up are followed.
- If the MAP is temporarily stopped, and the operation enters the night period in poor visibility conditions, the current seismic line shall be allowed to continue for a maximum period of one hour. After this period, seismic source activity shall be called off until the system is repaired or visual monitoring can be mitigated.
- If visibility conditions deteriorate during an activity interruption due to visual or acoustic detection, operation can be restarted using the standard scan procedure (acoustics) and ramp-up, provided passive acoustic monitoring is fully active.
- The visual scan shall be performed simultaneously with the acoustic scan for the remaining 30 minutes. Similarly, if visibility conditions are lost during a joint scan, the procedure shall continue with the acoustic scan only.

Seismic source tests.

The guidelines of the previous scan and the gradual increase of the seismic pulse (soft start) shall be observed so as to test the seismic source. In these cases, the gradual increase would not correspond to reaching a power greater than that of the test.

If the test is performed with a lower power than that used in the seismic study (maximum power), the duration of the gradual increase shall be adjusted in proportion to the power used in the test to avoid excessive triggering in the environment.

In the case of tests immediately before the beginning of the seismic lines, the duration of the gradual rise between the end of the test and the beginning of the line shall also be proportionally adjusted between the test power and the total power. That is, to gradually increase between the test and the maximum power, it is not necessary to restart the procedure with a minimum power, but to gradually increase the test power to the maximum power, keeping the same ramp used for the full gradual increase.

If the test consists of discharging at minimum power or only from a seismic air-gun (bubble test), the previous scan is kept, but it is not necessary to adopt the gradual increase procedure.

In any situation, the discharges from the compressed air sources shall be immediately suspended if marine fauna is detected in the Exclusion Zone.

Recording of data

IBAMA's “Guide for the Monitoring of Marine Fauna in Marine Seismic Studies” has a series of registration sheets in Annex I, which are briefly described below.

- Cover page: contains the name, training and signature of all MFOs on board and the MAP operator, as well as the total number of observation and acoustic detection log sheets submitted.
- Record of Observation and Acoustic Detection: signed by the professionals responsible for data gathering.
- The consolidated spreadsheets of the general record of acoustic observations and detections.
- Presentation of the occurrence data of marine fauna in digital media, in shapefile (.shp): a file for visual detections and another for acoustic detections.
- The spreadsheets of the Registry of Operations and Monitoring Efforts in digital format.

The abovementioned forms can be seen in the following Annexes:

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- ANNEX III - MARINE FAUNA MONITORING SHEETS - OPERATIONS AND MONITORING EFFORT RECORD (IBAMA).

2.2.4.1

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2.2.4.2

- ANNEX V - MARINE FAUNA MONITORING SHEETS - ACOUSTIC DETECTION REGISTRY (IBAMA).

2.2.4.3

- ANNEX VI - FORMS FOR MONITORING MARINE FAUNA - GENERAL REGISTRY (IBAMA).

2.3 IMPACT PREVENTION PROGRAM ON MARINE FAUNA

2.3.1 Activities

- **Planned Activities:**
  - Navigation of seismic and support vessels and physical presence of the seismic equipment.
  - Emissions, effluents and waste associated with the normal operation and maintenance of seismic and support vessels (and other operations) (in terms of light and sound emissions from vessels).

2.3.2 Impact (s)

- Potential effects of noise generated by seismic operations on marine organisms.
- Potential physical hazard to marine mammals from collision.
- Potential physical risk to sea turtles from being trapped on tail buoys.
- Potential physical risk to sea turtles from collision due to their interactions with vessels and seismic equipment.
- Sound effects on seabirds.
- Light attraction of birds.

2.3.3 Mitigation Actions

2.3.3.1 Measures to reduce the speed of vessels when they transit at a speed of 10 knots (or higher)

As a preventive measure to avoid a possible incident and / or impact of the vessels that shall be used during the tasks under study and the marine fauna present in the area, the following requirements regarding the proximity distance shall be met when the seismic vessel and support and tracking vessels move at a speed of 10 knots or greater 2:

2 On the basis of EPBC Regulation 2000, this is the Australian Parliament's Environmental Protection and Biodiversity Conservation Law of 1999, which provides a framework for environmental protection, including biodiversity and its natural and culturally significant locations.

- Travel at less than 6 knots when in a 150m-radius for dolphins and pinnipeds and 300m for whales, which can be considered a “caution zone”.
- Do not go beyond the "caution zones" for dolphins and whales defined above.
- If the cetacean or pinniped shows signs of disturbance, move away at a constant speed of less than 6 knots.
- If feeding fauna is identified, the mentioned precautionary zone is extended to 1,000 m.

MFOs shall alert personnel for vessels to move away or slow down upon detecting the presence of specimens. Likewise, if the ship's personnel spot specimens, they shall immediately notify the MFOs by collaborating in the detection, although the MFOs shall be equipped for these tasks.

2.3.3.2 Monitoring of seabirds, marine mammals and sea turtles

MFOs shall serve two roles during prospecting. One corresponds to the observation prior to the soft start in order to mitigate and ensure the maintenance of distances for the marine fauna.

The other entails the monitoring of birds, mammals and sea turtles. To that effect, the MFO shall collect data, following sampling procedures, on the abundance and distribution of seabirds through transect lines. This can be done both during the seismic acquisition and when the ship is in transit.

The study of birds, mammals, and sea turtles is not secondary to the observation of marine fauna during soft start operations, and resources shall be focused on both tasks in the presence of MFOs, where at least one of them shall be in charge of the observation, and another of the monitoring of birds, mammals and sea turtles.

2.3.3.3 Terminal buoys equipped with sea turtle protectors

The collected bibliography indicates that there are cases of surveys in which turtles were trapped in the tail buoys (tail buoys). In this sense, the installation of sea turtle protectors (“turtle guards”) in the terminal buoys of the streamers is a correct measure for the prevention of the possible impact mentioned.

As it is not entirely clear how sea turtles get trapped on the tail buoys, there are two possible theories: as a result of "jump diving" in front of the towed equipment, or as a result of foraging along seismic cables.

According to the experience of general seismic personnel, two areas of the tail buoys where turtles become trapped have been reported: in front of the structure under the buoy or “landing gear” in the area between the buoy and the tow chains or within the "double fin" landing gear structure".

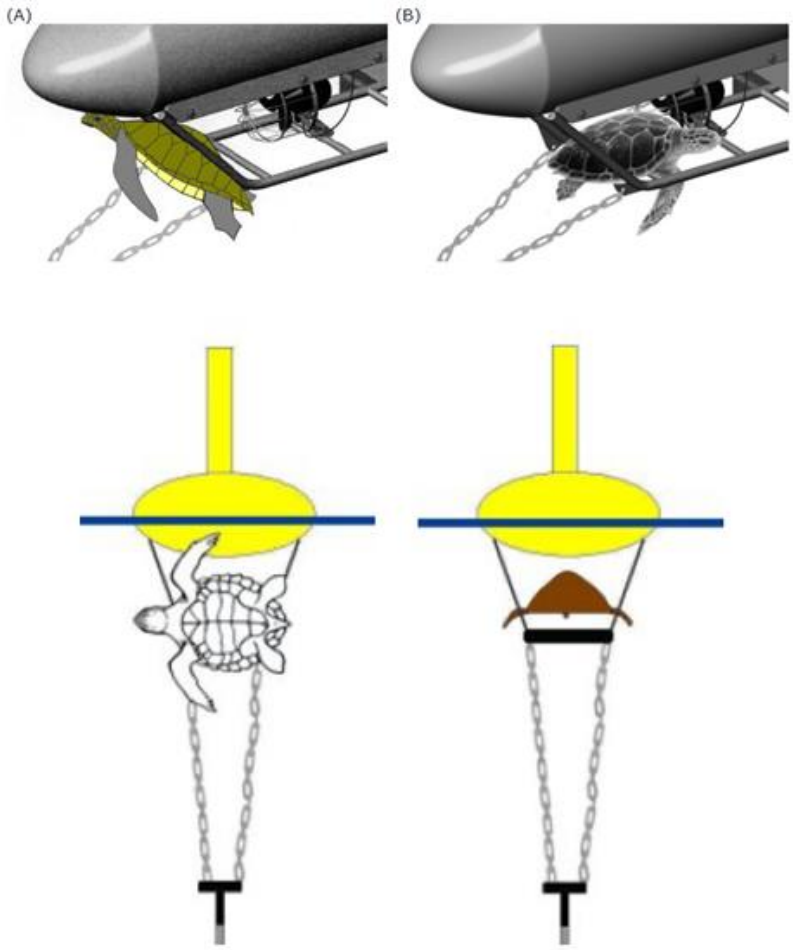


Figure 2. Illustration showing a place where a sea turtle is trapped in front of the landing between the buoy and the towing chains of a ship (left). Signage inside the landing gear structure where a marine turtle is trapped (right). Source: (Ketos Ecology, 2009).

Once trapped in or in front of a tail buoy, a sea turtle would be unable to escape due to the angle of its body as to the forward motion of the buoy. The 4-5 knot speed of a seismic vessel would cause considerable water pressure against a trapped turtle, Lawing to hold the animal against / inside the buoy with little chance of maneuvering.

So far, turtle protectors have been designed in two ways:

- As "exclusion turtle protectors", whose objective is simply to prevent the turtles from entering the gaps of the subsurface structure of the tail buoy.

- As "deflector turtle protectors", whose objective is to exclude the turtles from the gaps in the subsurface structure, and furthermore to keep the turtles away from the angle between the tow chains and the buoy.

According to information provided by the contractor to EQUINOR, the seismic vessel that shall be used has turtle exclusion protectors installed on the tail buoys.

It is a prefab structure made by a UK company, consisting of a series of closely spaced vertical bars that prevent turtles from entering the gap between the double-fin landing gear.

Figure 3 shows images corresponding to the protectors installed on the tail buoys of the streamers of the seismic vessel.

Figure 3. Images of the exclusion turtle protectors installed on the tail buoys of the streamers of the seismic vessel. Source: images provided by EQUINOR.

2.3.3.4 Prevention for birdlife

Prevention for birdlife: Regarding birdlife, one of the most significant effects that the project can generate is that of the birds colliding with the ships as a result of the attraction to the lights used during night work. These effects tend to increase in low visibility conditions (e.g. fog, storms, low cloud presence) and can lead to death of individuals or physical injury.

Seismic activities that require lighting include:

- Marine safety, in terms of ship navigation lighting to provide clear identification to other marine users (collision avoidance);

- Deck lighting to allow safe movement of personnel around the deck during hours of darkness; and

- During discontinuous periods in the night hours, spot lighting may be required for the inspection, deployment and recovery of seismic equipment in the water (this would mainly involve the use of reflectors at the stern of the ship that are focused towards the sound source). It should be noted that weather and wave conditions may prevent these nighttime water inspections for personnel safety reasons.

Measures to minimize impacts on birds include:

- Reduce external lighting of ships to a minimum that ensures the safety of navigation, the safety of ships and the safety of deck operations.

- When it comes to lighting for inspection, deployment and recovery of equipment at sea, avoid unnecessary lighting for night inspections whenever possible.

2.3.4 Management Program

In those cases where a specimen of endangered marine fauna is observed, the MFO, in consultation with the ship's operator, shall immediately contact the Argentine Coast Guard to request assistance

from the corresponding authorities. The Argentine Coast Guard, in compliance with its specific functions, shall coordinate and supervise the required actions, giving notice of the reported event to the National, Provincial and / or Municipal government authorities, as appropriate (SAyDS, 2002)3. In the event that a marine mammal or sea turtle becomes entangled in any cable or line, the MFO, in consultation with the vessel operator, shall give proper notice to the Argentine Coast Guard and authorities, so that appropriate response measures can be implemented.

In the event of a collision or any situation involving damage to marine fauna, the vessel operator, in consultation with the MFOs, shall document the conditions in which the accident occurred, including the following information:

- Location (latitude and longitude) of the vessel when the collision occurred;
- Date and time of the collision;
- Speed and course of the ship at the time of the collision;
- Observation conditions (for example, wind speed and direction, wave conditions, visibility, presence of rain or fog, etc.) at the time of the collision;
- Marine fauna species involved (if known)
- Name of the vessel, owner / operator and captain or officer in charge of the vessel at the time of the collision.

If a collision occurs, the ship shall stop, if it is safe to do so; and you shall be able to restart navigation once you confirm that there shall be no further damage to marine biota by doing so.

The action protocols in these cases require that collisions or other impacts related to marine biota be promptly reported to the coordinating body regarding stranding. Based on the report, this body shall coordinate subsequent actions, including obtaining assistance from marine turtle or mammal rescue organizations, if applicable. At the National level, these actions are articulated by the Federal Network for Assistance to Stranding of Marine Fauna 4, created by Resolution 11/2019 of the Ministry of Public Policies on Natural Resources of the MAyDS.

According to commonly applicable action protocols, the ship's operator does not have the authorization to help injured marine fauna or to recover the carcass, unless requested by the stranding coordinating body.

3 Secretariat for Environment and Sustainable Development, 2002. Recommendations Manual for the rescue of birds, turtles and marine mammals. Directorate of Ichthyofauna and aquaculture resources, Ministry of Social Development.

4 **https://www.argentina.gob.ar/noticias/ambiente-presenta-la-red-federal-de-asistencia-varamientos-de-fauna-marina**

2.4 PROGRAM FOR PREVENTION OF IMPLAWS DUE TO POTENTIAL INTERFERENCES AND COORDINATION WITH ADJOINING LAWIVITIES

2.4.1 Activities

- **Planned Activities:**
  - Operation of seismic sources (compressed air emissions).
  - Navigation of seismic and support vessels and physical presence of the seismic equipment.
  - Emissions, effluents and waste associated with the normal operation and maintenance of seismic and support vessels (and other operations).

2.4.2 Impact (s)

- Potential effects of noise generated by seismic operations on marine organisms.
- Potential physical risk to marine fauna due to collision.
- Interference with normal boat traffic.
- Interference with fishing activity.
- Interference with potential adjoining activities and explorations.

2.4.3 Mitigation Actions

2.4.3.1 General

- Implement Good Environmental practices and the state-of-the-art technologies at all stages.

Guarantee the permanent presence of an Environmental, Health and Safety Supervisor in all activities, training staff and recording operations and their impacts.

Train all personnel involved in the project on the Environmental Management Plan and the Contingency Plan.

The stages and areas of action shall be planned in advance and the Argentine Coast Guard shall be notified of the tasks to be carried out in the areas within its competence.

2.4.3.2 Health and Safety

Prior to the beginning of activities, the Team in charge of the seismic activity, shall require the personnel involved in the project to comply with the conditions related to environmental protection, occupational health, safety and accident prevention through the Chief of Operations, in accordance with the environmental protection program, health and safety of each of the vessels, which shall be duly delivered to EQUINOR for approval. The premises of HEALTH, SAFETY, ENVIRONMENT AND QUALITY MANAGEMENT IN EQUINOR OPERATIONS shall be made available to the staff to be adequately informed and also raise awareness through talks, courses, etc. They shall be included below (Point 0).

The forms for the control of compliance with the Safety and Hygiene Procedures shall be filled out by EQUINOR inspection personnel in total agreement with the personnel in charge of the vessel.

The seismic team shall inform EQUINOR in writing of the occurrence of any incident or accident related to safety, environment and health taking place during the execution of the tasks.

Post an adequate number of signs, posters or safety notices in visible places of the work area according to the existing risks.

Have fire protection equipment and periodically verify their correct operation.

When adverse weather conditions arise, operations shall be reduced to those strictly necessary.

2.4.3.3 Measures to reduce the speed of vessels when they transit at a 10 knot-speed (higher)

As a preventive measure to avoid a possible incident and / or impact of the vessels and the marine fauna present in the area, the following requirements regarding the proximity distance should be met when the seismic vessel and support and tracking vessels move at a 10 knot-speed or greater 5:

- Travel at less than 6 knots when in a 150m-radius for dolphins and pinnipeds and 300m for whales, which can be considered a “caution zone”.
- Do not go beyond the "caution zones" for dolphins and whales defined above.
- If the cetacean or pinniped shows signs of disturbance, move away at a constant speed of less than 6 knots.
- If feeding fauna is identified, the mentioned precautionary zone is extended to 1,000 m.

The MFOs shall alert personnel for vessels to move away or slow down upon detecting the presence of specimens. Likewise, if the ship's personnel spot specimens, they shall immediately notify the MFOs by collaborating in the detection, although these are accordingly equipped.

2.4.3.4 Mitigation measures for potential interference with navigation

Interference in the navigation of other vessels is one of the potential impacts of this type of project. When planning and coordinating activities, the following measures shall be applied:

A communication process shall be established with key stakeholders involved in maritime affairs (e.g, Argentine Coast Guard) to coordinate the planning of the use of maritime areas, in order to avoid interference that affects both maritime activities in the area of influence of the project as well as the seismic record itself.

To minimize the effects on the mobility and traffic of ships and boats, task schedules, dates and areas of execution and influence of the project shall be communicated to the corresponding Authorities (Argentine Coast Guard).

2.4.3.5

5 On the basis of 2000 EPBC Regulation. This is the Australian Parliament's Environmental Protection and Biodiversity Conservation Law of 1999, which provides a framework for environmental protection, including biodiversity and its natural and culturally significant locations.

2.4.3.6 Mitigation measures for potential interference with fisheries and Activities related to the fishing sector.

Interference in fishing activity is one of the potential impacts of this type of project. When planning and coordinating activities, the following measures shall be applied:

A communication process shall be established with key stakeholders involved in fisheries matters (e.g: Secretary of Fisheries, Argentine Coast Guard, National Institute for Fisheries Research and Development (INIDEP), representatives of companies or fishing associations) to coordinate the planning of the use of the maritime areas, in order to avoid interferences that affect both the fishing activities and / or research campaigns (prospecting) of the INIDEP and the seismic record itself.

In order to minimize the effects on fishing activities and related research activities, mobility, ship and boat traffic, etc., task schedules, dates and areas of execution and influence of the project shall be communicated to the corresponding Authorities and key actors.

2.4.3.7 Coordination with adjoining explorations

There are other blocks bordering those that involve the acquisition areas under study, CAN_100 - 108 and CAN_114, which in the same way have been part of the Offshore International Public Tender No. 1. In the case of CAN_100 and CAN_108 blocks, they adjoin CAN_105, 106, 107, 109 and 110 blocks. The CAN_114 block borders CAN_111, 112 and 113 blocks.

The tender for CAN_105, 106, 110 and 112 blocks has been declared void as no offers have been received for those areas.

The CAN_107 and CAN_109 blocks were granted to the Shell Argentina SA group and Qatar Petroleum International Limited, with the oil company Shell being the operator with a 60% stake in the consortium. According to information provided by the Ministry of Environment and Sustainable Development, both the Shell company and Spectrum (now TGS) have submitted project notices for seismic exploration activities in these areas.

On the other hand, CAN_111 and 113 blocks were granted to Total Austral SA and BP Exploration Operating Company Limited, each holding a 50% stake.

EQUINOR has entered into dialogue with Total and Shell to find out their plans regarding any seismic operations. EQUINOR has entered into dialogue with Total and Shell to find out their plans regarding any seismic operations. Based on the plans reported by EQUINOR to prospect the CAN_100-108 and CAN_114 areas during the spring of 2021 and the summer of 2022, Total has confirmed that its operations in the CAN_111 and CAN_113 areas would not overlap, as they are planning the same for later, in the year 2022.

On the other hand, Shell would be planning 3D operations in the CAN_107 and CAN_109 areas in the fourth quarter of 2021, which would temporarily overlap with the campaign under study. However, the distances would indicate that the operations in the adjoining blocks shall be outside the area of maximum incidence of the noise propagated by the prospecting activity (area of direct influence), at greater distances than the thresholds of physiological damage are reached on hearing for mammals and fish. It should be noted that these distances are tentative given that the details of which shall be the polygons to be effectively surveyed within the concession blocks are not known, as well as other details of the operation (number and type of vessels involved, planned schedule for each block, exploration sequence, survey pattern, characteristics of the seismic arrangement, etc.).

In this sense, the precautionary measure proposed by EQUINOR results in the planning of operations in a coordinated manner with Shell at all times, so that they are as far apart as possible during the development of operations.

Equinor proposes, in a preliminary way, to plan the operations later in the fourth quarter, in October 2021, to begin in the easternmost part of the CAN_100-108 area, which is about 65 km from the CAN_107 block at its closest point. However, as mentioned, this shall be jointly defined in detail by both companies closer to the start date in order to ensure the greatest distance between operations. This measure is considered regarding the development of the survey in Chapter 4 and is included in the EMP as part of Equinor´s commitments.

2.4.3.8 Coordination with adjoining operators

As mentioned in the Project Description (Chapter 4) the CAN_114 seismic data acquisition area includes a marginal sector of the CAN_113 area. In turn, the CAN_114 operational area involves a sector of the CAN_111 boundary block where vessels shall operate to make turns, maneuvers, etc. without operating seismic sources.
As part of the dialogue set up with the operator of the adjoining license (TOTAL AUSTRAL SA) Equinor has obtained authorization to acquire data in a small area within CAN_113 area and carry out operations (ship turns, etc.) in the CAN_111 area. A copy of the authorization signed by TOTAL AUSTRAL SA is included in the Annex to Chapter 4.

Equinor shall keep Total informed about the details of the project (task schedules, dates, areas of execution and influence of the project, etc.).

2.4.4 **Management Program**

The Geophysical Contractor in charge of executing the project shall develop the following program under the supervision of EQUINOR.

The application of the corresponding mitigation measures shall be ensured in order to avoid the possible impacts caused by potential interferences with ships operating in the neighboring exploratory areas and / or other vessels that are navigating in the area.

The communication process with the key stakeholders involved for the coordination and planning of the use of maritime areas shall be complied with, so that activities in adjacent or nearby areas, as well as the seismic record, are not affected.

Communication shall include the information of task schedules, dates and areas of execution and influence of the project to the corresponding Authorities (Argentine Coast Guard) and key stakeholders involved.

Likewise, the requirements of the Navigation Law (Law 20,094) and the maritime and fluvial regulations under the supervision of the Argentine Coast Guard shall be complied with. In this context, both vessels with national merchant registration and foreign flag vessels that navigate Argentine jurisdictional waters shall comply with the provisions of REGINAVE and with the ordinances of the Argentine Coast Guard.

2.5 ENVIRONMENTAL MONITORING AND FOLLOW-UP PROGRAM

2.5.1 Activities

- **All project Actions**

2.5.2 Impact (s)

- **All impacts associated with the seismic project.**

2.5.3 Mitigation actions

2.5.3.1 General

- Implement Good Environmental Practices and the state-of-the-art technologies at all stages.

Guarantee the permanent presence of an Environmental, Health and Safety Supervisor in all activities, training staff and recording operations and their impacts.

Train all personnel involved in the project on the Environmental Management Plan and the Contingency Plan.

The stages and areas of action shall be planned in advance and the Argentine Coast Guard shall be notified of the tasks to be carried out in the areas within its competence.

- Engines should be properly maintained as to ensure that emissions and noise levels are kept within control.

2.5.3.2 Health and Safety

Prior to the beginning of activities, the Team in charge of the seismic activity shall require the personnel involved in the project to comply with the conditions related to environmental protection, occupational health, safety and accident prevention through the Operations Manager, in accordance with the environmental protection program, health and safety of each of the vessels, which shall be duly delivered to EQUINOR for approval. The premises of HEALTH, SAFETY, ENVIRONMENT AND QUALITY MANAGEMENT IN EQUINOR OPERATIONS shall be made available to the staff through talks, courses, etc. included in Point 0. The forms for the control of compliance with the Safety and Hygiene Procedures shall be filled out by EQUINOR inspection personnel in total agreement with the personnel in charge of the vessel.

The seismic team shall inform EQUINOR in writing of the occurrence of any incident or accident related to safety, environment and health taking place during the execution of the task.

Post an adequate number of signs, posters or safety notices in visible places of the work area according to the existing risks.

Have fire protection equipment and periodically verify their correct operation.

When adverse weather conditions arise, operations shall be reduced to those strictly necessary.

2.5.4 Management Program

This measure is aimed at establishing the specific procedures that must be followed to guarantee compliance with the established prevention and mitigation measures; and the control of existing environmental conditions in the project's area of influence.

In addition to ensuring the permanent presence of an Environmental, Health and Safety Supervisor on board, a series of environmental and safety audits shall be carried out to guarantee the correct implementation of the mitigation measures and programs included in the EMP (Environmental Management Plan). Namely:

- 1 audit prior to the start of operations of the seismic vessel and support vessels
- 1 audit during operations of the seismic vessel.

For the correct execution of these monitoring measures, a Work Plan shall be developed that identifies the personnel, their responsibilities, the logistics of the activities, the schedules, the monitoring requirements, the monitoring report forms and the communication and information to the Authorities of the results thereof.

2.6 ON-BOARD WASTE AND EFFLUENT MANAGEMENT PROGRAM

2.6.1 Activities

- Generation of waste on ships
- Generation of liquid effluents on ships

- **Unplanned events (contingencies):**
  - Oil spill
  - Accidental discharge of chemical substances and / or non-hazardous / hazardous solid waste.

2.6.2 Impact (s)

- **Impact of oil spill on marine fauna**
- **Reduction of water quality with direct or indirect effects on marine organisms.**

2.6.3 Mitigation Actions

2.6.3.1 Waste management

- The waste derived from fuels, oils, hydraulic fluids and paints, as well as cleaning elements (solvents) and other dangerous materials, shall be properly stored and labeled.
- All plastic products used on ships shall be properly disposed of, bagged and stored in special containers according to their way of disposal (recycled, incinerated or disposed of in port).
- All handling and disposal of waste and hazardous elements shall be registered according to MARPOL standards in accordance with the Argentine Coast Guard.
- The Waste Management Procedures defined by the vessel operator that have been duly approved by the Argentine Coast Guard shall be observed.
- Differential collection of solid waste shall be carried out, ensuring that the ship´s implementation process protects the environment and complies with EQUINOR Environmental Policy.

2.6.3.2 Fuel and oil handling

- All petroleum by-products shall be stored on vessels in approved tanks labeled with the name of the product they contain. Containers of products that are not stored in tanks shall also be labeled with the name of the product they contain. Said containers shall be properly secured, mounted and isolated on the vessels to avoid spillage into the sea. Sufficient absorbent material shall be stored to be used in case of spills. The fuel tanks´ connecting valves shall be properly closed. All chemical products shall have the corresponding safety sheets.
- The provision of fuel for transportation and refueling shall be coordinated by a person in charge who shall control compliance with the safety standards required by the Argentine

Coast Guard, particularly those related to adequate signaling.

- All vessels shall have an operational Contingency Plan approved by the Argentine Coast Guard, to Law in the event of leaks and spills, with the tools, absorbent materials and plastic bags necessary to shut away and clean any spill or spilled product.

2.6.4 Management Program

Purpose and Scope

The aim of the On-board Waste and Effluent Management Program consists of properly managing the substances, and solid, liquid and semi-solid waste generated in the vessels involved in the project.

The specific objectives to be met are the following:

- Prevention of environmental pollution, avoiding affecting the socio-economic, cultural, aesthetic, biological and physical environments.
- Efficient reduction of the amount of waste generated on vessels.
- Classification, order and, where appropriate, separation and storage of waste.
- Control of the handling, transport, treatment, recycling, reuse and / or final destination of the waste.
- Registration of all management procedures until complete elimination of the waste is carried out.

Thus, this program includes, among others, the disposal of materials generated in the vessels, the collection and proper disposal of hazardous / special waste; and the implementation of demands and behaviors that avoid spills, losses and the unnecessary generation of waste.

The program shall be prepared pursuant to the provisions of Title VIII of REGINAVE, and Ordinance 02/98 of the Argentine Coast Guard, which rule upon the prevention of pollution from ships and incorporate the five chapters of MARPOL currently in force, to which the Argentine Republic has adhered.

In the same way, said program shall observe the requirements of Ordinance 01/03 of the Argentine Coast Guard on waste incinerators on board naval devices and ships for the elimination of solid waste, in accordance with the corresponding Annex of MARPOL and Maritime Ordinance 01/14 of the aforementioned Institution that regulates on waste management and other discharges to the sea.

Procedure

Appropriate methods and equipment shall be used for the collection, storage and routine disposal of solid, liquid and semi-solid waste, whether domestic, pathogenic or dangerous.

A policy of prevention and minimization of potential volumes of waste shall be deployed. The contractor and suppliers shall also make use of this policy and, where appropriate, receive application instructions. The use of recyclable materials is preferred.

No discharge of waste and / or hydrocarbon spillage from tank washing, bilge and ballast drainage and, in general, no other action capable of having polluting effects upon water courses shall be allowed.

EQUINOR shall supervise the development of the On-Board Waste and Effluent Management Program through inspection processes, request for reports, monitoring and auditing. Operators shall be held accountable for controlling the discharge of waste and effluents generated in the course of their activities and shall offer adequate means for their removal. The waste shall be taken to the port for delivery to the corresponding reception system.

All the crew members shall be informed and trained about garbage collection, classification and pollution prevention measures through the implementation of the ENVIRONMENTAL TRAINING AND PERSONNEL CONDUCT PROGRAM (see Point 2.9).

All waste generated in any vessel shall be collected in suitable containers, provided with a lid to avoid the accumulation of rainwater, labels and symbols where the category of waste they contain must be clearly stated and must be put in suitable places in differentiated and clearly marked areas throughout the ship.

Methodologies that promote source reduction and recycling shall be combined. Those materials that could be recycled such as aluminum, glass, cardboard and certain plastics shall be separated in proper containers for their final disposal.

If incineration is carried out, as already mentioned, it shall be done in accordance with the standard specification for on-board incinerators, Ordinance 01/03 of the Argentine Coast Guard, referring to the requirements of waste incinerators on board naval artifacts and ships for the disposal of generated solid waste, as MARPOL Annex V so states. These incinerators may not be used for the destruction of certain hazardous waste such as PCBs, PVC plastics or hydrocarbon mixtures.

2.6.4.1 Solid waste

Non-hazardous waste

Within the framework of this program and in accordance with the provisions of current regulations, more specifically Decree 1886/83, garbage is deemed to be "all kinds of food leftovers - except fresh fish and portions thereof - as well as the remaining waste from domestic chores and routine work of the ship under normal service conditions *(…). The term does not include hydrocarbons, sewage, or harmful liquid substances (…)."*

Likewise, it is worth mentioning that the classification identified as Non-hazardous waste includes:

- Food Leftovers,
- Plastic packaging,
- Glass
- Papers,
- Cardboard,
- Wood,
- Ashes from incinerators,
- Cooking oil.

In this regard, the unloading of garbage shall be carried out at the reception facilities or services, and must be kept on board in suitable containers.

The crew's food waste shall be reduced to less than 25 mm to be subsequently discharged 12 nautical miles away, as stated by MARPOL 73/78 Regulation.

All ships shall properly notify the crew of the garbage disposal requirements contained in Regulations 3, 4 and 5 of Annex V of MARPOL 73/78 Regulation, and in Articles 803.0201, 803.0202, 803.0203 and 803.0204 of the REGINAVE (Chapter III, Title 8), which shall be made visible in appropriate places so that the crew can often observe them.

There shall be a garbage management plan on board (According to Maritime Ordinance 2/98) defining the procedures for the collection, storage, treatment and discharge of garbage, including how to use the equipment on board. Said plan shall comply with the guidelines presented as Annex I of Ordinance 2/98.

The garbage record book (GRB) shall be carried on board, and must comply with Annex II of Ordinance 2/98. Another model may be adopted by foreign vessels provided that it contains similar indications to those established hereinabove. The aforementioned book shall specify all the garbage discharge and incineration operations, as well as the cases of elimination, spillage or accidental loss.

The vessels shall have a suitable waste disposer to reduce garbage.

The ships covered by Ordinance 2/98 shall have the Certificate for the Prevention of garbage pollution on board or, in the case of foreign ships, the certificate of Supervision for the Prevention of Garbage Pollution (Annexes III and IV Ordinance 2/98).

Hazardous Waste

Therefore, they require special procedures for their handling, storage and disposal in order to eliminate and / or control their danger.

Some of them could be the following:

- Used lubricating oils,
- Rags and filters with traces of oil,
- Fluorescent light tubes,
- Plastic or metal containers that have contained dangerous substances,
- Electronic Waste,
- Medical waste.

Extreme measures shall be taken to avoid accidental spills of hydrocarbons and / or oils. The selected contractor shall be in charge of all repairs and maintenance of the equipment and machinery used during the project and shall be carried out in places set up for this purpose.

2.6.4.2

Hazardous waste effluents shall never be discharged and shall be properly stored to be delivered to a certified recipient. All vessels involved in the project shall have adequate storage areas, thus avoiding the involuntary discharge of waste and cross-contamination of hazardous waste with non-hazardous waste.

A list of all hazardous materials used shall be prepared and Chemical Data Sheets (Material Safety Data Sheets) shall be available for all substances used or transported by operators in their vessels. The forms shall contain specific instructions about their disposal.

An identification and labeling system shall be used for all hazardous substances. All containers, pipes and other instruments used for the handling of this type of substances shall be labeled informing the project staff of their contents. It should be noted that the waste shall be stored in flexible intermediate bulk containers (FIBC) before being transferred to shore and must be adequately secured on deck. FIBC containers can carry up to 1000 times their own weight, are highly resistant and flexible, have a low cost per unit and can be used for hazardous chemicals.

During the use, storage and handling of dangerous substances, the following aspects shall be observed:

- Information on substances and their physical properties.
- Necessary precautions for use.
- Specific requirements for storage.
- Medical treatment in case of ingestion, inhalation, etc.

Batteries should be stored indoors in order to avoid spillage. Those remains of materials considered as Hazardous Waste shall be delivered in port to Certified Companies for their final disposal. However, it should be noted that, in addition to complying with Law No. 23,922 adhering to the BASEL CONVENTION ON THE CONTROL OF TRANSBOUNDARY MOVEMENTS OF HAZARDOUS WASTE AND THEIR DISPOSAL, and the provisions of Article 41 of the National Constitution through which the prohibition of entry into the national territory of current or potentially dangerous waste and radioactive waste was incorporated in the last paragraph, the Argentine Law N° 24.051 on Hazardous Waste, states the prohibition of the import, introduction and transport of all types of waste from other countries to the national territory and its air and maritime spaces through Art. 3°. Law No. 24,051 was regulated through Decree No. 831/93, including those products that are not accompanied by a health and / or environmental safety certificate, issued prior to shipment by the competent authority of the country of origin, and ratified by the Enforcement Authority, prior to disembarkation. The National Customs Administration shall be the Law enforcement Authority. It should be clarified that, Decree No. 591 corresponding to the year 2019 of the former Secretariat of Government for the Environment and Sustainable Development has been revoked by Decree No. 148/2020, by means of which various articles of Decrees 181/92 and 831/93 were substituted so that the materials used by the industry that were unavailable in this country could be admitted without the requirements of harmlessness or danger of the country of origin.

In the event of any contingency during the handling or storage of hazardous waste, the corresponding procedure shall be applied.

Pathogenic waste shall be entirely managed by the companies in charge of medical services. Said companies shall store the waste in nylon bags of at least 40 microns, which in turn shall be deposited in metal containers with hermetically sealed lids, and sterilized after use as an essential condition for reuse.

The personnel removing the pathogenic waste shall be trained about its risks. Likewise, they shall always have appropriate personal protection elements (goggles, surgery gloves, apron, etc.).

2.6.4.3 Effluents

Liquid Waste (Dirty water)

Dirty water can be generated on board a ship, among others. In the framework of this program and in accordance with the provisions of REGINAVE, dirty water is considered to be as follows:

- Drains and other waste from any type of toilets and urinals.
- Drains from sinks, and outlet pipes located in medical services offices (dispensary, medical service, etc).
- Other residual waters, when they are mixed with the drainage waters defined above.

It shall be forbidden to discharge dirty water into a body of water of National Jurisdiction, unless the operating regime of navigation to which the ship is affected is contrary to the set of rules that apply to the retention of dirty water on board for its discharge in the appropriate facilities (802.0203), in which case, the following conditions shall be met:

- That the dirty waters have been previously analyzed and disinfected by means of a duly approved system by the Argentine Coast Guard in accordance with article 802.0103;
- That the discharge is carried out through a moderate plan, the ship being in navigation and at a speed of not less than 4 knots. Said discharge shall be determined by the Argentine Coast Guard;
- That the provisions of article 802.0201 be completed.

The ships shall have the necessary facilities for the treatment of dirty water, which shall comply with the stipulated operational prescriptions in accordance with the standards and test methods determined by the Argentine Coast Guard.

Every vessel shall have a liquid retention tank with sufficient capacity to retain the dirty water, taking into account the vessel's equipment, the service it provides, the number of people on board, and other pertinent factors. Said tank shall be provided with visual content indicators.

Likewise, they shall have an outlet pipe to discharge the dirty water in the reception facilities. Said pipe shall be provided with a universal ground connection whose specifications are stated by the Argentine Coast Guard.

Management of bilge water and slops (effluents with fuel content)

Ships have bilge tanks and slops at the bottom of the vessel. During operation, the different machines can lose lubricants and fuels that are led to these tanks. According to MARPOL 73/78 International treaty (International Convention to Prevent Pollution from Ships), these oily waters can be discharged into the open sea at reduced rates. However, its discharge into coastal waters is banned. It also requires ships to install oil separators on board in such a way that a fluid with a minimum percentage of hydrocarbons is discharged, while oily mud is retained in the slop tank of the ship. While bilge waters have approximately 95% water to 5% hydrocarbons proportions, slops have 5% water to 95% hydrocarbons ratio.

- The discharge of fuels and mixtures whose content exceeds a concentration of 15 ppm is prohibited and shall be carried out in suitable reception facilities, or if there are none and until they are developed, they shall be eliminated according to the requirements of the Argentine Coast Guard so as not to pollute the environment.

2.6.4.4

- Depending on the type of vessel, each of them shall have the mandatory equipment, devices and systems on board as defined by Article 801.0301 of REGINAVE.

2.6.4.5

- Preventive measures shall be implemented to avoid oil spills. The methods approved by the Argentine Coast Guard (PNA) (Ordinance No. 8/98) and the recommendations of MARPOL No. 73/78, Annex I, Regulation for the Prevention of Oil Pollution - Regulation 26 of SOPEP shall be implemented in the event of a spill.

2.6.4.6

- The person in charge of the vessel shall have a Contingency Plan for Hydrocarbon Spills, the guidelines of which shall be adjusted to the regulations already indicated.

In all cases of waste management described above, records shall be kept indicating the type of waste, quantities, generation area, storage conditions, observations, transport company, operating company, etc. These aspects of waste management shall be periodically controlled by the Environmental Manager.

Ballast water procedure and invasive species control

Ballast water is used on ships to maintain their balance. They are tanks that are filled as the ships empty, to counterbalance the boat. In this process, the ballast water becomes a source of exchange for exotic species and diseases (bacteria, microbes, small invertebrates, eggs, cysts and larvae of different species, seeds, algae, etc.).

Considering this situation - which in fact has caused economic and biodiversity damage - the International Marine Organization (IMO) promoted the International Convention for the Control and Management of Ballast Water and Sediments from Ships (Convention BWM) in 2004, in order to introduce global rules to control the transfer of potentially invasive species. Ballast water management led to the enactment of MAyDS Resolution 85/17 as an interim measure until the IMO Ballast Water Convention came into force (which was ratified in Argentina by Law 27.011).

This regulation established the temporary validity of Resolution 159/99 of the Ministry of Health with the chlorination of bilge water as a preventive measure. As of the entry into force of the BWM Convention at the end of 2017, the management measures established therein and the good practices set up by the Technical Commission for Environmental Protection of the IMO for this purpose shall be applicable. This Technical Commission periodically issues mechanisms and acceptable procedures reports for the mitigation or neutralization of bilge water, including appropriate technologies, manufacturers and equipment. The bilge water management systems shall be aligned with the requirements of the Convention and the standards dictated accordingly by the Argentine Coast Guard.

The Convention requires all ships to adopt a ballast water management plan and must carry a log book on board. Ships are required to exchange ballast water in the middle of the ocean as an intermediate solution. However, most ships shall have on-board treatment systems installed.

Another important point of the agreement is that the signatory countries undertake to ensure that adequate facilities are available for receiving sediments in ports and terminals where ballast tank repair or cleaning work is carried out. This means that the terminals must have tanks and systems for filtering and disinfecting these sediments.

The Argentine Coast Guard is in charge of enforcing the rules corresponding to the care of the aquatic environment and MARPOL regulations within the Argentine Territory. Given that the BWM agreement is new, surely the Argentine Coast Guard (PNA) shall incorporate standards on the handling of such liquids in the near future.

However, the Argentine Coast Guard makes several references and controls the ballast water disposal in Argentina. The provisions refer mainly to those that could be contaminated with oily substances, although already in 1998, through Ordinance 7/98, Volume 6, it regulated ballast water based on previous guidelines issued by the IMO.

In particular, the first article provides: “that all international maritime navigation vessels that come from foreign ports and carry ballast water on board, having as their destination or stopover Argentine ports through the "Río de la Plata" river, shall change the ballast water before entering said waterway and the area of prohibition of polluting actions located in front of its outer limit. Whenever possible, they shall clean the ballast tanks to remove sediment”. This is particularly important for the port of Buenos Aires, where the seismic fleet shall dock during the mobilization stage.

Likewise, Ordinance No. 12/98, Volume 6 of the Argentine Coast Gard establishes in Art. 11º that prior to entering the Special Protection Zones, the ballast water should have been changed, ballasting with water taken within one hundred fifty (150) nautical miles immediately prior to the external limit determined for the Area in question, measured on the course traveled, in order to foresee that the present biota is reasonably similar to that native at the final ballasting site.

The captains shall record all the operations carried out in the Navigation Log (in the absence of a Ballast Water Record Book).

According to the abovementioned, it would not be necessary to manage ballast water in the Port of Buenos Aires. However, the operator shall foresee the possible reception of sediment from the ballast tanks in case the captain or the Argentine Coast Guard so require.

The service may be outsourced, but it shall be ensured that:

- The provider has permission to transport and dispose of the sediments in authorized sites for their treatment and final disposal. In all cases, the corresponding certificates shall be presented.
- Sediment analyses are performed to detect potentially harmful organisms (the most common being the Asian Kelp, Cholera, European Green Crab, South Pacific Starfish, American Jellyfish, Zebra Mussel, etc.)
- The corresponding procedures are carried out to avoid the proliferation of these species.

2.7 HYDROCARBON MANAGEMENT PROGRAM

2.7.1 Activities

- **Unplanned events (contingencies):**
  - Oil spills.
  - Accidental discharge of chemical substances and / or non-hazardous / hazardous solid waste.

2.7.2 Impact (s)

- **Impact of oil spill on marine fauna.**
- **Reduction of water quality with direct or indirect effects on marine organisms.**

2.7.3 Mitigation Actions

2.7.3.1 Fuel and oil handling

- All petroleum by-products shall be stored on vessels in approved tanks labeled with the name of the product they contain. Containers of products that are not stored in tanks shall be labeled with the name of the product they contain. These containers shall be properly secured, mounted and isolated on the vessels to avoid spillage into the sea. Sufficient absorbent material shall be stored to be used in case of spills and the fuel tanks connecting valves shall be properly closed. All chemical products shall have the corresponding safety sheets.
- The provision of fuel for transportation and refueling shall be coordinated by a person in charge who shall control compliance with the safety standards required by the Argentine Coast Guard, particularly those related to adequate signaling.
- The vessels shall have an operational Contingency Plan approved by the Argentine Coast Guard to Law in the event of leaks and spills, with the tools, absorbent materials and plastic bags necessary to shut away and clean any spill or spilled product.

2.7.3.2 Waste management

- The waste derived from fuels, oils, hydraulic fluids and paints, as well as cleaning elements (solvents) and other dangerous materials, shall be properly stored and labelled.
- All plastic products used on ships shall be properly disposed of, bagged and stored in special containers according to their way of disposal (recycled, incinerated or disposed of in port).
- All handling and disposal of waste and hazardous elements shall be registered according to MARPOL standards and the Argentine Coast Guard requirements.
- The Waste Management Procedures defined by the vessel operator that have been duly approved by the Argentine Coast Guard shall be observed.
- Differential collection of solid waste shall be carried out by the ship that must comply with environmental protection procedures and consequently, with EQUINOR´s Environmental Policy.

2.7.4 Management Program

Aim and Scope

The program is aimed at carrying out a correct management of the hydrocarbons used in the vessels involved in the project.

The specific aims to be met are:

- Prevention of environmental pollution, avoiding affecting the socio-economic, cultural, aesthetic, biological and physical environments.
- The classification, order and storage of substances with hydrocarbons.

Everything established under Title VIII of REGINAVE shall be taken into consideration for the elaboration of the program, which is entirely focused on the prevention of pollution from ships and incorporates the five chapters of MARPOL currently in force adopted by the Argentine Republic.

In the same way, said program shall consider the requirements of the Maritime Ordinance 01/14 of the Argentine Coast Guard that regulates on waste management and other discharges to the sea.

Procedure

In this regard, the provisions of REGINAVE and the ordinances approved by the Argentine Coast Guard shall be complied with at all times.

EQUINOR shall control the development of the program through inspection processes, request for reports, monitoring and auditing. The operators shall be held responsible for the control of handling and storage.

All crew members shall be informed and trained about the handling of hydrocarbons and pollution prevention measures through the implementation of the Environmental Training Program.

Depending on the type of vessel, each of them shall have the mandatory equipment, devices and systems on board as defined by Article 801.0301 of REGINAVE.

A Hydrocarbons Registry Book shall be drawn up as stated by Ordinance 7/97 of the Argentine Coast Guard, in order to comply with the requirements of MARPOL, as established in article 801.0206 of REGINAVE.

For the loading of fuel and lubricants, the ships shall comply with the verifications provided in the Checklist for Pollution Prevention in Bulk Loading and Unloading of Hydrocarbons or their by-products, according to Maritime Ordinance No. 1/93 of the Argentine Coast Guard.

Hydrocarbon waste shall be stored on board until it can be disposed of in the coastal area by a properly certified company. Preventive measures shall be implemented to avoid oil spills. The methods approved by the Argentine Coast Guard (PNA) (Ordinance No. 8/98) and the recommendations of MARPOL No. 73/78, Annex I, Regulation for the Prevention of Oil Pollution - Regulation 26 of SOPEP shall be implemented in the event of a spill.

Vessel operators shall have a Hydrocarbon Spill Contingency plan whose guidelines must be adjusted to the standards already indicated.

2.7.4.1 Subprogram for offshore refueling

One of the required operations shall be the refueling on the high seas. Once in the survey area, the seismic vessel shall receive fuel from the support vessel approximately every 2 to 3 weeks.

Whatever the case, the fueling operation is risky due to both the flammability and the environmental damage that a spill can cause.

The offshore fueling method is as follows: the two vessels are moored, the support vessel lifts a crane with a hose and extends it to the seismic vessel, hooks onto valves on deck, and fuel is passed.

All deck fuel fillers have a fixed drip collection tray. All drips accumulate in the bilge. These liquids are then processed by the bilge water separator. All separators shall comply with MARPOL rules, an agreement to which Argentina is signatory as a nation and, in turn, shall be authorized by the Argentine Coast Guard, the National State Police within the maritime field.

Before the oil transfer begins, all deck drains shall be effectively open to prevent spilled oil from leaving the ship.

The discharge valves at sea, as well as all other valves connected to the fuel and ballast systems, shall be properly closed and may even be sealed.

At the beginning and at regular intervals during transfer operations, the crew shall closely monitor that no oil is leaking from the ship through the valves or openings on the deck or in the engine room. It shall be particularly checked that all openings which must remain closed are effectively closed and all unused connections points are covered.

Fuel tanks that have been refilled shall be frequently checked during the remaining loading operations to ensure that there is no more fuel intake. The rate of loading shall be closely monitored, taking into account the available cargo space and the time required to stop transfer operations.

In the event of a leak or overflow, loading operations shall stop immediately and shall not restart until the fault has been identified and rectified and all risks arising from the released hydrocarbons and / or hazardous substances have been eliminated. All spills must be reported to the authorities and any adjacent vessels that may be at risk.

In the event of a fuel spill:

- The captain shall order the crew to position themselves at their oil spill response stations.
- If there is a spill of hydrocarbons and / or dangerous substances, the interested parties shall be immediately notified in accordance with the established procedures.
- Wherever possible, an oil barrier should be deployed right away to prevent dissipation and, at the same time, recover as much oil as possible.

The most likely operational spills shall be the result of:

- Leaking pipes, including transfer hoses.

Overflows from cargo tanks or fuel tanks may also occur.

A - Leak in pipeline / hose during refueling:

- All cargo sourcing operations shall stop and the manifold valves shall close.
- The emergency alarm shall be activated and emergency response procedures shall begin.
- The cargo captain / fueling crew shall be informed of the incident.
- The source of the leak shall be located and clean-up procedures shall begin.
- The affected section of pipe shall be drained into an empty tank (for example, waste tank or other cargo tank).
- If the spilled liquid is contained on board and can be handled, then absorbents and permitted solvents shall be used to clean up the spilled liquid on board, ensuring that the collected waste and contaminated absorbent materials used in the clean-up operation are carefully stored prior to disposal.

B - Overflow of the cargo tank or fuel tank:

- All cargo sourcing operations shall stop and the manifold valves shall close.
- The emergency alarm shall be Lawivated and emergency response procedures shall begin.
- The cargo captain / fueling crew shall be informed of the incident.

- The tank level shall be lowered by dropping the cargo or fuel into an empty tank.
- Portable pumps shall be used if it is possible to transfer the spilled liquid to an empty tank.
- If the spilled liquid is contained on board and can be handled, then absorbents and permitted solvents shall be used to clean up the spilled liquid on board, ensuring that the collected waste and contaminated absorbent materials used in the clean-up operation are carefully stored prior to disposal.

It should be noted that if oil or other cargo liquid is observed in the water near the ship during loading or fueling operations and cannot be accounted for, the possibility of a hull leak shall be considered.

C - Leak in the hull:

- All loading and supply operations shall be stopped and the manifold valves, tank valves, and pipeline master valves shall be closed.
- The emergency alarm shall be activated and emergency response procedures shall begin.
- The cargo captain / fueling crew shall be informed of the incident.
- An attempt shall be made to locate the source of the leak.
- If the source of the leak is not easily identified on deck or above the waterline, the use of a diver shall be considered to help locate said leak.
- When the source of the leak is identified, the oil or fuel load shall be reduced by dropping or pumping the liquid into an empty tank.
- If possible, pump water into the leaking tank to create a water cushion that prevents further loss of hydrocarbons less dense than water.
- If the leak is below the waterline, divers shall be required to investigate further.

After dealing with the cause of the spill it may be necessary to obtain permission from local authorities to continue normal operations.

2.8 ONSHORE LOGISTICS BASE OPERATION PROGRAM

2.8.1 Activities

- Generation of waste on ships.
- Generation of liquid effluents on ships.

- **Unplanned events (contingencies):**
  - Oil spills.

2.8.2 Impact (s)

- Damage to marine fauna by oil spill (superficial contact with the skin and other mucous membranes, inhalation or ingestion).
- Reduction of water quality with direct or indirect effects on marine organisms.

2.8.3 Mitigation Actions

2.8.3.1 Waste management

- The waste derived from fuels, oils, hydraulic fluids and paints, as well as cleaning elements (solvents) and other dangerous materials, shall be properly stored and labelled.
- All plastic products used on ships shall be properly disposed of, bagged and stored in special containers according to their way of disposal (recycled, incinerated or disposed of in port).

- All handling and disposal of waste and hazardous elements shall be registered according to MARPOL standards and the Argentine Coast Guard requirements.
- The Waste Management Procedures defined by the vessel operator that have been duly approved by the Argentine Coast Guard shall be observed.
- Differential collection of solid waste shall be carried out, ensuring that the ship´s implementation process protects the environment and complies with EQUINOR Environmental Policy.

2.8.3.2 Fuel and oil handling

- All petroleum by-products shall be stored on vessels in approved tanks labeled with the name of the product they contain. Containers of products that are not stored in tanks shall be labeled with the name of the product they contain. These containers shall be properly secured, mounted and isolated on the vessels to avoid spillage into the sea. Sufficient absorbent material shall be stored to be used in case of spills. The fuel tanks connecting valves shall be properly closed. All chemical products shall have the corresponding safety sheets.
- The provision of fuel for transportation and refueling shall be coordinated by a person in charge who shall control compliance with the safety standards required by the Argentine Coast Guard, particularly those related to adequate signaling.

- The vessels shall have an operational Contingency Plan approved by the Argentine Coast Guard to Law in the event of leaks and spills, with the tools, absorbent materials and plastic bags necessary to shut away and clean any spill or spilled product.

2.8.4 Management Program

2.8.4.1 Subprogram for fueling

One of the operations required by shipping lines is the loading of fuels in port. In container and general cargo ports, ships are loaded by tanker trucks. In passenger terminals, due to the inconvenience that these trucks can cause to the movement of people, fixed installations are sometimes built. Whatever the case, the fueling operation is risky due to both the flammability and the environmental damage that a spill can cause. Therefore, it is necessary to have clear procedures on how the operation should be carried out.

As in the case of oily liquids, the supplier is primarily responsible for operations - generally a third party hired by the shipping agency - and the shipping line. And although the operation is normally monitored by the Argentine Coast Guard (PNA) due to the secondary responsibilities that could arise and the damages caused to the operation affecting the operator, the latter shall ensure that these operations are acceptable.

The standard PNA procedure considers:

- Availability of elements for the containment of spills in the water (equipment of the fuel supplier or the port, such as booms and absorbent material).
- Spill tray under the charging hose.
- Fire extinguisher.
- Security.

Smoking, open fires, and hot works are prohibited during loading operations. Only the essential personnel shall be in the work area, setting up a marked exclusion zone.

2.8.4.2 Subprogram for ship waste management

Ships are obliged to separate waste on board through Annex V of the MARPOL 73/78 agreement. This international agreement was ratified by Law 24,089 being the Argentine Coast Guard its enforcement authority, which incorporated the provisions of the agreement into Title 8 of REGINAVE. According to these regulations, the dumping of plastics in the sea and the rest of the garbage is totally forbidden, except for its dumping in river waters. In addition, it is specified that ports and terminals shall have garbage reception facilities and services with adequate capacity so that ships that use them do not have to suffer unnecessary delays.

Annex V of Marpol specifies the following garbage classification:

1. Plastics
2. Food leftovers (which can be thrown overboard with certain limitations)
3. Cooking oil
4. Household waste (cans, bottles, paper, cardboard, etc.)
5. Incinerator Ash
6. Fishing nets
7. Animal waste
8. Waste derived from the operation and loads (soaps, additives, residual loads that remain after unloading)
9. E-waste
10. Mixed waste

The legal framework for the removal of Ship Waste, classified as similar to Household Waste, is set by compliance with Ordinance PNA 02/98 (Argentine Coast Guard). In accordance with these requirements, ships deliver already processed waste to the Port (all transactions carried out shall be recorded in the Garbage Record Book).

The management of waste in the port shall be carried out according to the legislation applicable at the local level, assimilating it to household, special (dangerous) and pathogenic.

As detailed in the Regulations for the stay of vessels in the Port of Mar del Plata, prior authorization shall be requested from the Operations Section of the Port of Mar del Plata, for the use of a dock area to deposit waste in bags and / or containers, equipment, gates, nets, grills and / or any other element from the ship, for a period equal to or greater than 12 hours.

The land transport of waste classified as similar to Household Waste is an outsourced service in which the awarded companies must be duly registered to work within Mar del Plata Regional Port Consortium. Each cargo is accompanied by a delivery note (a copy remains in the possession of the Consortium), indicating the classification of the waste and the volume removed that shall have the local sanitary landfill as its final destination.

The company providing the service must be registered and authorized by the Argentine Coast Guard and the Provincial Organization for Sustainable Development (POSD) of the Province of Buenos Aires for the transport of household-type waste from the port to the landfill.

Likewise, companies authorized by the PNA and the Provincial Organization for Sustainable Development of the Province of Buenos Aires shall be hired for the removal, transport and / or treatment of special waste, lubricants and hydrocarbons. Said Companies must be properly registered to work in the area of the Regional Port Consortium of Mar del Plata, as a port services company.

2.8.4.3 Bilge water and slops management

When the capacities of the slop and bilge are full, it is necessary to discharge them in the port areas.

Normally, these operations are outsourced and directly hired by the shipowners in container and general cargo Ports.

In this scheme of responsibilities, the operator in charge of unloading and transport would be the first responsible and the shipping line would share that responsibility. The Argentine Coast Guard controls these operations that must be carried out through authorized procedures.

2.9 EMERGENCY RESPONSE PROGRAM

2.9.1 Activities

- **Unplanned events (contingencies):**
  - Oil spills
  - Accidental discharge of chemical substances and / or non-hazardous / hazardous solid waste

2.9.2 Impact (s)

- **Impact of oil spill on marine fauna.**
- **Reduction of water quality with direct or indirect effects on marine organisms.**

2.9.3 Mitigation actions

2.9.3.1 General

- Implement Good Environmental Practices and the state-of-the-art technologies at all stages.

Guarantee the permanent presence of an Environmental, Health and Safety Supervisor in all activities, training staff and recording operations and their impacts.

Train all personnel involved in the project on the Environmental Management Plan and the Contingency Plan.

The stages and areas of action shall be planned in advance and the Argentine Coast Guard shall be notified of the tasks to be carried out in the areas within its competence.

- Engines should be properly maintained as to ensure that emissions and noise levels are kept under control.

2.9.3.2 Health and Safety

Prior to the beginning of activities, the Team in charge of the seismic activity, shall require the personnel involved in the project to comply with the conditions related to environmental protection, occupational health, safety and accident prevention through the Operations Manager, in accordance with the environmental protection program, health and safety of each of the vessels, which shall be duly delivered to EQUINOR for approval. The staff shall be adequately informed to raise awareness through talks, courses, etc. Therefore, HEALTH, SAFETY, ENVIRONMENT AND QUALITY MANAGEMENT CONTENT IN EQUINOR OPERATIONS included in Point 0 shall apply.

The forms for the control of compliance with the Safety and Hygiene Procedures shall be filled out by EQUINOR inspection personnel in total agreement with the personnel in charge of the vessel.

The seismic team shall inform EQUINOR in writing of the occurrence of any incident or accident related to safety, environment and health taking place during tasks.

Post an adequate number of signs, posters or safety notices in visible places of the work area informing of the existing risks.

Have fire protection equipment in place and periodically verify their correct operation.

When adverse weather conditions arise, operations shall be reduced to those strictly necessary.

2.9.3.3 Fuel and oil handling

- All petroleum by-products shall be stored on vessels in approved tanks labeled with the name of the product they contain. Containers of products that are not stored in tanks shall be labeled with the name of the product they contain. These containers shall be properly secured, mounted and isolated on the vessels to avoid spillage into the sea. Sufficient absorbent material shall be stored to be used in case of spills. The fuel tanks connecting valves shall be properly closed. All chemical products shall have the corresponding safety sheets.
- The provision of fuel for transportation and refueling shall be coordinated by a person in charge who shall control compliance with the safety standards required by the Argentine Coast Guard, particularly those related to adequate signaling.
- The vessels shall have an operational Contingency Plan approved by the Argentine Coast Guard to act in the event of leaks and spills, with the tools, absorbent materials and plastic bags necessary to shut away and clean any spill or spilled product.

2.9.3.4 Waste management

- The waste derived from fuels, oils, hydraulic fluids and paints, as well as cleaning elements (solvents) and other dangerous materials, shall be properly stored and labelled.
- All plastic products used on ships shall be properly disposed of, bagged and stored in special containers according to their way of disposal (recycled, incinerated or disposed of in port).
- All handling and disposal of waste and hazardous elements shall be registered according to MARPOL standards and the Argentine Coast Guard requirements.
- The Waste Management Procedures defined by the vessel operator that have been duly approved by the Argentine Coast Guard shall be observed.
- Differential collection of solid waste shall be performed, verifying the implementation by the ship of procedures compatible with the protection of the environment and therefore with the EQUINOR Environmental Policy.

2.9.4 Management Program

Aim and Scope

As detailed in Chapter 7 - Environmental Impact Assessment, the operation of ships leads to consider different risks.

In this regard, the design of the survey, operation and maintenance of the vessels that shall be used for the project, shall also be developed in accordance with the requirements set up by the IMO. However, although the probability of an accident is extremely low, the occurrence of an eventual contingency cannot be ruled out.

In this way, although all measures shall be adopted to minimize them, it is necessary to put forward a program in the event of accidents that allows these situations to be adequately addressed and to comply with the provisions in force.

In this sense, Ordinance 08/98 of the Argentine Coast Guard lays down the framework for contingency plans at the national level. The vessel operator shall draw up a Contingency Plan for approval by the PNA, contemplating articulation with the remaining components, some with the private sector, others with public agencies.

The program is aimed at:

a) Optimizing emergency control actions, in order to protect people's lives, affected natural resources, and own and third-party assets.

b) Avoiding or minimizing the adverse effects derived from emergencies that may occur as a result of the execution of maritime operations.

c) Determine an orderly procedure of the main actions to be followed in case of emergencies and promote the development of skills and abilities in all personnel to deal with such situations quickly.

d) Constitute a suitable, efficient and permanently trained body that allows the correct use of the human and material resources available to that effect.

e) Comply with current provisions.

Procedures

General aspects

1. Identification of Contingencies

During the operation of boats, some emergency situations may arise, and it shall be necessary to have an adequate, timely and efficient treatment scheme. Possible contingencies identified include:

a) Spills of fuels and other dangerous substances.
b) On board Explosions / Fires.
c) Accident on board (so it shall be necessary to evacuate and transfer the injured).
d) Man overboard.

2. Classification of contingencies

The different types of possible incidents shall be classified according to the severity and magnitude of the emergency as follows:

Grade 1 incidents: this is a minor operational incident, which locally affects the vessel operator's equipment, generating a small or limited environmental impact, without causing harm to people.
Grade 2 Incident: this is a major operational incident, which affects the vessel's operator's equipment, third-party assets, water, air, aquatic life and / or fauna, which could produce a

considerable impact.

3. Organization upon Contingency

There shall be an organization chart that clearly identifies the task assigned to each person in charge on board. As an example, a table is presented below with possible roles of the personnel in the event of fires or emergencies (Table 6), which can be adapted by the operator provided that all positions are adequately covered in an emergency.

Table 3. Position and assigned roles upon emergency.

Position	Assigned Role (s)
Captain	General Command
Chief Mate	Head of Response. In charge of the emergency team, Supports the Chief Engineer in the event of a fire in the engine room
Chief Engineer	Maintain essential services Non-essential equipment shutdown Direct the fire fighting team in the event of a fire in the engine room
Head of Electrical Equipment	Maintain essential electrical services Support the Chief Engineer
Superintendent	In charge of the service crew Verify the evacuation of cabins Secure kitchen items
Radiocommunication Officer	Keep communications
Crane Operator	Unload the crane Place the crane in a safe and deactivated position
Health care staff	Appear at the sanitary office

In order to respond to the emergency situations identified above, specific action procedures shall be available for each type of contingency. The actions of these procedures shall be coordinated by the Head of Response. In addition, the operating company shall have a Safety and Hygiene Manager and also an Environmental Manager.

Vessels with a total crew of ten (10) or more shall prepare the "**Station Bill**" in which each crew member shall be assigned a role number stating assigned position and roles in the cases of fire, collision, rescue and man overboard.

4. Phases of a contingency

The phases of a contingency are divided into detection and notification, evaluation and start of reaction, and control.

- Detection and notification

In order to respond to emergency situations, each vessel and work site shall have a specific procedure for action in the event of contingencies.

Contingencies or emergencies that occur during the project shall be coordinated by the Captain of the vessel and notified to EQUINOR, who, in turn, shall notify the enforcement authority (Argentine Coast Guard).

- Evaluation and start of action

Once the contingency has been produced and evaluated by the Safety and Hygiene Manager and eventually the Environmental Manager, the control measures shall begin.

- Action upon emergencies

The operators of the vessels shall organize and train the staff members of the normal crew to carry out the required tasks in the event of a contingency. The participation of companies specially designed to control this type of event may be requested depending on the type of emergency.

- Control

The control of a contingency requires the works staff to be duly trained to act during an emergency situation. This control implies the participation of its own personnel as well as the hiring of specialized third parties who shall comply with the current procedures.

5. Contingency Management Strategies

Preventive measures

Emergency drills shall ensure that the personnel have prior experience regarding their tasks and obligations in the event of an emergency (See ENVIRONMENTAL TRAINING PROGRAM AND PERSONNEL CONDUCT).

Equipment Required for Emergencies

The personal protection elements and equipment required in emergency situations shall be those specified in the Safety and Health Manual.

In turn, each vessel shall have a special sector for elements and materials in order to fight spills and fires (as stated by current regulations).

<u>Specific Emergency Actions</u>

A. Emergency Plan in Case of Spill of Fuels and other Dangerous Substances from Ships

In all cases in which hydrocarbon discharges occur outside the authorized system in Section 2 of Chapter 1, Title 8 of REGINAVE, the responsible vessel shall use all the systems and means available to fight the pollution produced. These systems and means shall meet the requirements set up in Section 5 of Chapter 1, Title 8 of REGINAVE.

In order to avoid pollution, the Argentine Coast Guard may act in cases where the equipment is not sufficient or its inefficiency is proven.

The Spill Contingency Plan shall be developed in accordance with local regulations and IMO recommendations (Shipboard Oil Pollution Emergency Plan (SOPEP) procedure, MARPOL Regulation 26; 73/78).

Everything established under Title VIII of REGINAVE shall be considered, which is about the prevention of pollution from ships and incorporates the five chapters of MARPOL currently in force and adopted by the Argentine Republic.

Whenever the general staff is working in a contingency due to a spill, strict compliance to the safety regulations established by the Captain shall be observed in order to avoid sparks that could give rise to an explosion and / or fire.

In the event of a spill in a surface water body, a rapid response action shall be performed, tending to immediately remedy such contingency. There shall be a migration trend of the product as a result of the action of the current, the waves and the wind.

Containment barriers shall be placed whenever possible. The spill differs from other contingencies because, if the personnel are trained and observe the safety regulations, it is highly unlikely that there shall be an immediate danger to integrity and / or human life.

These rules shall be applicable both to own and hired personnel and to any person or entity or company that provides some type of service during the development of the project.

The specific tasks to carry out during the contingency of a spill are hereinbelow listed:

a) Alert

- Those responsible are informed.
- The magnitude of the event shall be determined.
- Control procedures shall be implemented.

b) Spill control - The source of the spill shall be determined and the contaminant shall be prevented from spilling further

- Those in charge of Health and Safety and the Environment shall be informed immediately.
- Other activities shall be interrupted.
- All necessary information on the size, extent and contaminants spilled shall be gathered.

The Chief Engineer and the crew shall stop the dispersion of the product and collect it using suitable equipment and materials for its subsequent recovery, as long as it is a spill of minor characteristics. If the spill is of greater dimensions, the Health and Safety and Environmental Experts shall be immediately notified to act accordingly.

The Health and Safety Manager and the Environmental Manager shall jointly determine if the participation of a company specialized in spill control and remediation is necessary. Compliance with current legislation shall be ensured at all times.

All vessels shall be provided with absorbent material capable of holding spills both in water and on deck as a preventive measure.

Communication shall be established as quickly as possible. There shall always be a charged mobile phone and / or radio reserved for emergency situations.

The Head of Response shall coordinate with the Captain the actions to be followed and the support of equipment and personnel to be requested.

Once the spill has been controlled, the causes of the accident shall be analyzed and the necessary corrective measures determined to avoid its repetition.

B. Fire / Explosion Fighting Plan

This particular aspect of the Contingency Plan shall consider Chapter 4, Title 1 of REGINAVE (ON FIRE AND FLOOD FIGHTING SYSTEMS AND DEVICES) and 42/05 Provision of the Argentine Coast Guard. The number of hydrants, as well as the requirements of the fire pumps and hoses, shall be appropriate to the size of the ship.

The fire extinguishers shall be of approved designs and models, their materials shall not be easily altered by the action of external agents, and suitably protected. The fire extinguishers shall be examined and subjected to the tests determined by the Argentine Coast Guard.

Portable and semi-portable fire extinguishers shall be classified by a combination of a letter and a number, indicating: the letter, the type of fire source expected to be extinguished by the unit; the number and its relative size.

In this regard, fire is classified into four classes: A, B, C and D, whose characteristics and control method are presented in Table 4 and Table 5.

Table 4. TYPE OF FIRE.

A TYPE	Those that are produced in solid fuels (wood, paper, fabrics, rags, rubber and plastic), with ash production and where the optimal extinguishing effect is achieved by COOLING the materials with water or aqueous solutions to reduce the ignition temperature. Use A or ABC type fire extinguishers.
B TYPE	Those that are produced in liquid fuels and flammable gases (petroleum derivatives, oil, tar, enamel, paint, fats, alcohols, acetylene, etc.) without ash production and in which the extinguishing action is achieved using an agent capable to act by Drowning the fire, interposing itself between the fuel and the oxygen in the air, or by penetrating the flame zone and interrupting the chemical reactions in place. For example: Extinguishing foams, carbon dioxide and / or chemical powder can be used in this case. Use B or ABC type fire extinguishers.
C TYPE	Those that are produced on electrical installations. The extinction must be done with non-conductive agents of electricity due to their nature (carbon dioxide - Halon BCF - chemical powders). Use C or ABC type fire extinguishers.
D TYPE	Those that are produced in combustible metals under certain conditions whose control requires very careful techniques with special agents (magnesium, titanium, sodium, lithium, potassium, etc.)

In each case, compatible extinguishing agents shall be used as indicated in the following table.

Table 5. Compatibility of extinguishing agents.

FIRE EXTINGUISHER AGENT					
FIRE	**WATER**	**ABC POWDER**	**CO_2**	**FOAM**	**HALON 1211**
A	YES	YES	NO	YES	YES
B	NO	YES	YES	YES	YES
C	NO	YES	YES	NO	YES

These two graphics shall be placed in visible and strategic places on board.

In addition, graphics with the Station Bill, meeting places and the accesses to reach them shall be placed in visible and easily reached places on the ship; as well as a firefighting plan or sketch showing the location of the firefighting devices.

In the event of a fire, alarm sounds shall be made with the ship's whistle or with the alarm bell of the bridge, which shall consist of a short and a long repetitive ring as well. If there is a loudspeaker network on the ship, the alarm sounds shall be complemented with an emergency call: "fire in the area ... (and precise indication of the place on board)".

The Chief of Response shall try to block the affected facility with available personnel, while receiving outside assistance. The Captain shall instruct a person to notify the following divisions in the order in which they are indicated:

- Argentine Coast Guard
- Firefighters
- Hospital
- Emergency

Communication shall be established as quickly as possible. There shall always be a charged mobile phone and / or radio reserved for emergency situations.

The Head of Response shall coordinate with the Captain the actions to be followed and the support of equipment and personnel to be requested. It provides for the request for medical help, regardless of whether there have been no victims so far.

Once the spill has been controlled, the causes of the accident shall be analyzed and the necessary corrective measures determined to avoid its repetition.

In case of fire on the docks, dikes, riverside, etc. The captains, bosses or officers on duty shall gather their crew and prepare the ship to execute the orders they receive or those they deem necessary to give, on their own initiative, for the safety of the vessel under their command.

Ships are prohibited from making fire on deck regardless of the reason or cause.

C. Onboard Accidents - Procedure for the Evacuation of the Wounded

In case of registering accidents, together with the environmental emergency, involving ship personnel or third parties, the injured shall be evacuated.

The boats shall have stretchers for transfer.

The Response Chief shall ask the Captain for help according to the number of personnel to evacuate, giving a summary detail of the reasons for evacuation.

The injured shall always be evacuated to an urban center for care. However, an attempt shall be made in all cases to provide first aid for the companions of the injured, until they arrive at the care center.

It is worth mentioning that, in the event of a medical emergency on the seismic vessel, the injured person shall be evacuated by support boat or helicopter, whichever is faster and more efficient, to the town of Mar del Plata, which is the closest to the prospecting area.

D. Man Overboard

This item shall be developed pursuant to the provisions of Chapter 5, Title 1 of REGINAVE (ON RESCUE DEVICES). In this regard, the life-saving devices of the ships shall comply with the provisions of the aforementioned provision and with the standards and specifications issued by the Argentine Coast Guard.

In case of "man overboard" all seismic operations shall stop immediately. All vessels shall be required to have graphic tables with the signals for the request for help and with those for rescue, which may be contained in a single table, or brochure available to on-duty personnel.

Every ship shall have one of its Davit launched life-rafts, with a circular lifebuoy to be lowered in case of "man overboard". In the case of ships in which a motor boat is required, this shall be the one to be used. In addition, the crew shall be properly instructed in the event of the crew call corresponding to the "man overboard" maneuver, particularly during the night.

There shall be at least one lifeguard thread, with a whistle and a flare. The Head of Response shall give notice of the incident and shall command the following actions:

- Throw a lifesaving thread and mark the position on the GPS.
- Initiate the man overboard maneuver.
- If it is not possible to carry out the maneuver from the boat, immediately send a rescue boat (for example, supply boats or other).
- Communicate with the Argentine Coast Guard.
- Call emergency.
- Entrust a person with the permanent monitoring of the position of the shipwrecked.
- Initiate course of action so that once the shipwrecked person has been rescued, the incident is analyzed and the pertinent security measures are established.

In the event that the equipment falls overboard once the shipwrecks have been rescued, the risks to navigation shall be evaluated with the Argentine Coast Guard and the risk zone shall be delimited until the rescue / removal of the equipment.

Procedure for the Communication of Contingencies

The captains or masters of the ships and naval artifacts of the national merchant ships that are sailing, anchored or moored in Argentine or foreign jurisdictional waters, extraterritorial or free sea, and the captains or masters of ships and foreign naval artifacts that are navigating , anchored or moored in Argentine jurisdictional waters, are obliged to report immediately and by the fastest means to the jurisdictional agency of the nearest Coast Guard, any occurrence of navigation suffered or caused by their ship or naval artifact.

In convoys, the obligation to make the communication lies with the captain or master of the ship or naval artifact directly taking part in the event.

When it comes to grounding, the communication shall contain information on the following points in the broadest possible way:

- Position of the ship or naval artifact.
- Position and estimated situation with respect to beacon signs or significant spots of the coast, according to the place of grounding.
- If it totally or partially obstructs navigation or if it allows free movement.
- In case the obstruction is partial, crossing gap and depth shall be determined.
- Height of the water at the moment of grounding and tidal variation.

In the event of another accident or loss, it shall contain, in the broadest possible way, information on the following items:

- If the event affects the safety conditions of the ship or naval artifact.
- Situation of the ship or naval artifact or the port or place of destination if it continues navigating.

When the event does not affect the safety conditions of the ship or naval artifact, you may continue the trip, by your own means or towed to the nearest port or to the most immediate scale of your itinerary, and the communication may be put off until arrival at that port or stopover.

Only the Project Manager, the Environmental Manager or the Health and Safety Manager shall be authorized to respond to the press and the media in general upon emergency cases.

The operator shall give notice to EQUINOR of a special report with the most relevant details of the contingency, orally in the first place, and then in writing. This communication shall be made within 24 hours of the occurrence of the events. At least, it shall contain the following:

- Nature of incident.
- Cause of the incident.
- Brief details of the contingency.
- Synthetic details of the actions taken so far.
- How the follow-up was done.
- Definition if the incident is concluded or not.
- All Incident Reports shall be sequentially numbered.

2.10 ENVIRONMENTAL TRAINING PROGRAM AND STAFF CONDUCT

2.10.1 Activities

- **All project actions**

2.10.2 Impact (s)

- **All impacts associated with the seismic project.**

2.10.3 Mitigation actions

2.10.3.1 General

- Implement Good Environmental Practices and the state-of-the-art technologies at all stages.

Guarantee the permanent presence of an Environmental, Health and Safety Supervisor in all activities, training staff and recording operations and their impacts.

Train all personnel involved in the project on the Environmental Management Plan and the Contingency Plan.

The stages and areas of action shall be planned in advance and the Argentine Coast Guard shall be notified of the tasks to be carried out in the areas within its competence.

- Engines should be properly maintained as to ensure that emissions and noise levels are kept under control.

2.10.3.2 Fuel and oil handling

- All petroleum by-products shall be stored on vessels in approved tanks labeled with the name of the product they contain. Containers of products that are not stored in tanks shall be labeled with the name of the product they contain. These containers shall be properly secured, mounted and isolated on the vessels to avoid spillage into the sea. Sufficient absorbent material shall be stored to be used in case of spills. The fuel tanks connecting valves shall be properly closed. All chemical products shall have the corresponding safety sheets.
- The provision of fuel for transportation and refueling shall be coordinated by the person in charge of controlling compliance with the safety standards required by the Argentine Coast Guard, particularly those related to adequate signaling.
- The vessels shall have an operational Contingency Plan approved by the Argentine Coast Guard to act in the event of leaks and spills, with the tools, absorbent materials and plastic bags necessary to shut away and clean any spill or spilled product.

2.10.3.3 Waste management

- The waste derived from fuels, oils, hydraulic fluids and paints, as well as cleaning elements (solvents) and other dangerous materials, shall be properly stored and labelled.
- All plastic products used on ships shall be properly disposed of, bagged and stored in special containers according to their way of disposal (recycled, incinerated or disposed of in port).
- All handling and disposal of waste and hazardous elements shall be registered according to MARPOL standards and the Argentine Coast Guard requirements.
- The Waste Management Procedures defined by the vessel operator that have been duly approved by the Argentine Coast Guard shall be observed.
- Differential collection of solid waste shall be carried out, verifying the implementation of procedures compatible with the protection of the environment and therefore with the EQUINOR Environmental Policy.

2.10.4 Management Program

Aim

All the tasks of the seismic prospecting project necessarily require having technically trained personnel in order to carry out the Environmental Management Plan with the required and adequate responsibility for the environment.

This program is justified by the need to achieve the following by the personnel in charge of the development of the project:

- a full awareness regarding their role in terms of preservation, protection and conservation of the environment when on duty; and
- a training regarding its responsibilities in environmental matters to carry out the mitigation and control measures and, particularly, to face the contingencies that may arise.

The aims of the program are hereinbelow displayed:

- plan adequate information and training of personnel on expected environmental effects, the implementation and control of mitigation, preservation, protection and environmental control measures, contingency plans and environmental standards and regulations applicable to the activities carried out.

- Roles to fulfill according to the different levels of specific responsibility assigned to the personnel in relation to the implementation, operation, monitoring and control of mitigation, preservation, protection and control measures.

- roles to be fulfilled in the face of various emergency situations that may arise, whose general contents are specified in the Program corresponding to the Contingency Plan, with significant environmental consequences.

Scope

This Program shall consist of two different types of actions: direct training actions and support actions. The Direct Training actions shall include the basic content necessary to meet the defined objectives. Training actions shall be tested since it is essential to check their effectiveness and the need to make adjustments and intensify actions.

Responsibilities

Although this program shall be carried out by each Contractor in particular, compliance shall be controlled by EQUINOR. Therefore, it would be convenient to hold the meetings between the Contractor, EQUINOR and the corresponding enforcement authorities.

Procedure

The key topics to include are the following:

- Basic notions about environment, natural resources and sustainable development.
- Water pollution.
- Impact on marine and coastal fauna.
- Uses of the sea and the coast by various users.
- Waste and effluent management in relation to the project.
- Protection of sensitive areas.
- Environmental impact, mitigation measures and project environmental management plan.
- Registration of observations.
- Preparation and response to contingencies.

In addition to training personnel in knowledge regarding environmental care, emphasis shall be placed on modifying unfavorable habits for the prevention of environmental impacts. On the other hand, the most common practices of workers in similar operations shall be identified, related to the handling of materials, substances and waste segregation.

Employees shall be categorized according to their role within the company into at least three groups to organize training activities and materials: operators, middle management workers, senior workers. In this way, the content, procedures and language used can be more easily adapted according to the training participant.

Each module shall consist of a theoretical development for each topic, followed by a practical work. These shall fundamentally deal with case analysis, giving priority to those particularly related to the project.

Both the theoretical content and its practical examples shall enable the participant to:

- Analyze and assess the actions derived from the development of the project from the perspective of its environmental impact.

- Point out the risks associated with each action to assess.
- Identify and provide solutions to control risks.
- Assess and control the quality of the environment within the project setting.

The development of the Program shall be continuously tested and, in addition, a comprehensive assessment shall be carried out at the end of the Program in order to detect its level of effectiveness. This allows you to take advantage of this information to correct those aspects of the program that have not been clear.

The assessment can be performed through surveys with simple questionnaires and simulations of typical situations in which the application of the contents of the training given can be verified.

On the other hand, it is important that backing actions are developed, such as outreach campaigns with specific topics, preparation and placement of specific signs.

2.11 ENVIRONMENTAL AND SOCIAL COMMUNICATION PROGRAM

2.11.1 Activities

- **Planned activities:**
  - Operation of seismic sources.
  - Navigation of seismic and support vessels and physical presence of the seismic equipment.

2.11.2 Impact (s)

- Potential effects of noise on marine organisms caused by seismic operations.
- Impact of oil spill on marine mammals.
- Reduction of water quality with direct or indirect effects on marine organisms.

2.11.3 Mitigation actions

2.11.3.1 Communication to the population

The population shall be properly informed of the project in general and of the particular actions so that they are aware not only of the impacts and proposed mitigation measures but also of the associated benefits to get a clear opinion about the whole process.

2.11.4 Management Program

Aims and scope

Stakeholder engagement, information disclosure, and open dialogue with potentially affected communities and parties.

The main focus shall be on early engagement and consultation with stakeholders, prior to approval of the Environmental Impact Assessment (EIA); including the public hearing that shall be offered by the Organizing Authority, consisting of identifying the possible environmental and social contributions of the relevant actors and the probable concerns related to the seismic survey planned by EQUINOR in the CAN_100, CAN_108 and CAN_114 licenses.

Procedures

a) Stakeholder identification and mapping

We proceeded through extensive research and analysis by reviewing public documentation, web pages of the different organizations, statements, information / news, to identify the interested parties, understanding them as any individual or group that may be potentially affected by the project or that may have a potential impact on the outcome of the project.

Likewise, said analysis considered the supposed level of interest in the project, the supposed level of influence on it and the probable attitude towards the project (against, neutral or positive).

Stakeholders were divided into nine main categories:

- Public Administration: some of which fulfill a regulatory function directly applicable to the registration and authorization of projects related to oil and gas.
- Non-governmental organizations at the local, national and international levels, as well as intergovernmental organizations.
- Professional, business and worker associations, such as trade unions, among others.
- Academic Scope: Universities that have a role or interest in environmental issues related to hydrocarbons and offshore exploration.
- Private sector: private companies and industrial groups operating offshore, including other oil and gas companies.
- Media: including major newspapers, television, radio news channels, and online news sites.
- Religious organizations that can influence the public perception of the project.
- Native organisations.
- Political Parties.
- Community-based organisations.

A large proportion of stakeholders are likely to be in a “neutral” position on the project, and may favor their position to a more positive or negative view depending on how they are approached or engaged. Those that showed a greater degree of influence on the project are mostly found in the category of “Public Administration”.

The complete list of potential interested parties gathered from the desktop study amounts to more than a hundred. It has served as a database for further analysis and an assessment of which parties should be defined as ‘key actors'.

It should be highlighted that the appropriate level of consultation and communication within the complete list of interested parties shall be different, following the logic of "the greater the interest and influence, the greater the level of participation", and subsequently, a preferential level of participation comes off for different stakeholders.

Not only are key stakeholders informed, but they are also consulted for their input and possible concerns. Fishing chambers are a relevant example of this type of key player.

b) Stakeholder Approach and Strategy

EQUINOR focuses on a gradual approach based on dialogue in all phases of the project, continually evaluating the scope and activities aimed at stakeholders, as follows:

- consultation with key stakeholders by proactively communicating and organizing meetings when necessary.

- circulation of information about the project: information on the website, answer / contact option, considering an easily accessible webpage.

2.11.4.1

- registration of directed activities and stakeholder feedback.

It should be noted that the initial phase stakeholder consultation carried out from December 15, 2020 to early February 2021, began earlier to gather their input and allow the identification of potential risks and impacts at an early stage and later address the improvement of mitigation actions. The list of key actors can be found in Chapter 5 - ENVIRONMENTAL BASELINE.

It is worth mentioning that, due to the complex context of Covid-19, establishing communication (by telephone) has been difficult, and physical meetings have not been possible. Therefore, EQUINOR decided to use email and video conferencing as the main channels. The distributed material and details on the disclosure can be found in Annex 7.1 of Chapter 5, as well as an overview of the scope and dialogue with all key stakeholders during this initial consultation phase in Annex 7.2.

At the end of January 2021, Equinor received input from 8 stakeholders; INIDEP, Cluster de Energía Mar del Plata, Leviticus Subsea (member of the "Cluster de Energía Mar del Plata"), Antares Naviera (member of CAENA), Argentina Institute of Energy, Mar del Plata Port Management (member of the "Cluster de Energía Mar del Plata"), ICB and CAPeCA. CAPeCA and ICB have provided questions and concerns about the project. Their input and EQUINOR's responses can be found in Annex 7.3 of Chapter 5.

c) Participation Plans of interested parties through all phases

Outreach to and dialogue with interested parties shall be a continuous process with two main phases, each including several sub-stages.

- Phase 1: Consultation of key stakeholders before obtaining the final approval of the EIS: consultation, evaluation and mitigation shall be the focus through the following stages:

  - Early consultation with key stakeholders before submitting the EIA (finalized).

  - Communication activities up until the public hearing.

  - Communication activities after the public hearing.

- Phase 2: Follow-up and communication with key stakeholders after the approval of the EIA:

  - Prior to commissioning. Examples: inform about time and location, define communication protocols with key stakeholders.

  - During Operations. Examples: Regular updates on the vessel's operation and location, notification and coordination in case of incidents or emergencies, early identification of potential difficult routes/activities.

2.11.4.2

  - After operations: Inform about the end of activities.

2.12 CONSULTATION AND CLAIMS PROGRAM

2.12.1 Activities

- **Planned activities:**
  - Operation of seismic sources.
  - Navigation of seismic and support vessels and physical presence of the seismic equipment.

2.12.2 Impact (s)

- Potential effects of noise on marine organisms caused by seismic operations.
- Impact of oil spill on marine mammals.
- Reduction of water quality with direct or indirect effects on marine organisms.

2.12.3 Mitigation actions

2.12.3.1 Response to inquiries and complaints

The population shall be offered answers to queries and complaints associated with the project in general and about the actions in particular to be aware of the impacts, proposed mitigation measures and also the associated benefits, in order to have all the necessary tools to clear up doubts and correct claims.

2.12.4 Management Program

Aims and scope

In order to clear up as quickly and accurately as possible all doubts and / or claims that the community in general and / or the different key actors identified in particular may have in relation to the Project, accessible and easy communication channels shall be offered as the population is entitled to be informed.

Procedures

Information about the project shall be available on the web page created within Equinor.com website: presentation of the project, information about the development of the seismic data acquisition processes in progress, as well as question and answer documents on key issues.

Likewise, there shall be an email address within the framework of the Project for those who want to contact EQUINOR by communicating queries and / or comments (ARG_sismica_norte@equinor.com).

Complaints and claims management procedure

EQUINOR shall set up a Complaints and Claims Management Procedure for the seismic survey of the company that covers the CAN_100, CAN_108 and CAN_114 licenses, in due time prior to the start of operations.

It is a systematic non-judicial mechanism for the purpose of receiving, investigating, responding and resolving complaints from individuals / communities or their representatives, who are related to the operations of EQUINOR, its contractors and subcontractors.

It shall be effective during the development of all operations and for a short period of time after completing the operations and designed for the resolution of complaints in a transparent, systematic and timely manner.

2.13 LOCAL STAFF AND LOCAL PURCHASING PROGRAM

2.13.1 Activities

- **Planned activities:**
  - Demand for labor and goods and services.

2.13.2 Impact (s)

- **Indirect positive impact on local economies.**

2.13.3 Mitigation actions

2.13.3.1 Exploration and exploitation development

Although this stage includes the exploration of the hydrocarbon resources of the seabed, it is expected to find reserves that can be exploited commercially which might consequently boost the demand for labor and associated goods and services.

2.13.4 Management Program

The personnel that this project requires deserves high qualification, great expertise in the activity and experience; For this reason, the majority shall be foreign personnel with these characteristics.

EQUINOR representatives, both Argentine and foreign shall be on board the seismic vessel to supervise the work and ensure that operations are carried out in accordance with company standards.

The seismic vessel shall have approximately 67 crew members on board, including maritime personnel (approx. 33), seismic personnel (approx. 26), 1 doctor and EQUINOR representatives (approximately 3). In addition, there shall be Marine Fauna Observers (3) and the Passive Acoustic Monitoring operator (1) who would be local professionals. It is a foreign vessel that shall operate in Argentina under a temporary import regime of the regulations of the Customs Code and shall have to obtain a flag exemption to comply with the Argentine Navigation Regulations. As part of the flag exemption requirements, several local Argentine maritime personnel shall be hired on board the seismic vessel and shall become part of its maritime crew (Merchant Marine Act No. 27,419, Section 19).

The support vessel (typically 10-11 crew members) and the follow-up vessel (about 6-8 members) shall only have maritime personnel. The support vessel is also foreign and shall be imported, as described above. It shall include a number of local Argentine personnel in compliance with the flag exemption requirements. On the other hand, the follow-up vessel is local and shall only have an Argentine crew.

It should be noted that the referenced numbers could vary slightly depending on operational needs or other limitations (for example, mobilization of additional personnel in case someone is prevented from flying due to Covid-19 restrictions).

2.14 IDENTIFICATION AND VERIFICATION OF LEGAL COMPLIANCE PROGRAM

2.14.1 Activities

- **Planned activities:**
  - Operation of seismic sources (compressed air emissions).
  - Navigation of seismic and support vessels and physical presence of the seismic equipment.
  - Emissions, effluents and waste associated with the normal operation and maintenance of seismic and support vessels (and other operations).
  - Demand for labor and goods and services.

- **Unplanned events (contingencies):**
  - Oil spills.
  - Accidental discharge of chemical substances and / or non-hazardous / hazardous solid waste.

2.14.2 Impact (s)

- **All impacts derived from the seismic project.**

2.14.3 Mitigation actions

2.14.3.1 Legal Compliance

All applicable regulations identified in all stages of the project shall be complied with.

2.14.4 Management Program

Aim

- Verification during the development of the project of the application, compliance and continuous updating of the general and specific national regulations, and of the organizations

linked to the project.

- Manage the permits and authorizations necessary for the development of the Project, in accordance with the current legal framework.

Persons in charge

EQUINOR shall comply with this program and shall also verify compliance by the contractor linked to the Project.

Procedure

A system that allows to organize and control compliance with all the steps, required permits, formal / contractual aspects and legal requirements associated with the project shall be adopted. It becomes essential to consider the regulatory aspects and the implications arising from the analysis of the Legal Framework (Chapter 3) and the Environmental Management Measures along with this Environmental Management Plan. The requirements to be fulfilled according to the logistics and operations of the Geophysical Operator defined shall be included in the Detailed Management Plan to be presented prior to the start of operations. The Annex to this chapter (Point 0) displays a summary table of the legal requirements.

The corresponding permits and authorizations shall be managed among the requirements to comply with the applicable regulations. In some cases, said permits/authorizations are complementary to those that already exist.

- The management of permits and authorizations that were not considered in the development of the Legal Framework of this study (Chapter 3) and that were required by the competent authorities shall be carried out.

- The corresponding permits and authorizations granted shall remain in force.

- A record shall be kept of each authorization and permit obtained, procedures and activities carried out, results of inspections and / or observations made by the different competent organizations.

- In the event that the permit must be managed by a Contractor or Subcontractor, EQUINOR shall be responsible for acknowledging it, and the considerations previously made shall be applicable.

Given that the CAN_114 seismic data acquisition area includes a marginal sector of the CAN_113 area and, in turn, involves a sector of the CAN_111 boundary block where vessels shall operate to perform turns, maneuvers, etc. without operating the seismic sources, it is necessary to ask TOTAL AUSTRAL SA to issue the necessary authorizations to obtain data and ship operations within the area subject to the exploration permit. Equinor has obtained authorization to acquire data in a small zone within CAN_113 area and carry out operations (ship turns, etc.) in CAN_111 area. A copy of the authorization signed by TOTAL AUSTRAL S.A. appears in the Annex to Chapter 4. These aspects and the necessary coordination with the boundary operator have been considered in particular under point **Error! Reference source not found.**.

3 HEALTH, SAFETY, ENVIRONMENT AND QUALITY MANAGEMENT IN EQUINOR'S OPERATIONS

The principles of Health, Safety, Environment and Quality that govern EQUINOR's operations in offshore activities in Argentina and the requirements towards the Geophysical Contractor are hereinbelow presented.

3.1 EQUINOR'S HEALTH, SAFETY, ENVIRONMENT AND QUALITY POLICY

I AM SAFETY
Accountable, visible and engaged

- I understand and manage my risks
- I look after my colleagues
- I am visible and engaged in my team´s safety and security
- I stop unsafe behavior and activities
- I openly report and learn from all incidents
- I systematically use Compliance and Leadership
- I continuously improve safety and security
- I actively search for weak signals and act

EQUINOR's code of ethical conduct forms the basis of its ethical standards. We always request that these policies be posted on prominent notice boards on sites that operate for EQUINOR.

The Health, Safety, Environment and Quality objectives of our organization, described in the previous policy, show that health, safety and environmental aspects are a priority at the highest levels of the Company. It is our responsibility to translate this into practical action and ensure that no harm to personnel or the environment occurs as a result of our operations. We encourage the active participation of crews in this process and welcome your comments to improve safety performance.

The fundamental principle, at the root of our operating philosophy, is:

¡ Never compromise safety!
Your attitude and behavior make a difference
If it's not safe, STOP!

Annex VII includes the Security and Sustainability Policies that govern Equinor's operations.

3.1.1 Health, safety and environmental aspects program

The Contractor shall establish a health, safety and environmental aspects program that addresses all elements of the Health and Safety Management System (HSE) and all aspects of the work. The program shall be an integral part of the Company's overall HSE program for the project, and shall address specific activities with clear results. The HSE program shall be proactive and up-to-date during the course of the work.

The HSE program:

- Shall identify the applicable HSE regulations.
- Shall determine the applicable risk acceptance criteria.
- Shall spot and define the hazards to be addressed, how these shall be controlled, and the provision of methods for recovery in the event of loss of control.
- Shall identify the procedures to be developed under the Contract.
- Shall state the roles, responsibilities and interfaces of the Company / Contractor and the Contractor's strategy for the supervision of subcontractors.
- Shall draw up an emergency response plan that covers all aspects of emergencies (fire, medical evacuation, man overboard, etc.).
- Shall pick out and schedule contractor training requirements.
- The HSE program shall be presented to the Company for initial review, and the Contractor and the Company shall jointly adjust the program whenever necessary, with particular emphasis on their respective roles, responsibilities and interfaces.

3.1.2 Health regulations, safety and environmental aspects program

The Contractor shall comply with relevant industry standards for marine seismic operations in line with the documents listed below and their relevant references. The latest versions / revisions of the various documents shall be applied. The Company shall also use these documents as a basis for evaluating the Contractor's performance during the development of this agreement.

- “International standard for the management and safe operation of ships and prevention of pollution"; The ISM Code, IMO
- “International Convention for the Prevention of Pollution from Ships", consolidated edition, MARPOL, IMO.
- " International Convention for the Safety of Life at Sea", Consolidated Edition, SOLAS, IMO
- “IAGC Marine Geophysical Security Manual",10th Edition, IAGC 2012.
- “IAGC Environmental Manual for Global Geophysical Operations”, IAGC 2013
- “Health Management in the Oil and Gas Industry”, IOGP 343 Report vs. 3.0, January 2019.

3.1.3 Environmental safeguards

The Contractor shall, at all times, try to minimize the adverse environmental effects of the seismic operation. The Contractor shall also avoid damage to onshore facilities, complying with all applicable government laws, rules and regulations that apply in the area of operation. The IAGC Environmental Guidelines for Global Geophysical Operations in addition to National and local regulations shall be observed at all times.

The Contractor shall carry out operations in Argentina in accordance with the recommendations and restrictions stated in the approved EIA. The latter (EIA) is the basis on which the permission for the development of the project shall be granted. The final report of the EIA shall be sent to the Contractor as soon as it has been approved by the authorities.

The Contractor shall immediately notify the Company regarding any contamination, loss, damage, claim or lawsuit (or an event that may lead to such) that results from performing this Work in accordance with the reporting requirements given.

Soft start of compressed air devices shall be performed in accordance with approved and accepted IBAMA guidelines.

For operations in Argentina, the Contractor shall arrange for OFMs to be on board during seismic activities. In turn, they shall install a Passive Acoustic Monitoring (MAP) system recognized by the industry and shall coordinate the necessary operators.

3.2 HSE WORKSHOP

The Contractor shall conduct a one-day workshop for all crew members involved. This shall be arranged for the crews prior to the start of work. The Company shall approve the workshop program in advance and shall also participate.

3.3 HSE ACTIVITIES IN OPERATIONS

3.3.1 Emergency response test

An emergency response test shall be carried out within 24 hours of starting the work. Its main objective is to verify that the telephone contacts provided are correct and to inform the parties involved that the seismic record shall start.

The test shall follow the Emergency Notification plan, which is presented in the next section.

The personnel responsible for the drill shall issue a brief summary of the time the crew calls were made, and the subsequent response. This report shall be included in the daily notice.

3.3.2 Lists of personnel on board (OBP)

EQUINOR uses the list of personnel on board to keep an overview of all crew members when under contract. In addition, each project requires ensuring that all relevant companies / parties have an up-to-date “Emergency Notification Box” (ENB) and a list of close relatives' contacts. The list of personnel on board shall include:

- Name
- Nationality
- Position in the crew

3.3.3 HSE registration and procedure for submitting monthly HSE statistics

During the seismic record, EQUINOR´s onboard representative shall collect key proactive and reactive HSE indicators requested by EQUINOR, including exposure hours for all crew involved as per IOGP guidelines (12 hour / day exposure).

HSE statistics, including hours of exposure, shall be updated daily.

3.3.4 Incident and Near Failure Report

All incidents and near accidents shall be reported to EQUINOR through Equinor's onboard representative and classified according to the HSE management system of the corresponding contractor.

- **In the event of a minor incident**

EQUINOR´s Project Manager or the person responsible for the company shall be notified as soon as possible, and no later than 12 hours after the incident. This person shall assess the situation to continue informing EQUINOR.

- **Major Incidents and Potentially Major Incidents**

EQUINOR´s representative shall be notified as soon as possible and no later than one hour after the incident has occurred.

A preliminary report (emails) shall be provided no later than 48 hours after the incident has occurred. The delivery of the final report shall be agreed.

The transcription and formatting of incident reports required for EQUINOR's corporate reporting system shall be under the responsibility of EQUINOR´s Project Manager.

3.3.5 Medevac

The Contractor shall follow a medical plan to get sick or injured persons to a hospital with adequate benefits as soon as possible. If EQUINOR is the employer or the contractual manager of the person in need of medical attention, the additional monitoring responsibility shall be transferred to EQUINOR after the person has received proper emergency treatment.

3.3.6 HSE audits

Before the ship leaves port on mobilization, all ships shall have passed EQUINOR's suitability inspection.

EQUINOR´s Representative on board shall conduct at least 2 internal HSE audits together with crew representatives during the course of the seismic record. This can be part of the regular crew audit program.

3.3.7 Emergency Drill

Emergency drills shall be held at regular intervals. The drills shall alternate between the different types of emergencies turning up.

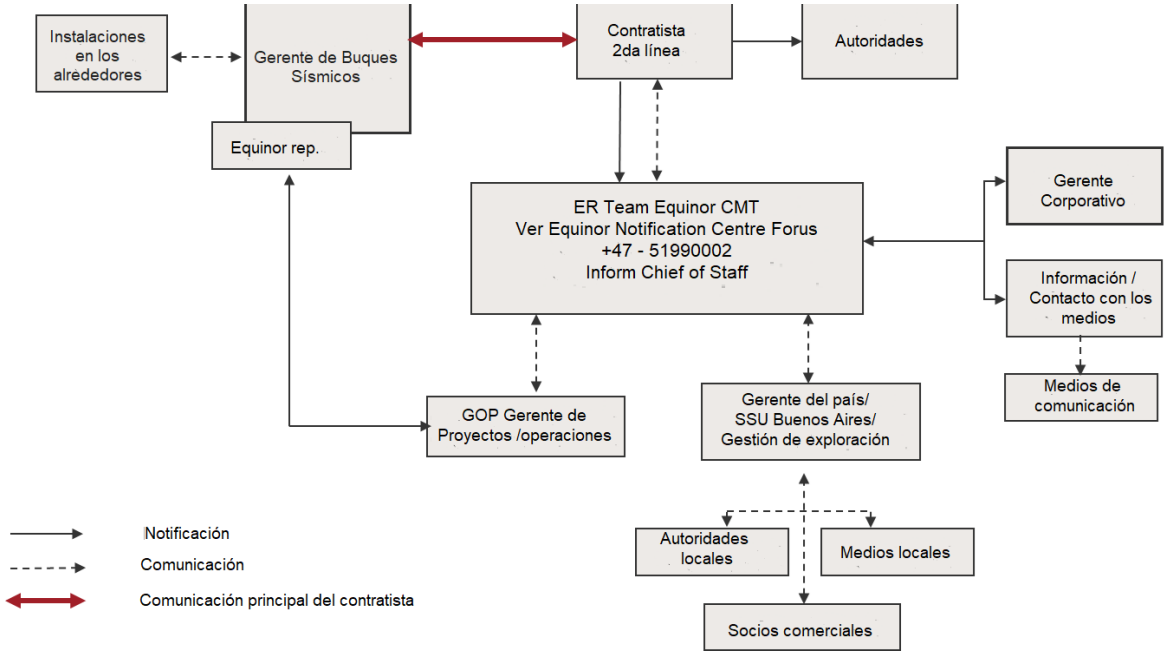
3.3.8 Crew inspections

The Contractor shall assist EQUINOR´s representatives as necessary during crew safety inspections / audits. Part of the inspection / audit shall imply a review of the Safety Management System.

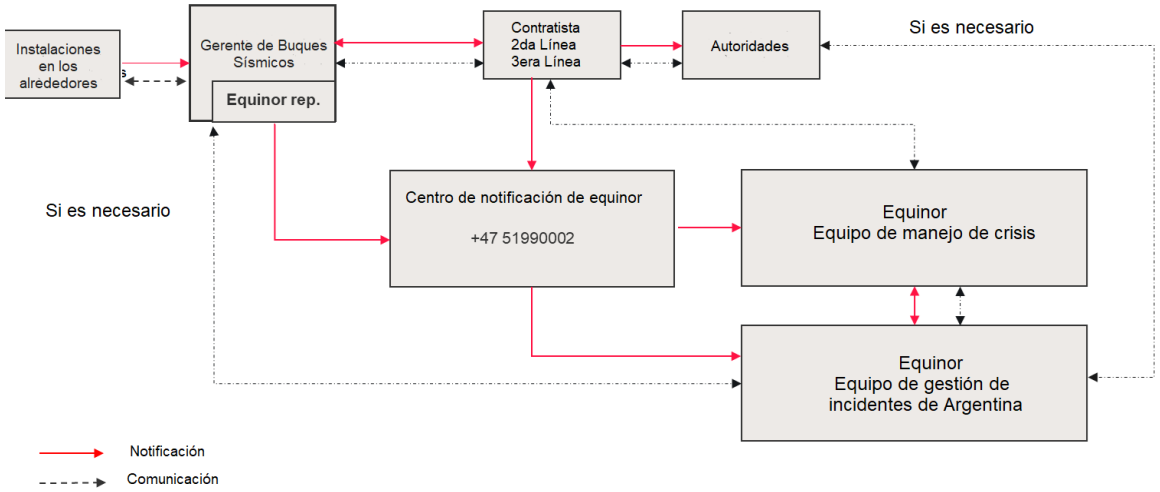
3.4 EMERGENCY SITUATIONS

3.4.1 Emergency notification flow chart

The following diagram applies to the initial notification process and communication for crew emergencies:



The following notification and communication flow diagram shall be applied for emergencies involving EQUINOR employees, civil unrest or NGO activities:



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ANNEX I - SUMMARY TABLE OF ENVIRONMENTAL REQUIREMENTS

REQUIREMENT	JURISDICTION	REGULATIONS	ENFORCEMENT AUTHORITY	DESCRIPTION	TIME FRAME	DOCUMENTS	COMMENTS
Prospecting Permit	National	Laws 17319, 24145, 26197 and 27007. Resolution SE 131/70 and Resolution MEyM 197/18	Ministry of Energy	Figure contemplated in articles 13 and 14. of Law 17319. Resolution MEyM 197/18 establishes the general requirements for obtaining surface recognition permits. These are granted on a non-exclusive basis for geophysical research (without drilling), in order to obtain information			DOES NOT APPLY TO THIS LICENSE. It is quoted as an antecedent for the exploration permit. The regulations did not indicate detailed environmental guidelines, or enforcement authority in charge of issuing permits
Exploration Permit	National	Laws 17319, 24145, 26197 and 27007.	Ministry of Energy	The exploration permit is considered in article 16 of Law 17319. Offshore (Ronda Offshore Argentina) is governed by Resolutions 872/18 and 65/18 with the guidelines in terms of work required by Law	According to adjudication resolution	According to adjudication resolution	Background check for EMP and environmental filings
License	National	Laws 17319, 24145, 26197 and 27007.	Ministry of Energy	Conversion of an exploration permit to an exploitation License according to Law 17319	According to authorizing conversion resolution	According to adjudication resolution	DOES NOT APPLY
Declaration or Environmental Impact Assessment	National	Laws 17319, 24145, 26197 and 27007. Resolutions 24/04 and 25/04 of the Ministry of Energy. It specifically governs Joint Resolution SGE and SGMAyDS 3/19	Joint (Ministry of Energy and MAyDS)	The project presents the Project Notice for pre-categorization before the Ministry of Energy, prior to the final categorization by the MAyDS. Depending on the nature and complexity of the projects, they may be subject to an ordinary or simplified EIA. Once categorized, the MAyDS analyzes and evaluates the technical studies, prior to the issuance of an Environmental Impact Statement (EIS). There is a Preliminary Report issued by the Ministry of Energy and a review from the Secretary of Fisheries, after which the Ministry of Energy issues a Final Review Report	According to Joint Resolution 3/19	1. Project Notice for Categorization 2. Ordinary or Simplified Study 3. Responses to Observations	Resolution 3/19 considers citizen participation
Incident information	National	Laws 17319, 24145, 26197 and 27007. Resolution SE 24/04	Ministry of Energy	Standard designed for activity on the continent. It applies mutatis / mutandis to offshore activity	N/A (Not applicable)	According to incidents	Consider for incidents. Assess application for wildlife watchers
Monitoring Report	National	Laws 17319, 24145, 26197 and 27007. Ministry of Energy Resolution 25/04	Ministry of Energy	Standard designed for activity on the continent. It applies mutatis / mutandis to offshore activity. Annual reporting of activities is required	N/A (Not applicable)	EMP compliant	The EMP requirements will govern according to study and requirements of the DIA
NATIONAL RULES WITH ENVIRONMENTAL IMPACT FOR EXPLORATORY ACTIVITY ON THE CONTINENTAL SHELF							NATIONAL RULES WITH ENVIRONMENTAL IMPACT FOR EXPLORATORY ACTIVITY ON THE CONTINENTAL SHELF
GENERAL ENVIRONMENTAL FRAMEWORK	National	National Constitution (articles 41 and 124). Laws of Minimum Protection Budgets (Laws 25675, 25831, 27540). Law 26994 Unified Civil and Commercial Code. Law 27275 (general regulations of Access to Information).	At the national level, the MAyDS are authorities, regardless of the sectoral authorities within the scope of their powers (Ministry of Energy, Argentine Coast Guard, SSVN, etc.). The federal system sets the rule of provincial jurisdiction, except in the EEZ outside the 12 miles of provincial jurisdictional waters	The LGA contains the guidelines for environmental management governing the specific rules and regulations regarding EIA, liability for environmental damage, mandatory environmental insurance and citizen participation, among other issues. It is an indirect source and guideline for the EIA framework applicable to offshore in the specific sector regulations, in addition to establishing the framework for eventual judicial processes. Argentina is part of CONVEMAR and its provisions govern the environmental protection of the sea	N/A (Not aplicable)	Specific documents according to certain regulations	The precepts on environmental damage and the duty of prevention, together with the provisions of the Civil and Commercial Code regarding assets of collective impact and the duty of care are of great interest to offshore activity. Although the LGA orders to take on an environmental insurance (Article 22), it is estimated that the insurance required by international law and maritime legislation, replace the requirements of environmental insurance. Law 27540 has not established restrictions on hydrocarbon activity to date.

REQUIREMENT	JURISDICTION	REGULATIONS	ENFORCEMENT AUTHORITY	DESCRIPTION	TIME FRAME	DOCUMENTS	COMMENTS
GENERAL ENVIRONMENTAL FRAMEWORK (INTERNATIONAL)	National	Law 24543 (CONVEMAR). Law 23919 (Approval of the Ramsar Convention on wetlands), Law 24367 (Convention on Biological Diversity) and Law 24295 (Convention MNUCCG) and Kyoto Protocol (Law 25438), Law 24543 (approval of the Convention on the Law of the Sea). Protocol of 1992 that amends the International Convention on Civil Liability derived from Damage due to Hydrocarbon Pollution -CLC- (London-1969), approved by Law 25.137. Protocol of 1992 that amends the International Convention on the Constitution of an International Fund for Compensation for Damage due to Oil Pollution -FUND Convention- (London-1971), approved by Law 25.137.	MAyDS, Argentine Coast Guard, and other institutions	The agreements described are called MEAs or Multilateral Environmental Agreements and establish a general framework for the protection of global environmental resources. They are the general frameworks for sectoral policies or specific regulations with an impact on offshore activity. In specific matters for offshore activity, in addition to CONVEMAR, the agreements that establish the civil liability regulations for damages caused by hydrocarbons and its complementary agreement that makes up the fund are stated.	N/A (Not aplicable)	See specific sector frameworks	The Convention on Biological Diversity (CBD) establishes the framework for the protection of resources and species in maritime ecosystems, including the creation of maritime ANPs. The Convention on Climate Change is the framework in which sectoral laws or specific programs (renewable energies, energy efficiency, etc.) have been enacted. The Ramsar Convention protects wetlands in the coastal zone, having no direct impact on activities on the continental shelf, although they need to be considered in production phases. The Convention on the Law of the Sea is the framework for various criteria on the protection of the sea, under the guardianship of the Argentine Coast Guard and following other agreements on the protection of the marine environment. Articles 208 to 211 are particularly important. The agreements on civil liability and the Supplementary Fund are not applicable to exploratory stages (beyond a minor spill caused, and were designed with the purpose of regulating the transport of hydrocarbons during production
PROTECTED AREAS	National	Law 22351 (National Parks) Law 27037 (National System of Maritime Protected Natural Areas) and Law 27167 (PROMAR Program).	MAyDS and CONICET	The National System of Protected Areas created by Law 27037 is in line with the UICN conservation strategies and the ODS targets.	N/A Not applicable	Consider in EIA and EMP	Marine protected natural areas prohibit exploratory and productive activities. Proximity and eventual indirect impact due to seismic activities were considered.
PROTECTION OF CULTURAL HERITAGE	National	Law 25743 on Protection of Cultural Heritage and Law 26,556, approving the UNESCO Convention on the Protection of Underwater Heritage. Maritime Regulation 08/18	MAyDS, Argentine Coast Guard, CONICET and Secretariat of Culture	Maritime Regulation 08/18 establishes the “Regulation for the treatment of cultural property”.	N/A Not applicable		Issues pertaining to cultural heritage need to be considered. It is estimated that they have a very low incidence, due to the lack of activities on the seabed
BIODIVERSITY	National	Law 24375 (Convention on Biological Diversity) Resolutions MAyDS 91/03 and 151/17) Resoluciones MAyDS 91/03 y 151/17. Law 24922 (Federal Fishing Law) SSP and SSRH 1/19 Joint Provision. Law 27167 (PROMAR Program)	MAyDS and MAGyP	These standards make up the frameworks for the protection of biodiversity in general terms. The Federal Fisheries Law covers the exploitation of the living resources of the sea (see box below, for specific information)	N/A Not applicable	See specific sector frameworks. For the impacts on fauna and fisheries, see SAGyP and SAyDS Joint Resolution	The protection of fishing resources and marine fauna are central to offshore activity in the exploratory stage. The involvement of the SP of MAGyP and INIDEP is highlighted, as well as the observers on board during the seismic exploration campaigns. See incidence of SSP and SSRH 1/19 Provision on good practices and coordination of fishing and offshore activities.

REQUIREMENT	JURISDICTION	REGULATIONS	ENFORCEMENT AUTHORITY	DESCRIPTION	TIME FRAME	DOCUMENTS	COMMENTS
FAUNA	National	Law 26.107, approving the Agreement on the Conservation of Albatrosses and Petrels (Canberra – 2001). Law 23.094. Declaratory regulation of the Southern Right Whale as a natural monument, subjecting it to the special provisions of the Law of National Parks, Natural Monuments and National Reserves 22,351. Law 25.052. Regulation banning the hunting of killer whales in nets or by forced stranding. aw 25,577 generically prohibits the capture of cetaceans throughout the territorial sea and the Exclusive Economic Zone. Law 25,290, approving the Agreement on the Application of the Provisions of the United Nations Convention on the Development of the Sea of 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks	MAyDS (APN)	The regulations and conventions listed protect species in particular, such as albatrosses and petrels, adopting habitat conservation measures, the prohibition of catching killer whales, guarding the right whale as a natural monument, and prohibiting the catch of cetaceans in general and the ratification of the agreement on straddling fish	N/A Not Applicable	Considerations are included in the EIA	The EMP shall consider the measures to avoid affectation to protected marine fauna species, affectation to the habitat or to carry out operations in breeding seasons or similar with possible adverse effects. Species subject to the Straddling Fish Convention shall be considered
FLORA	National	Law 24375 Convention on Biological Diversity	MAyDS	Global Convention on the Protection of Biological Diversity with the programs designed by the MAyDS (National Biodiversity Strategy)	N/A Not applicable	N/A Not applicable	In theory, there are no major impacts on vegetation in the sea (algae or similar) derived from offshore activity.
FISHING	National	Law 24543 (CONVEMAR). Law 24922 (Federal Fishing Law) and amendments (Laws 25109, 25470, 26386) and Decree 415/19.	SAGyP (advisory role of INIDEP) and COFEPESCA	The federal fishing regulatory framework establishes an agreed mechanism for the allocation of quotas by species and by zone, to the shipowners, according to criteria of fishery sustainability. It assigns a role to the Federal Council in the allocation of maximum allowable quotas and the formulation of agreed policies. Joint Resolution 3/19 of the SGE and SGAyDS assigns an intervention to the fishing portfolio prior to the issuance of impact declarations, and Provision 1/19 of the SSP and SSRH calls for the elaboration of articulated procedures between offshore activity and fishing	According to SGE and SMAyDS 3/19 Joint Resolution	See INIDEP's opinion on the EIA process	One of the most critical areas for activity is the potential negative impact of offshore operations upon fishing. It is advisable to articulate and program activities taking into account the biological cycle of the species of fishing interest, closed seasons and movement of fishing tides
AIR	National	Law 20284. Law 23778 (Montreal Protocol) Law 24089 (MARPOL Convention and Annexes applicable to gaseous emissions from ships and naval artifacts. Law 27270 (Paris Agreement)	MAyDS in general and the Argentine Coast guard in particular for gaseous emissions from ships	MARPOL is the framework for environmental management on board ships and naval artifacts			
WATERS	National	Law 22190 and Decree 962/98. International agreement to prevent pollution of seawater by hydrocarbons -OILPOL- approved by Law 21,353.	Argentine Coast Guard (PNA)	The international conventions and treaties described establish the requirements for the protection of the marine ecosystem and the prevention of water pollution, historically due to hydrocarbons. The annexes and detailed regulations arise from the Maritime Ordinances issued by the Argentine Coast Guard, in many cases being transpositions of decisions and amendments adopted by IMO.			

REQUIREMENT	JURISDICTION	REGULATIONS	ENFORCEMENT AUTHORITY	DESCRIPTION	TIME FRAME	DOCUMENTS	COMMENTS
		International Convention on Intervention on the High Seas in Cases of Accidents that Cause Pollution by Hydrocarbons - approved by Law 23,456. OPRC Agreement (International Agreement on Cooperation, Preparation and Fight Against Oil Pollution (Law 24,292).	PNA (Argentine Coast Guard)	Standards that set up the requirements for the management of contingencies in cases of oil spills			
		Agreement on the Management of Ballast Water and Bilge Sediments, approved by Law 27.011	PNA (Argentine Coast Guard)	It regulates the management of ballast water and bilges in order to avoid contamination and the introduction of exotic species to national waters			
		International Agreement to Prevent Pollution from Ships, MARPOL 1973/78, its Annexed Protocols approved by Law 24.089.	PNA (Argentine Coast Guard)				
		Maritime Regulation 07/17	PNA (Argentine Coast Guard)	It states the “Regulations for the Control and Management of Ballast Water and Sediments of Ships, Naval Artifacts or other Floating Constructions”. Based on these requirements, the Argentine Coast Guard, has prepared a Manual of Good Practices to prevent the entry of exotic species. See https://www.argentina.gob.ar/prefecturanaval/epecies-exóticas-invasoras			
WASTE	National	Law 25612 (industrial waste and service activities), Law 25916 (PPMM on household waste) and Law 24051 (Hazardous Waste). Agreement on the Prevention of Marine Pollution by Dumping of Wastes and Other Substances, approved by Law 21.947. Maritime Regulation 01/80. This states the requirements that those interested in carrying out any discharge included in the terms of the London Agreement of 1972 shall meet. • International Agreement to Prevent Pollution from Ships, MARPOL 1973/78, its Annexed Protocols approved by Law 24.089	PNA (Argentine Coast Guard). MAyDS and port or provincial authorities in case of operations on land	The PPMM Law establishes the framework for the management of household waste and Law 24051, for the management of hazardous waste. In theory, these rules, like Law 25612, do not apply to waste generated onboard ships and naval artifacts. Maritime Regulation 01/80 and its amendments regulate the dumping of waste in accordance with the London Agreement	N/A Not applicable	See required documentation according to the Argentine Coast Guard standards	The aforementioned National laws DO NOT APPLY directly to offshore activities, prevailing the requirements of the international agreements indicated herein. National regulations may superficially impact on land operations. The London Agreement and, more specifically on operational management, MARPOL apply regarding waste management on ships or offshore operations
		Maritime Regulation 02/98	PNA (Argentine Coast Guard)	It incorporates the amendments first introduced by the 1978 Protocol to MARPOL and Annex V referring to the management of waste on board ships and naval artifacts, supplemented by IMO resolutions (Resolution MEPC 65 (37), adopted in 1996. Argentine Coast Guard Provision 01/18. It adopts MEPC Resolution 295 (71) “2017 Guidelines for the Implementation of Annex V of the MARPOL Agreement”, of the Marine Environment Protection Committee (MEPC) of the International Maritime Organization (IMO), for the purposes of its integration into the national technical-legal framework	Yearly	Check documentation required by the Argentine Coast Guard	The labeling of different types of common or assimilable household waste is required (in terms similar to Urban Solid Waste), to be made public to both crew and passengers, together with the formulation of a waste management plan, a record book of garbage management and a garbage or food disposer, depending on the tonnage. These requirements are subject to periodic inspection by the Argentine Coast Guard.

REQUIREMENT	JURISDICTION	REGULATIONS	ENFORCEMENT AUTHORITY	DESCRIPTION	TIME FRAME	DOCUMENTS	COMMENTS
CONTROLLED SUBSTANCES	National	Convention on Safety of Human Life at Sea -SOLAS 74- approved by Law 22.079, the 1978 Protocol approved by Law 22.502 and its amendment approved by Law 23.706. IMDG code (IMO).	Different authorities are involved according to a specific subject (ARGENTINE COAST GUARD), SRT, MAyDS, MT	Jurisdictional waters are governed by the rules derived from the aforementioned conventions (SOLAS) and the IMO rules issued accordingly, that is the IMDG.	N/A Not applicable	See required documentation according to the Argentine Coast Guard standards	The SRT adopted the Harmonized Global System in 2015 for the labeling and handling of dangerous substances (Resolution 801-2015). Jurisdictional waters are ruled by the IMDG Code, along with its amendments, verifying the requirements according to the Argentine Coast Guard regulations and specific requirements regarding training and professional qualification, where appropriate
		Maritime Ordinance 01/93 and SRT Standards (Resolution SRT 801/15)	PNA (Argentine Coast Guard) and SRT	Maritime Ordinance 01/93 establishes checklists for pollution prevention in bulk loading and unloading of hydrocarbons or noxious liquid substances in ports, terminals, platforms or monobuoys	N/A Not applicable		Check list of substances
		Ordinance 11/98	PNA (Argentine Coast Guard)	It states the procedures and authorizations necessary for the use of chemical products to fight spills. It revokes Ordinance 01/95.	N/A Not applicable		Check and verify list of chemical anti-spill substances
CONTROLLED ANTHROPIC ACTIVITIES							
NAVIGATION	National	Law 24.543 (CONVEMAR). Law 20094 (Navigation Law) and REGINAVE (approved by Decree 4516/73, updated periodically over the years, being Decree 770/19 the most recent)	PNA (Argentine Coast Guard), MT (SSVN) and port authorities of on land operations in some cases.	The Navigation Law No. 20,094 regulates all legal relationships originated in water navigation, covering ships and naval artifacts, the latter being understood as “any other floating construction auxiliary to navigation but not intended for it, although it may move on the water in short stretches for the fulfillment of its specific purposes” (Art. 2). REGINAVE groups together the technical and regulatory standards applicable to the grouping of ships and naval artifacts, being supplemented by standards issued by the Argentine Coast Guard (Maritime Ordinances)	See terms of validity according to particular requirement	The Navigation Law and the REGINAVE establish requirements for the safety of navigation and pollution control that need to be complied with by shipowners and operators	The Navigation Law and its regulations govern the activities related to the operation of ships and naval artifacts. In many cases, REGINAVE transposes regulations derived from International Law drawn up within the IMO.
		Maritime Ordinance 2/88	PNA (Argentine Coast Guard)	Sets up safety zones for navigation where naval devices operate			Verify the existence of restriction zones with the Argentine Coast Guard.
		Maritime Ordinance 07/97	PNA (Argentine Coast Guard)	It lays down the format that the Hydrocarbon Registry Book shall have in order to comply with MARPOL requirements			
		Ordinance 8/97, contains the requirements established by the IMO, to obtain the certificates required by the International Code of Ship Operational Safety and Pollution Prevention. This Code was approved by the IMO, by virtue of the requirements contained in the SOLAS Convention and requires the implementation of a Safety Management System by the shipowner company and the ship, subject to review and external audits by the PNA (Argentine Coast guard. The certificate is valid for 5 years with mandatory intermediate audits.					
		Maritime Ordinance 08/97	PNA (Argentine Coast Guard)	It contains the requirements established by the IMO, to obtain the certificates required by the International Code of Ship Operational Safety and Pollution Prevention.	5 year-validity	Certificate subject to external audits	This Code was approved by the IMO, by virtue of the requirements contained in the SOLAS Convention and requires the implementation of a Safety Management System by the shipowner company and the ship, subject to review and external audits by the PNA (Argentine Coast guard). The certificate is valid for 5 years with mandatory intermediate audits
		Maritime Ordinance 08/98	PNA (Argentine Coast Guard)	It sets up the framework for contingency plans at the national level, under the coordination of the Argentine Coast Guard and according to the requirements of PLANACON	N/A Not applicable		The vessel operator shall draw up a Contingency Plan for approval by the Argentine Coast Guard, including articulation with the remaining private or public entities. No greater applicability is foreseen for the project.

REQUIREMENT	JURISDICTION	REGULATIONS	ENFORCEMENT AUTHORITY	DESCRIPTION	TIME FRAME	DOCUMENTS	COMMENTS
		Maritime Ordinance 05/99	PNA Argentine Coast Guard	It contains the requirements that companies registered in the Argentine Coast Guard must comply with for the provision of services to third parties for the control of spills of hydrocarbons and other toxic or dangerous substances for the environment	Yearly	Requires audit	The registration requirement is based on the National System for the Prevention of Spills in the sea and coastal areas created by Decree 962/98, administered by the PNA (Argentine Coast Guard).
		Maritime Ordinance 03/00	PNA Argentine Coast Guard	The registration requirement is based on the National System for the Prevention of Spills in the sea and coastal areas created by Decree 962/98, administered by the PNA (Argentine Coast Guard.	Yearly		Do Include in the EMP (Environmental Management Plan)
		Maritime Ordinance 04/19	PNA Argentine Coast Guard	It determines a harmonized program of unified recognition and certification of pollution prevention for ships of the Argentine merchant fleet sailing in jurisdictional waters	According to each certificate	External audit	Do consider in the EMP (Environmental Management Plan) and link with the different types of contamination

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SERMAN & ASOCIADOS S.A.

ANNEX II - FORMS FOR MONITORING SEA FAUNA - COVER (IBAMA)

IBAMA
MMA

Marine Fauna Monitoring Project

Report of Activities

LPS n°

Company:	Vessel:	Name of the study:

Array Features		Type of Seismic Investigation		Duty Period
Volume:	pol^3	3D	Floating Lines	Start:
Pressure:	psi			End:

Coordinator * (Accountable for the Report)	Name		Federal Technician Registration N°:
	Training:	Signature:	

Total number of spreadsheets	Observation logs	
	Acoustic Detection Records	

I hereby declare that all the forms completed by the observers on board are being duly submitted.

Data from On-Board Observers and MAP Operators

( ) Observer	Name:		Federal Technician Registration N°:
( ) MAP Operator	Training:	Signature:	
( ) Observer	Name:		Federal Technician Registration N°:
( ) MAP Operator	Training:	Signature:	
( ) Observer	Name:		Federal Technician Registration N°:
( ) MAP Operator	Training:	Signature:	
( ) Observer	Name:		Federal Technician Registration N°:
( ) MAP Operator	Training:	Signature:	
( ) Observer	Name:		Federal Technician Registration N°:
( ) MAP Operator	Training:	Signature:	
( ) Observer	Name:		

( ) MAP Operator	Training:	Signature:
* If necessary, fill out more than one cover sheet to include all the professionals involved in the project.		

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ANNEX III - MARINE FAUNA MONITORING SHEETS - OPERATIONS AND MONITORING EFFORT RECORD (IBAMA)

Date	MAP operation				Observation effort			
	Start	End	Total	Observation	Start	End	Total	Observation
			00:00				00:00	

Line / Test	Source volume	Frequency Sweep	Frequency Sweep			Soft Start			
			Start	End	Total	Final Volume	Start	End	Total
					00:00				00:00
					00:00				00:00
					00:00				00:00
					00:00				00:00

Operation (at full power or test)					Line activity details		
Start	Acquisition / Test Start	End	Total Acquisition / Test	Total	Line Status	Reason	Observations
			00:00	00:00			
			00:00	00:00			
			00:00	00:00			
			00:00	00:00			
			00:00	00:00			
			00:00	00:00			
			00:00	00:00			
			00:00	00:00			
			00:00	00:00			
			00:00	00:00			

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Seismic source uptime		Acoustic Detection Effort Time with Shots		Acoustic Detention Effort Time without shots	Observation time with shots		Observation time without shots	Observations
Line / Test	Per day	Line / Test	Per day	Per day	Line / Test	Per day	Per day	
00:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00	
00:00		00:00			00:00			
00:00		00:00			00:00			
00:00		00:00			00:00			
00:00		00:00			00:00			
00:00		00:00			00:00			
00:00		00:00			00:00			
00:00		00:00			00:00			
00:00		00:00			00:00			
00:00		00:00			00:00			

ANNEX IV - MARINE FAUNA MONITORING SHEETS - OBSERVATIONS RECORD (IBAMA)

IBAMA MMA

Marine Fauna Monitoring Project	Number:	
Registration of observations	Date:	

Latitude	Time - Start of observation	Time - End of observation	Behavior [3]
			( ) Slow movement
			( ) Fast movement
Length			( ) Movement at the bow of the ship
	Observation identification [2]		( ) Porpoise
	Scientific name:		( ) *Chorus line*
Depth			( ) Pulverization
			( ) Pectoral exposure
	Common name:		( ) Exposure to flow
Water Temperature			( ) Blows to the surface
			( ) Head strike to the surface
	Observed characteristics [4]		( ) Partial jump
Reflex	( ) body shape and / or size		( ) Total jump
( ) None			( ) Break
( ) Soft	( ) Shape of head		( ) Indifference
( ) Moderate			( ) Escape / avoidance
( ) Severe	( ) shape, size and / or position of the dorsal fin		( ) Decreased aerial behavior
State of the Sea [1]			( ) Increase in aerial behavior
( ) 0 ( ) 4	( ) shape and size of pectoral fin		( ) Decrease in inhalation time
( ) 1 ( ) 5			( ) Increased inhalation time
( ) 2 ( ) 6	( ) the shape and size of the tail fin		( ) Decrease the immersion time
( ) 3 ( ) 7+			( ) Increase the dive time
Visibility			( ) *Spy hopping*
( ) Good (> 5 km)	( ) direction and shape of spray		( ) Fishing / Forge
( ) Moderate			( ) _____
( ) Weak (< 1 km)			( ) _____
Wind	( )		( ) _____
			( ) _____

[1] Beaufort scale. [2] Identification at the most specific taxonomic level possible.
[3] More than one behavior may be indicated. [4] Check what was observed for identification and give a brief description.

Group Description
No. of individuals:
No of Adults:
Nº de calves:
Presence of sub-groups: () yes ____ () no
Presence of scattered individuals in a large area: () yes () no

Seismic source operation
( ) Full Power
( ) Soft Start
( ) Test
( ) Stop

Interruption requested?		¿ Interruption made?	
( ) Yes ( ) No	___:___ h	( ) Yes ( ) No	___:___ h

Delay in soft start?	Total time of activity interruption
( ) Yes ( ) No	

Time of entry into the Exclusion Zone	Less distance from the seismic source

Observer's signature

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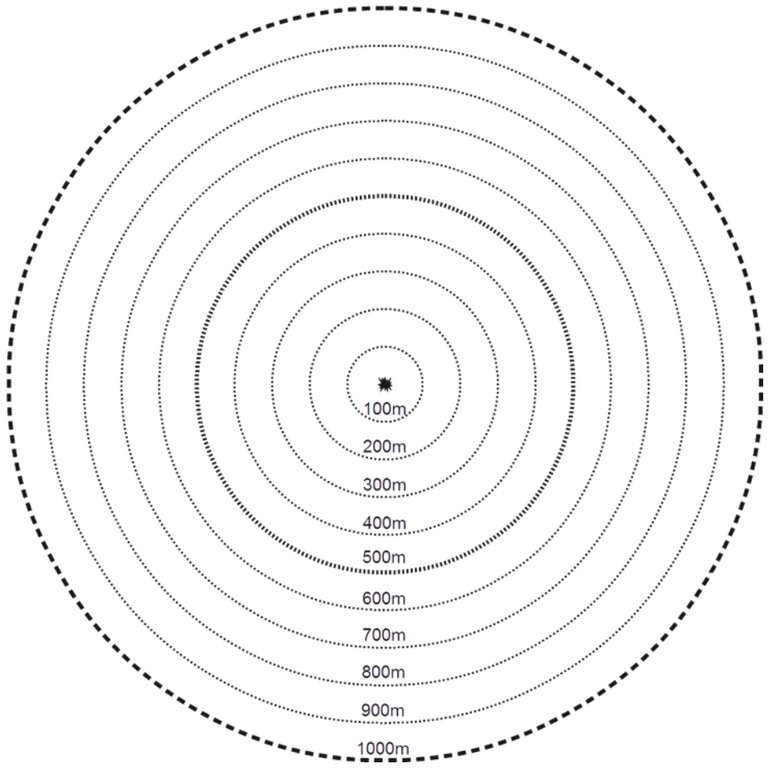
	Marine Fauna Monitoring Project	Number:	
IBAMA MMA	**Record of Observations (overleaf)**	Date:	

Indicate the position of the seismic vessel. The center of the diagram represents the center of the seismic source. Indicate the position of the animal or group, the movements observed and the time of the observations.	**Observations**



ANNEX V - MARINE FAUNA MONITORING SHEETS - ACOUSTIC DETECTION REGISTRY (IBAMA)

Marine Fauna Monitoring Project	Number:	
Acoustic Detection Record	Date:	

Latitude	**Time - Detection start**	**Time - End of detection**	**Detection Description**	**Detection Description**
				( ) Yes ( ) No
Length	**Detection identification [2]**			**Audio file names**
	Scientific name:			
Depth				
	Common name:			
Water Temperature				**Seismic source operation**
	Type of sound detected			( ) Full Power ( ) Gradual Increase (soft start) ( ) Test ( ) Stop
State of the Sea [1] ( ) 0 ( ) 4 ( ) 1 ( ) 5 ( ) 2 ( ) 6 ( ) 3 ( ) 7+	( ) Clicks () Song () Whistle ( ) Other: _____			
	Minimum frequency	**Maximum Frequency**		**¿ Interruption requested?** / **¿ Interruption made?**
MAP array depth				( ) Yes ( ) No ___:___ h / ( ) Yes ( ) No ___:___ h
	Detection techniques used			**¿Delay in soft start?** / **Total time of activity interruption**
	( ) Listen () Visual in the spectrogram () Listening and viewing () Automatic detector ( ) Other: _____			( ) Yes ( ) No
Distance from the stern of the vessel [3]				**Time of entry into the Exclusion Zone** / **Less distance from the seismic source**
	Signal Strength	**Ambient noise**		
	( ) 1 (Weak)	( ) 1 (Low)		**Operator´s Signature**
Distance between pairs of hydrophones	( ) 2	( ) 2		
	( ) 3	( ) 3		
	( ) 4	( ) 4		
	( ) 5 (Source)	( ) 5 (High)		

[1] Beaufort scale. [2] Identification at the most specific taxonomic level possible. [3] The distance between the nearest hydrophone and the stern.

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	Marine Fauna Monitoring Project	Number:	
IBAMA MMA	**Acoustic Detection Record (overleaf)**	Date:	

In this space you must enter information that supports the detection carried out, such as screen copies of the program used for the MAP.

ANNEX VI - FORMS FOR MONITORING MARINE FAUNA - GENERAL REGISTRY (IBAMA)

General Record	Acoustic Record	Visual Record	Date	Detection start time	Detection end time	Total time of Detection	First detection	Observer 1	Observer 2	Observer 3
						00:00				

State of the seismic source	Least distance between the animal and the source	Latitude	Length	Depth	Water Temperature	Identification - Type	Identification - Order	Identification - Suborder	Identification - Family	Identification - Gender	Identification - Species

Group - Number of individuals	Group - Number of adults	Group - Number of calves	Group - Presence of sub-groups?	Group - Individuals scattered over a large area?	Observation - State of the sea	Observation - Reflex	Observation - Visibility	Observation - description of behavior	Observation - observed characteristics

Acoustic detection - description of the detected sounds	Acoustic detection - signal strength	Acoustic detection - ambient noise	Time of entry into the Exclusion Zoneinterrupcion in	¿ Was there an interruption or delay?	Source shutdown time	LPS	Comments

ANNEX VII - EQUINOR´S SAFETY AND SUSTAINABILITY POLICIES

SAFETY POLICIES

Fundamentals Classification: **Internal**

FR10 - Safety and security (SF)

Process area:	Safety and security (SF)
Owner:	Torger Rød
Author:	Bente Christensen
Revision no:	3.03
Revision date:	16/12/2020
System:	
Competence:	
Validity area:	All locations

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The purpose of the fundamentals is to enable safe and secure operations and to drive a strong safety and security culture. This gives a fundament for efficient operations where zero harm to people, assets and environment can be achieved.

Scope
The scope includes management of safety, health and working environment, security, emergency response, incident and crisis management.

Fundamentals
1. Safety, security, health and working environment risks shall be identified and measures implemented in accordance with appropriate risk reduction and cost efficiency.
2. The security threat picture shall be established and systematically monitored to enable effective and proportionate security risk management.
3. The predefined corporate risk matrix format shall be used for evaluation of safety and security incident risks at asset/unit level.
4. Distinct safety and security competencies shall be managed.
5. Technical- and non-technical barriers shall be identified, and barrier management shall be in place.
6. Health and working environment shall be managed to achieve a safe and healthy workplace. Medical facilities and competence shall be available.
7. Personnel transportation, including aviation activities, shall be assessed and monitored.
8. A permit to work system shall be in place at all facilities with hazardous activities.
9. All unsafe operations and activities shall be stopped.
10. Emergency response measures shall be in place and adhere to the PEAR principle – People, Environment, Asset and Reputation, in that order.
11. Business Continuity Management shall be developed, implemented and resourced throughout Equinor.
12. Emergency response capabilities shall be maintained through required competence and systematic training.
13. The need for business continuity work shall be evaluated for non prioritized assets.
14. All safety and security incidents shall be recorded and followed-up. The most serious incidents shall be investigated in order to identify and mitigate the root causes and enable learning.
15. Assurance activities shall be planned and executed to manage safety and security risks and drive performance and learning.
16. Implement and follow up national regulatory directives, laws and regulations.
17. Authority communication shall be transparent, coordinated and documented.

Changes from previous version
Version 3.03: added number 11, 16, 17 and updated number 10

SUSTAINABILITY POLICIES

FR11 - Sustainability (SU)

Process area:	Sustainability (SU)
Owner:	Bjørn Otto Sverdrup
Author:	Morten Mikkelsen
Revision no:	5
Revision date:	27/10/2020
System:	
Competence:	
Validity area:	

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Purpose
The purpose of the Sustainability function is to shape and safeguard Equinor's business in relation to climate change, environment, social performance and human rights. The function enables the company to realise its strategic ambitions through cost effective management of impacts, risks and performance related to sustainability in support of Equinor's purpose, our contributions to the Paris Agreement and the UN Sustainable Development Goals.

Scope
The scope of the Sustainability function addresses our management of impacts, risks and performance related to sustainability, including climate change, environment, social performance and human rights

Fundamentals
1. Management of sustainability performance shall be an integrated part of governance, strategies, business planning, risk and performance management and decision-making processes.
2. We shall systematically identify, analyse and manage our significant sustainability aspects to achieve continual improvement in a verifiable, efficient and effective manner.
3. We shall implement measures according to the mitigating hierarchy: avoid, minimise, remediate/compensate for or offset adverse sustainability-related impacts, and enhance positive impacts, in accordance with good international practices and principles.
4. We shall respect human rights in accordance with our human rights policy.
5. We shall drive change in support of a net zero society and a reduced net carbon intensity for Equinor.
6. We shall work systematically to optimize energy efficiency, minimize energy demand and reduce greenhouse gas emissions from our activities.
7. All Equinor operated oil and gas assets shall work systematically to reduce all flaring and to eliminate routine flaring, in order to fulfil our commitment to zero routine flaring by 2030. In our partner-operated assets we shall work actively to help achieve the same objective.
8. We shall establish, implement and maintain tools and practices to manage chemicals, waste and discharges in a safe and sustainable manner.
9. We shall establish, implement and maintain practices for managing direct impacts from our operations on biodiversity.
10. We shall ensure that our activities do not have a significant negative direct impact on the freshwater resources in the areas we operate.
11. We shall contribute to social and economic development in the societies and communities we operate in.
12. We shall conduct meaningful engagement with potentially affected stakeholders and let their views inform our actions, decisions and follow-up.
13. Distinct sustainability competencies and technologies shall be available and suitable for the scope and complexity of Equinor's business activities.
14. Our sustainability reporting shall be open, accurate, clear, reliable and consistent, reflecting material topics and impacts and in accordance with relevant requirements and reporting frameworks.

Changes from previous version
Most content revised to reflect changes in context and expectations.