

Mineral Licence and Safety Authority Guidelines

for application, execution and reporting of
offshore hydrocarbon exploration activities
(excluding drilling) in Greenland



About the Guidelines

The latest version of the Greenlandic guidelines for offshore hydrocarbon exploration activities (excluding drilling) in Greenland was published by the previous Bureau of Minerals and Petroleum in 2011. These replaced the BMP' "Seismic Survey Standards, 2003".

A number of amendments to the Mineral Resources Act have been passed in the meantime, a wide variety of activities have been carried out, and new international guidance reports such as the Arctic Offshore Oil and Gas Guidelines (AOOGG) "Systems Safety Management and Safety Culture – Avoiding Major Disasters in Arctic Offshore Oil and Gas Operations" have been published.

This has led to the current process in which the guidelines have been revised. The first draft has been subject to a public consultation, and the MLSA would like to thank all the parties who took time out to read our document and who have provided many useful comments.

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The following appendices also form part of these guidelines (the appendices are available in English only):

Appendix A: Template for 3-day activity report

Appendix B: Template for weekly report

Appendix C: Template for completion report

Appendix D: Insurance requirements for offshore hydrocarbon exploration activities

Appendix E: Information on the Greenland VMS (Vessel Monitoring System)

Appendix Fa: Reporting of data

Appendix Fb: Reporting of data (spreadsheet)

Appendix G: Template for Fishery Liaison Officer log book

Appendix H: Guidelines for health systems and medical emergency preparedness

1. Definitions

1.1. For the purpose of the Guidelines, the following terms shall have the meanings stated below, unless otherwise apparent from the context:

- a) "ALARP" means as low as reasonably practicable.
- b) "BAT" means Best Available Technology defined with reference to the OSPAR Convention appendix 1 as "the latest stage of development (state of the art) of processes, of facilities or of methods of operation which indicate the practical suitability of a particular measure for limiting discharges, emissions and waste" as adopted by the OSPAR Commission.
- c) "BEP" means Best Environmental Practice defined with reference to the OSPAR Convention appendix 1 as "the application of the most appropriate combination of environmental control measures and strategies".
- d) "EAMRA" means the Environmental Agency for Mineral Resource Activities.
- e) "EIA" means Environmental Impact Assessment.
- f) "Guidelines" means MLSA Guidelines for application, execution and reporting of offshore hydrocarbon exploration activities (excluding drilling) in Greenland.
- g) "Government of Greenland" means Naalakkersuisut.
- h) "Licensee" means the company or a joint venture of companies that has been granted an Exclusive Licence for the Exploration for and Exploitation of Hydrocarbons in an Offshore Area – or a Prospecting Licence for Hydrocarbons under the Mineral Resources Act.
- i) "Mineral Resources" means all mineral resources covered by the Mineral Resources Act, see section 5 of the Mineral Resources Act, unless otherwise apparent from the text.
- j) "Mineral Resources Act" means Greenland Parliament Act no. 7 of 7 December 2009 on mineral resources and mineral resource activities, as amended by Greenland Parliament Act no. 26 of 18 December 2012, Greenland Parliament Act no. 6 of 8 June 2014 and Greenland Parliament Act no. 16 of 3 June 2015, as amended by subsequent Acts from time to time¹.
- k) "MLSA" means the Mineral Licence and Safety Authority.
- l) "MRA" means the Mineral Resource Authority which is the overall administrative authority for mineral resources and which comprises the Greenland Government, the ministry with responsibility for the mineral resources area, the Mineral Licence and Safety Authority and the Environmental Agency for the Mineral Resources Area as well as any persons and organizations, which the MRA appoints to conduct inspection and auditing of the Licensee's activities under a licence.
- m) "NORSOK G-001" means NORSOK G-001 "Marine Soil Investigations" (Rev. 2, October 2004) as amended from time to time.

¹ In Danish: "Inatsisartutlov nr. 7 af 7. december 2009 om mineralske råstoffer og aktiviteter af betydning herfor, som ændret ved inatsisartutlov nr. 26 af 18. december 2012, Inatsisartutlov nr. 6 af 8. juni 2014 og Inatsisartutlov nr. 16 af 3. juni 2015 med senere ændringer (Råstofloven)"

2. Introduction

This document is prepared by the Mineral Licence and Safety Authority (MLSA) to provide guidelines for application, execution and reporting of offshore hydrocarbon exploration activities (excluding drilling) in Greenland. The guidelines are made with reference to § 84 of the Mineral Resources Act. The guidelines replace the “BMP Guidelines for application, execution and reporting of offshore hydrocarbon exploration activities (excluding drilling) in Greenland” (December 2011).

In these guidelines "offshore hydrocarbon exploration activities" denotes activities carried out from a ship/vessel in an offshore area of Greenland under a prospecting licence or an exclusive licence for exploration and exploitation of hydrocarbons, except for drilling activities. Exploration activities conducted from offshore installations are not covered by these guidelines. In these guidelines the boundary between "offshore" areas and the adjoining onshore areas is determined at the mean sea level.

Offshore hydrocarbon exploration activities covered by these guidelines include:

- Marine 2D seismic acquisition
- Marine 3D seismic acquisition
- Marine controlled source electromagnetic surveys
- Marine gravity surveys
- Marine magnetic surveys
- Marine geophysical/geotechnical and environmental site surveys
- Metocean surveys
- Ice studies
- Seabed sampling surveys

The above list is not exhaustive. Please note that requirements for approval and execution of drilling activities are put forward in the BMP Stratigraphic Drilling Guidelines, amended from time to time, and the Greenland Bureau of Minerals and Petroleum Drilling Guidelines (Guidelines for Exploration Drilling), amended from time to time. Specifications regarding design of site surveys are also included in Mineral Resource Authority Guidelines for Exploration Drilling, amended from time to time.

Offshore hydrocarbon exploration activities can only be performed under a prospecting licence, or an exclusive licence for exploration and exploitation of hydrocarbons, see however the Mineral Resources Act § 2, section 3 and 4.

General terms

Offshore hydrocarbon exploration activities in Greenland are subject to approval by the Government of Greenland (Naalakkersuisut).

Activities may not commence before an approval is obtained.

To obtain an approval to conduct offshore exploration activities, the licensee shall comply with the provisions of the Mineral Resources Act and related legislation, the provisions of the licence under which the activity is applied for, the provisions of these guidelines and provisions contained in the approval letter.

Naalakkersuisut may, when approving the specific activity, outline specific provisions for the execution of the activity.

A copy of the approval letter shall be present on board the vessel, and the approval shall, upon request, be made available to relevant authorities.

Any deviations from these guidelines may only be granted if the licensee has documented to Naalakkersuisut that the deviation in an equal or better way complies with the legislation, licensing conditions and relevant rules, regulations and guidelines.

The Greenlandic and Danish language versions of this document shall prevail.

3. Legislation and Licence Terms

Offshore activities shall follow the rules of law from time to time in force in Greenland. Attention should be made to the following legislation, rules, licence terms and standards that are of particular relevance to these guidelines for offshore hydrocarbon exploration activities in Greenland:

- The Greenland Parliament Act No. 7 of 7 December 2009, on Mineral Resources and Mineral Resource Activities, as amended by the Greenland Parliament Act No. 26 of 18 December 2012, the Greenland Parliament Act No. 6 of 8 June 2014 and the Greenland Parliament Act No. 16 of 3 June 2015 (The Mineral Resources Act)
- Consolidated Act No. 929 of 24 September 2009 on protection of the marine environment cf. Order in Council No. 1035 of 22 October 2004 for provisions brought into force in Greenland
- The Greenland Government Executive Order No. 4 of 3 November 1994 on protection of the marine environment, as amended by Greenland Government Executive Order No. 3 of 6 June 1997 and Greenland Government Executive Order No. 2 of 21 May 2004²
- Act on maritime safety (Consolidated Act No 903 of 12 July 2007)
- Order no. 417 of 28 May 2009: "Order on technical regulation on safety of navigation in Greenland waters"
- Order no. 170 of 17 March 2003 on ship reporting systems in the waters off Greenland
- Technical Regulation no. 169 of 4 March 2009: "Technical Regulation on the use of ice searchlights during navigation in Greenland waters"
- Greenland Parliament Act No. 4 of 4 June 2012 on Greenland Oil Spill Response A/S

Offshore hydrocarbon exploration activities shall be carried out according to acknowledged best international standards and practices. Please pay attention to the following international reference documents:

- Arctic Offshore Oil and Gas Guidelines (AOOGG) "Systems Safety Management and Safety Culture – Avoiding Major Disasters in Arctic Offshore Oil and Gas Operations" (2014)
- The latest revision of the IMO guidelines Guidelines for Ships Operating in Polar Waters Resolution A.1024 (26)
- IMO International Safety Management (ISM) Code
- International Convention for the Prevention of Pollution from Ships (MARPOL)
- NORSOK standard G-001 amended from time to time
- OSPAR Convention for the Protection of the Marine Environment of the North-East Atlantic (please see the environmental guidelines).

² In Danish: "Landstingsforordning nr. 4 af 3. november 1994 om beskyttelse af havmiljøet, som ændret ved landstingsforordning nr. 3 af 6. juni 1997 og landstingsforordning nr. 2 af 21. maj 2004"

Environment

Pursuant to the amendments to the Mineral Resources Act of December 18 2012, the administrative authority for environmental matters relating to mineral resources activities is separate from the MLSA.

In relation to offshore hydrocarbon exploration activities (excluding drilling), The MLSA kindly refers to the following environmental guidelines which supplement these MLSA guidelines:

- Guidelines for submission of scope of project for offshore hydrocarbon exploration activities (excluding drilling),
- Guidelines to Best Environmental Practices,
- Environmental Impact Assessments and Environmental Mitigation Assessments 2015, and
- Manual for Seabird and Marine Mammal Survey on Seismic Vessels in Greenland 4th revised edition, April 2015.

Abovementioned guidelines and manuals can be found [here](#).

Social Sustainability

Pursuant to section 18, subsection 1 and 2 of the Mineral Resources Act the licensees shall use Greenlandic manpower, contractors and subcontractors, suppliers and service providers when carrying out activities under a licence, if such are available.

If licensees use foreign manpower and companies the licensees shall be able to document to the MLSA that neither Greenlandic manpower nor Greenlandic companies were available or qualified to perform the activities or parts thereof.

Pursuant to Section 18 of the Mineral Resources Act contracts and tender material shall comply with Greenlandic law and Greenlandic principles of contract law. Tender material etc., aimed at Greenlandic companies should be drafted in Greenlandic and/or Danish.

Hunting and Fishing

Hunting and fishing is not permitted in connection with exploration activities, unless specific permission is given by Naalakkersuisut.

Transparency and Information on Exploration Activities

The MLSA publishes an annual brochure in Greenlandic and Danish on Hydrocarbon and Mineral Activities in Greenland. Approvals for activities are published on the Mineral Resources website. Furthermore three-day activity reporting received during operations are distributed to anyone interested via email and published on the Mineral Resources website.

The work of the MLSA as a government agency is generally governed by the Case Processing in the Public Administration Act³ and the Open Government Act⁴. In addition hereto the Licence terms set out the following principle regarding information on activities (cf. the Standard Terms for Prospecting Licences article 11.03 and the Model Licence for Exclusive Licences article 20.02):

“BMP (now the MRA) is entitled to make general statements concerning the licence area and the work performed under the Licence. Furthermore, BMP may, without restrictions or conditions, make use (including publication) of material that in the opinion of BMP is of general public interest, including data and considerations of an environmental, technical, navigational, meteorological and glaciological nature, topographical maps and aerial photographs, and bathymetric maps.”

³ The Greenland Parliament Act No. 8 of 13 June 1994 on Case Processing in the Public Administration, as amended by the Greenland Parliament Act No. 21 of 30 October 1998, the Greenland Parliament Act No. 5 of 31 May 2001 and the Greenland Parliament Act No. 19 of 22 November 2011.

⁴ The Greenland Parliament Act No. 9 of 13 June 1994 on Open Government, as amended by the Greenland Parliament Act No. 1 of 31 May 1999.

4. Application: Procedures and Approval

Pursuant to the Mineral Resources Act article 3 a (6,) the MLSA is the coordinating administrative authority and obtains necessary statements and decisions from the environmental authority. The applicant is kindly requested to submit all application materials to the MLSA in one paper copy and/or one electronic copy. Please note that there are specific language requirements for materials for public consultation in the environmental guidelines.

Mineral Licence and Safety Authority

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First step: Submitting a description and Scope of Project for environmental assessment

In order for the environmental authority to be able to assess the level of environmental assessment needed for the specific activity a scope of project shall be submitted in accordance with the “Guidelines for submission of scope of project for offshore hydrocarbon exploration activities (excluding drilling)”. This guideline can be found [here](#). Based on the pre-scope evaluation the environmental authority will decide which level of environmental assessment is needed. **Deadline: 1st of December**

Second step: Submitting an Operations Application and an Environmental application as applicable

Operations application

The Operations Application shall be submitted to the MLSA, including documentation according to the following chapters of these guidelines:

Chapter 5 Operations program and logistics

- 5.1 Operations Program
- 5.2 Logistics of the Operation

Chapter 6 Health and Safety Systems

- 6.1 Management systems
- 6.2 Health Systems/Medical Emergency Preparedness
- 6.3 Safety of Navigation
- 6.4 Vessel Reporting Systems
- 6.5 Greenland Oil Spill Response A/S (GOSR)
- 6.6 Fishery Liaison Officer

Chapter 7 Insurance

Environmental application

The Environmental Application shall be submitted to the MLSA, including documentation according to the following EAMRA guidelines:

Guidelines to Best Environmental Practices

Environmental Impact Assessments and Environmental Mitigation Assessments (2015)

Manual for Seabird and Marine Mammal Survey on Seismic Vessels in Greenland 4th revised edition, April 2015.

Abovementioned guidelines and manuals can be found [here](#).

Third step: Processing and assessment

The Environmental application process is described in the relevant environmental guidelines.

For the Operations application the MLSA requires a minimum of 40 days processing time from the day the MLSA has approved the application as being complete.

The application may cover one or more activities carried out under one licence. The application may also cover one or more activities carried out by two or more licensees (a joint application signed by all applicants).

If the application contains no defects and/or shortcomings (viewed against the components listed in these guidelines), a decision on the application can be expected 40 days from the date where the application is considered completed. Any such approval is dependent on approval of the activity by the environmental authority as applicable.

Assessments of the Operations application are undertaken with the MLSA as the coordinating Authority who consults with other relevant authorities in the review process.

Applications not submitted in accordance with the above mentioned deadlines and requirements will not be processed by the MLSA. Any deviations from these guidelines may only be granted if the licensee has documented to the MLSA that the deviation in an equal or better way complies with the legislation, licensing conditions and relevant rules, regulations and guidelines.

Fourth step: Approval

Offshore hydrocarbon exploration activities in Greenland are subject to approval by Naalakkersuisut.

Activities may not commence before an approval is obtained.

An approval letter is issued which sets out the terms for the approval. Naalakkersuisut may, when approving the specific activity, outline specific provisions for the execution of the activity.

A copy of the approval letter shall be present on board the vessel, and the approval shall, upon request be made available to relevant authorities.

Fifth step: Modification of approved activities

Modification of approved activities is generally contingent upon submission of an application hereof and approval of the modification. The processing time of assessing such an application will depend on the extent of the change requested. The licensee must be aware that a new public consultation process in certain cases may be necessary cf. the environmental guidelines listed above.

5. Operations program and Logistics

Operational requirements

The licensee shall ensure that the activity is performed in accordance with the approved plans and the specific provisions stipulated in the approval, regardless of whether the activity is performed by the licensee or by a contracted third party.

Best Environmental Practice (BEP) and Best Available Technology (BAT) shall be applied in a continuous effort to prevent and eliminate marine pollution, meet the highest standards with regards to health and safety and ensure the integrity of the operations. The risk of pollution and other harmful impacts on the environment shall be identified, assessed and reduced as much as is reasonably practicable in accordance with the environmental guidelines.

Activities shall be conducted in a safe and responsible manner and with due regard to the actual conditions.

The activities shall to the largest possible extent be coordinated with other activities in the area to ensure that neither the requested exploration activity nor other parties' activities in the area are unnecessarily impeded.

General requirements to execution of work follows NORSOK standard G-001 amended from time to time. Work and equipment not included by the above mentioned standards should at an equal level be described and adhere to documented best international standards and practice.

Documentation requirements for the application

5.1 Operations Program

When submitting an application for conducting offshore exploration activities the licensee shall document how the abovementioned requirements will be met. This includes an operation program that outlines the planned exploration activity. The operation program shall include the following:

- a. Information on the operator of the exploration activity including possible contracted operator. Contact details of the contacts at the contracted operator, including phone number and email address.
- b. List of used vessels and ship owner/shipping company including Vessels' IMO numbers, call sign and ship's email/MMSI number.
- c. Purpose of the operation, including:
 - Type of exploration activity
 - Acquisition methodology
 - Description of employed equipment
 - Use of equipment and their operating procedures
- d. If applicable, description and information regarding seabed sampling shall follow NORSOK standard G-001, Annex B "Sampling", sections B.1 – B.4, amended from time to time.
- e. Plan for the data acquisition and expected quantity of data collected.
- f. Map of the expected data acquisition shall be included, with indication of coordinates, licence area and shorelines with WGS 84 as the geographical reference system. If data is planned to be acquired in sub-

areas of licence area, maps and coordinates for sub-areas shall be included with precise specifications of where the different types of data is planned to be acquired.

- g. Shape files over the planned data acquisition (e.g. seismic acquisition lines) shall be included, with WGS 84 as the geographical reference system.
- h. When applying for sampling the expected sample size, depth in the seabed from which the samples are expected to be retrieved and sample density shall be included.
- i. When applying for sampling, a description of how the collected samples will be treated on board the acquisition vessel, and description of the analysis programmes to be conducted on-board the vessel and subsequent analysis programme shall be included, see also NORSOK standard G-001, Annex B "Sampling", section B.5 "Sample handling and storage", amended from time to time.
- j. Operation period, including timing of planned entry into Greenland waters, planned commencement of data acquisition and planned completion of the operation. Any operation period to be approved by the MLSA is dependent on the operation period approved in the EIA/EMA.
- k. When applying for placement of constructions/equipment on the seabed, for example for measuring currents or tidal conditions, the licensee shall set out the time period for the proposed placements and submit a plan for their retrieval.

5.2 Logistics of the operation.

- a. The licensee shall have rotation schedules for working time and time off approved by the MLSA. As a general principle a 4 weeks on/4 weeks off schedule shall apply.
- b. Information regarding planned crew rotation (if applicable).
- c. Description of any special conditions regarding the specific type of operation (if applicable).

6. Health and Safety Systems

Operational requirements

The Licensee must ensure that a management system for health and safety is established and maintained. The management systems shall correspond to the size, nature and complexity of the exploration activity applied for under these guidelines.

A systems safety approach to management shall be implemented throughout the range of activities connected to the exploration program, which include but may not be limited to vessels, facilities, equipment, operating procedures and personnel.

The management systems shall be fully implemented across the organization of the Licensee (including all aspects of the exploration program) and be functional for the purpose of achieving systems safety integrity and health and safety for personnel.

The licensee shall ensure that risks of the specific activity applied for are identified, assessed and reduced as much as is reasonably practicable following the ALARP-principle. This includes a systematic approach to the identification of hazards such as (HAZID) and hazard and operability studies (HAZOP).

During the operation, a person with medical training and specific prerequisites for handling and stabilizing patients with acute conditions shall be on board the vessel. The licensee shall insure that

- a qualified doctor is available at all times for consultation (e.g. through Radio Medical, or similar) or is able to be brought aboard the vessel, and
- an injured person can be transported from the vessel to a hospital

The licensee shall ensure that all national and international laws/rules/regulations on ships, equipment, crew, and navigation are followed. The ship's master is responsible for the vessel being seaworthy, sufficiently manned with the proper expertise and adequately equipped and having sufficient provisions to carry out a safe voyage in the period and area. The ship's master is responsible for the vessel being navigated and handled in accordance with good seamanship.

The ship's master shall be familiar with all rules and regulations relevant to navigation and operations within the Greenlandic EEZ (Exclusive Economic Zone), and shall plan the voyage taking into account all available sources of information necessary to ensure safe navigation, such as weather, wave and ice prognosis, bathymetry, local geography, currents and tides, navigational hazards, operational limits, the ship's design/construction, means of communication and navigation etc.

Documentation requirements for the application

6.1 Management systems

- a. The Licensee shall document that the management systems in line with the above complies with recognized international norms and standards. The documentation hereof may be submitted in the form of a certificate issued by an internationally accredited certification society.
- b. The Licensee shall provide a description of how its management system identifies and communicates roles, responsibilities, and authorities at all levels of the organization relevant for the activity.

- c. Specific attention is pointed towards documentation on the links between the health and safety management systems including emergency response of the different vessels taking part in the operation; this includes all vessels that are a part of the licensee's emergency response, and the licensee (bridging documents) for approval by the MLSA.
- d. Attention is also pointed towards documentation that employees and subcontractors have the necessary health and safety capabilities, training and awareness to work in the area and with the activity applied for.

6.2 Health Systems/Medical Emergency Preparedness

- a. In the application the licensee shall include an account/statement of the health systems / medical emergency preparedness resources available during the operation. A guideline for description of health systems and medical emergency preparedness can be found in Appendix H.

6.3 Safety of Navigation

- a. The latest revision of the IMO guidelines Guidelines for Ships Operating in Polar Waters Resolution A.1024 (26) shall be followed.
- b. Before the ship is put into operation in Greenland waters, the licensee shall submit documentation prepared by an independent third party stating that the vessel's certificates are clean and without annotations. "Certificates" means the vessels classification certificates and national certificates, as well as all other certificates. "Clean certificates" means that the vessel's certificates are valid and unextended with condition/recommendation by Class or the relevant authorities at the time it is navigating in Greenland's EEZ.
- c. If sailing in icy waters is included in the ship's planned voyage, the submitted documentation prepared by an independent third party should also contain documentation regarding the vessel's construction in relation to the intended navigation in the given ice conditions.
- d. The ship shall meet all the requirements for navigating in Arctic Waters of the classification society, which has classed the vessel.
- e. If ships taking part in the operation are required to have a safety management system according to the International Safety Management (ISM) Code, the ships shall have procedures and contingency plans that take the special conditions related to navigation in Arctic waters into consideration, including the existing search and rescue emergency preparedness. Upon request from the MLSA the licensee shall submit documentation regarding the safety management systems.
- f. As per the MARPOL 73/78 requirement under Annex I, all ships with 400 GT and above must carry an oil prevention plan as per the norms and guidelines laid down by International Maritime Organization under MEPC (Marine Environmental Protection Committee).
- g. If ships taking part of the operation is covered by these requirements, the licensee shall submit a Ship Oil Pollution Emergency Plan (SOPEP) to the MLSA as part of the activity application.

6.4 Vessel Reporting Systems

- a. The vessel shall use the Greenland VMS (Vessel Monitoring System) and have a monitoring device installed for this purpose (see Appendix E for more information on VMS). Vessels shall be equipped with LRIT (Long Range Identification and Tracking System).
- b. If the VMS or LRIT is not operative, and on voyage to and from Greenland waters before VMS is installed, the reporting system GREENPOS shall be used.

6.5 Greenland Oil Spill Response A/S (GOSR)

- a. The licensee shall have a valid agreement with GOSR covering the licence under which the activities take place before any activities can be approved.

6.6 Fishery Liaison Officer

- a. The licensee shall, upon MLSA request, include one or more Fishery Liaison Officers (FLO) in the operation. The FLO shall be approved by the MLSA and shall serve as an advisory observer and communicator in matters related to fishery. The MLSA may impose specific requirements on the FLO's qualifications, including, for example that they shall be speaking Greenlandic in order to communicate with local fishery actors.
- b. The licensee shall bear all costs associated with the FLO's participation in the operation. The licensee shall agree with the fisheries expert on working hours, wages, insurance, etc.
- c. The FLO shall keep a logbook of his observations during the operation. A template for such logbook can be found in Appendix G. The logbook shall be submitted to the MLSA, with a copy to the licensee within 2 weeks of the termination of the exploration activity.

7. Insurance

Operational requirements

The Licensee shall have insurance coverage for potential hazards and risks in connection to all activities in accordance with the Mineral Resources Act.

The licensee's activities shall be covered by insurance which at all times complies with the provisions of the Licence and Appendix D to these guidelines.

Documentation requirements for the application

7.1 Insurance

- a. Upon submission of an application for offshore exploration activities, the licensee shall notify the MLSA on existing insurance policies and their main terms.
- b. The licensee shall submit all insurance policies and terms to the MLSA regarding the activity upon MLSA's request. The MLSA may demand that the licensee establishes and maintains additional insurance. Furthermore, the licensee shall follow provisions on insurance given by MLSA, and decisions on insurance made by the MLSA.

8. Notification at the start-up of operations

The licensee shall as a minimum notify the listed authorities about the start-up of the actual operations. The listed authorities shall also be informed upon termination of the activities.

The notification shall contain a list of used vessels with specification of vessels' IMO number, call sign and email / MMSI number, which they will operate during the period.

The licensee shall furthermore notify Joint Arctic Command / Arktisk Kommando when the vessels enter into Greenland waters and connect the vessel to a Greenland Vessel Reporting System while the vessel is in Greenlandic waters, see Section 6.4.

JOINT ARCTIC COMMAND / ARKTISK KOMMANDO

MRCC NUUK
Aalisartut Aqquataat 47
3900 Nuuk
Grønland
Tel.: +299 364000 (24h)
Fax: +299 364099 (24h)
Email: ako@mil.dk (Official mail, only monitored during normal working hours)
ako-commcen@mil.dk (24h)

Danish Maritime Authority

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DK-3900 Nuuk, Greenland.
Tel.: +299325444
Fax: +299325199
Web site: www.dma.dk
Email: nuuk@dma.dk

Greenland Fisheries Licence Control (GFLK)

P.O. Box 501
Indaleeqqap Aqq. 3
3900 Nuuk
Tel: (+299) 34 50 00
Fax: (+299) 64 63 60
E-mail: gflk@nanoq.gl

9. During operations

9.1 Immediate reporting of significant events

The licensee shall promptly notify the MLSA of any significant situation or event, including loss of life, missing person, serious injury, fire and imminent threat to personnel, vessel safety or the environment on the MLSA emergency telephone. The above list is not exhaustive.

As soon as practicable after the immediate notification, the licensee shall submit a complete written report to the MLSA on the occurred situation or incident.

9.2 Continuous Reporting

3-day activity reports : Three times a week the licensee shall submit a 3-day activity report. The 3-day activity report is used to inform stakeholders of ongoing exploration activities in order to allow for the planning and coordination of various offshore activities. It summarizes the activities performed since the last 3-day activity report and describes the planned activities for the next 3 days. The content and format for such 3-day activity reports shall follow the template in Appendix A unless otherwise determined by the MLSA.

Weekly reports : Every Monday, the licensee shall submit a weekly report to the MLSA. The report shall follow the format and contain the information shown in Appendix B.

Completion Report: Immediately after the end of the operation the licensee shall submit a summary completion report. The report shall follow the format and contain the information shown in Appendix C.

9.3 Meteorological, Oceanographic and Ice Observations

The licensee shall, upon MLSA's request, keep a logbook of meteorological, oceanographic and ice observations made during exploration activities. Reporting shall be done in accordance with Chapter 10 of these guidelines and any other specific requirements on format, as defined by the MLSA.

9.4 Waste management

All non-degradable materials and structures shall be removed upon termination of the operation according to the environmental guidelines, unless approved otherwise.

Discharge of waste water and kitchen waste shall be in compliance with the provisions of Annex IV and Annex V of the MARPOL Convention.

9.5 Historical relics and finds

According to Decree no. 4 of the 21st of May 2004 (the Museum Decree)⁵, the finding of relics from the past on the deep seabed, including shipwrecks, ship cargo and parts from such shipwrecks, which could be presumed to have been lost for more than 100 years ago, shall be reported to the National Museum of Greenland (Nunatta Katersugaasivia Allagaateqarfialu). (unofficial translation of the museum decree).

⁵ Landstingsforordning nr. 4 af 21. maj 2004 om ændring af landstingsforordning om museumsvesen (Ændringer som følge af Rigsfælleskabets ratifikation af De Forenede Nationers Havretskonvention af 10. december 1982)

10. After operations: Reporting of data

10.1 Social sustainability reporting

The licensee will be asked to report on the below items a and b in Greenlandic and Danish.

- a. which actions the licensee has undertaken to meet the requirements for use of labour from Greenland and Greenlandic enterprises for contracts, supplies and services in the execution of the approved activity; and
- b. the results of the actions, including documentation and an explanation – if so – why Greenlandic labour and Greenlandic enterprises were not chosen.

10.2 Geoscientific reporting

All material and data shall be submitted to the MLSA within 14 days of it being available in a finalized and complete format. Data is to be submitted no later than April 1st, the year after the data was acquired. Dispensation from this deadline must be applied for at, and approved by, the MLSA.

All geoscientific data shall after January 1st 2015 be shipped to the MLSA and upload fees to the Greenland National Petroleum Data Repository (GNPDR) will apply depending on the amount, and type, of data for upload. In case of new versions of reprocessed data, the MLSA will assess if data should be uploaded to the GNPDR. Data should not be supplied to GEUS (the Geological Survey of Denmark and Greenland) anymore after January 1st 2015. Data, including processed data and reports shall be submitted to:

Mineral License and Safety Authority (MLSA)

Imaneq 1A, 201
P.O. Box 930
3900 Nuuk
Greenland

Shallow cores, associated core samples and seabed sampling shall be submitted to the MLSA Core Storage facility at the following address. The MLSA shall be contacted prior to forwarding any kind of material to the MLSA Core Storage Facility:

Greenland Services Partners A/S

P.O. Box 1020
3910 Kangerlussuaq
Greenland

Geoscientific data

- a. All data and reports shall be submitted in one (1) copy. With regards to seismic data the copy shall be delivered digitally as specified in Appendix Fa section 1 and 2.
- b. All reports shall be submitted digitally in PDF-format. The MLSA shall receive one (1) printed copy of the reports as well.
- c. All submissions must be followed by a cover letter stating the licence number and for exclusive licences the licence commitment under which the data has been collected. Furthermore a complete list shall be included of the material forwarded. If the submitted data and reports are to replace any earlier

forwarded versions, this must be stated. Descriptions of the changes made to the new versions must also be documented.

- d. MLSA may at any time demand the licensee to submit information as to whom any data including reports have been sold to.
- e. Besides the general reporting requirements stipulated in this chapter 10 and the specific reporting requirements stipulated in Appendix Fa, MLSA may in the approval letter specify further requirements for reporting or deviations from the requirements listed mentioned here. All deviations from these guidelines will only be permitted if the licensee can demonstrate to the MLSA that the deviation in an equal or better way complies with the legislation and licensing conditions.
- f. For types of data not included in Appendix F, MLSA will set out reporting requirements in the approval letter.
- g. The MLSA may at any time request further information and reporting as available to the licensee.
- h. For all activities and data acquisitions MLSA asks for a list of products and deliverables produced in relation to the acquisition, processing and analysis of data. The list shall be submitted to MLSA no later than 1st April the year after the data was acquired. If items are added or the list is otherwise amended, an updated list shall be submitted to the MLSA.
- i. Further to the requirements listed in Appendix Fa, after the activity has ended, navigational data for all types of data acquisitions (seismic lines, sample sites etc.) shall also be supplied in a shape file format with WGS-84 as reference system, the UTM zone should be informed and the correct EPSG projection reference should additionally be supplied.
- j. For all types of original geophysical field data, the licensee is obligated to keep a copy for at least 1 year after the expiry of the licence. If the licensee after this period should decide to discard the original field data, MLSA shall be offered the data free of charge before destruction of data. The MLSA may at any time request access to the original field data.

10.3 Environmental reporting

Environmental data and MMSO-data shall be submitted according to the Environmental and MMSO guidelines.

If applicable the Fisheries Liason Log shall be submitted according to appendix G.