## Hebron **ExxonMobil Canada Properties**

20 Hebron Way St. John's, Newfoundland A1A 0L9



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File Code: 11.4A.2

Mr. Paul Alexander Canada-Newfoundland and Labrador Offshore Petroleum Board 240 Waterford Bridge Road The Tower Corporate Campus – West Campus Hall Suite 7100 St. John's, NL A1E 1E2

Attention: Mr. Paul Alexander, Chief Safety Officer

**Subject: Volume of Stored Explosives** 

Dear Mr. Alexander:

ExxonMobil Canada Properties (EMCP) is requesting Chief Safety Officer approval to increase the total explosives onboard Hebron to a maximum quantity of 200 kg for the time periods that well perforation activities take place, in lieu of the maximum quantity of 75 kg prescribed in Section 153 (1) (c) of the Canada–Newfoundland and Labrador Offshore Area Occupational Health and Safety Regulations.

## **Background/Rationale**

Section 153 (1) (c) of the OH&S Regulations states that every employer must ensure "that the quantity of explosives stored at the workplace is kept to a minimum and does not, in any event, exceed 75kg unless otherwise authorized by the Chief Safety Officer". Hebron has been operating since June of 2017 with the approval (2016-RQ-164) to temporarily store up to 200kg of explosives for periods when perforating activities take place. When perforation activities are not taking place, the amount of explosives on board Hebron will not exceed the 75 kg limit.

The average perforating interval in the early Hebron wells will be 175 metres in length, the quantity of explosives required to conduct this operation will be approximately 200 kg including a contingency for gun failure or damage. In the later wells which will have higher angles or be horizontal through the reservoir, perforating intervals could be significantly longer. Therefore, it is clear that the current limit of 75 kg of explosive material is insufficient for Hebron perforation operations, thus our request to continue to allow the necessary amount of explosives, up to a maximum of 200 kg, on a short-term basis (perforating activities).

## Mitigations

The practice of making up guns onshore and shipping them to the location just in time to start the perforating operation is an industry wide practice, accepted as the safest and most effective method of performing the operation. The guns are shipped in custom built gun racks designed to protect them safely during transportation and storage, the guns will remain in these racks until immediately prior to them being armed and deployed into the well. It should be noted that the perforating guns are shipped without detonators in place, and the detonators are installed in the guns immediately prior to deploying them in the

well. It is our opinion that the technique we plan to use on Hebron is safe, practical and effective and there is no practical alternative.

All perforating operations including transportation and storage will be performed in strict accordance with our vendor's procedures. Unplanned detonation of explosives could occur due to exposure to heat or severe impact, mishandling or detonation by radio signal when armed, the following steps will be taken to mitigate these risks:

- The perforating guns will remain in their custom built transportation and storage racks until they are ready to be deployed in the well
- The guns will be stored in areas within easy reach of the cranes such that they can be moved quickly in the event of a fire in their vicinity.
- No other platform equipment will be lifted directly over the storage and transportation racks whilst the guns are in them
- A radio silence procedure will be implemented and adhered or safe perforating systems will be
  used where appropriate to eliminate the risk of detonation by radio signal during perforating
  operations.
- The supplier's explosives handling procedures which are in compliance with regulatory requirements and standards will be adhered to at all times.

## **Previous RQ Conditions**

ExxonMobil Properties will continue to follow the previous conditions listed in 2016-RQ-0164, updated below to reflect the RQ replacement with this letter:

- 1. Shipments must be timed such that these explosives remain onboard for as short a period as reasonably practicable
- 2. The Explosives Control Procedure for Hibernia and Hebron Platforms will be adhered to at all times.
- 3. The total amount of explosives available on the platform must be reported to the Board on a daily basis via the daily drilling report.

Finally, this request has been reviewed with the platform workplace committee and we have received their concurrence

concurrence.
If there are any questions, or if additional information is required, please contact
Sincerely,
Hebron Asset Manager
Cc
Central Files