



August 11, 2025

Canada-Newfoundland and Labrador Offshore Energy Regulator (C-NLOER)  
240 Waterford Bridge Road  
The Tower Corporate Campus – West Campus Hall, Suite 7100  
St. John's, NL  
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**Doc. No.: CVA-CPB-WR-LTR-00077**

**Attention: Jill Mackey, Chief Safety Officer (CSO)**

Dear Ms. Mackey:

**Subject: Acceptance of Increased POB during annual turnaround maintenance on SeaRose FPSO**

Cenovus require annual turnaround maintenance periods to complete critical maintenance and modification work scopes. Such activities are required to maintain the integrity of the installation as well as regulatory compliance. Personnel resources required to successfully prepare and complete such campaigns, in addition to ongoing preventative maintenance and normal operations, may exceed the established steady state persons onboard number of 90. As a result, Cenovus is requesting permission from the Chief Safety Officer to increase POB for annual turnaround maintenance periods up to 120 POB. The Certifying Authority (CA) has been engaged and is aligned with this approach for temporary upstaffing.

### **Life Saving Appliance Arrangement**

The following outlines the Life Saving Appliance configurations on the SeaRose FPSO

#### Lifeboats

Lifeboat configuration on the SeaRose FPSO is as follows:

- 1 x 67-person lifeboat (KISS 1000) located at the aft/starboard disembarkation station;
- 1 x 67-person lifeboat (KISS 1000) located at the aft/port disembarkation station;
- 1 x 56-person lifeboat (KISS 800) located at the aft/port disembarkation station; and
- 1 x 37-person lifeboat (KISS 700) located at the forward/starboard disembarkation station.

Based on a maximum of 120 POB and 100 kg/person, lifeboat capacity is as follows:

- 190% total lifeboat capacity.
- 103% lifeboat capacity on the port side; and
- 87% lifeboat capacity on the starboard side.
- 158% lifeboat capacity aft of blast wall near accommodations/TR

The proposed configuration does not comply with the Transport Canada/SOLAS requirements for 100% capacity per side for this period. MTRB 20512 has been submitted to Transport Canada outlining mitigations in relation to the current configuration and all conditions associated with this MTRB will be followed during the annual maintenance turnarounds.

### Liferafts

Liferaft configuration on the SeaRose FPSO is currently as follows:

- 5 x 20-person liferafts located at the aft/starboard disembarkation station;
- 5 x 20-person liferafts located at the aft/port disembarkation station;
- 2 x 20-person liferafts located at the forward/starboard disembarkation station; and
- 2 x 20-person located at the forward/port disembarkation station.

Based on a maximum of 120 POB and 100 kg/person, liferaft capacity is as follows:

- 234% total liferaft capacity.
- 117% liferaft capacity on the port side; and
- 117% liferaft capacity on the starboard side.
- 167% liferaft capacity aft of blast wall near accommodations/TR

As noted, the proposed configuration does comply with the C-NLOPB requirement for 100% capacity for liferafts onboard. In addition, this is in compliance with Transport Canada Safety and Security's approved MTRB 12554 which states that the SeaRose shall carry, on each side of the ship, enough liferafts to accommodate 100% of the complement.

### Immersion Suits and Lifejackets

The SeaRose FPSO is provided with 275 immersion suits and 155 lifejackets; therefore, there is sufficient equipment available to meet regulatory requirements. The facility has 68 immersion suits outside the port side and 72 immersion suits outside the starboard side of the Accommodations Module (close to the lifeboats), with 37 immersion suits located in the Forward Muster Area (in proximity to the forward lifeboat). In addition, all personnel are also provided with an immersion suit in their assigned cabin. The facility also has 55 lifejackets close to the aft/port lifeboat station, 67 lifejackets close to the aft/starboard lifeboat station, 20 lifejackets located in the Stbd Forward Muster Area; and 5 lifejackets port forward embarkation area. In addition, there are 12 immersion suits and 4 lifejackets on the Bridge, and 2 immersion suits and 2 lifejackets in the Engine Room (2nd Deck) to meet other marine requirements, and one in each crane.

All other Lifesaving equipment onboard are installed as per *the Canada-Newfoundland and Labrador Offshore Area Occupational Health and Safety Regulations* and the *Canada-Newfoundland and Labrador Offshore Area Petroleum Operations Framework Regulations*.

Lifesaving Equipment is maintained as per the following Performance Standards

- Safety Critical Element Performance Standard #33 – Life Saving Appliances and Personal Survival Equipment
- Safety Critical Element Performance Standard #34 – Evacuation Systems

### Ancillary Life Saving Appliances

The SeaRose FPSO is outfitted with Emergency Escape Breathing Apparatus (EEBD's) and designated locations as

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per the LSA plan. These devices are placed in accordance with hazards and risks associated with the systems, equipment, and operations in those areas as well as expected numbers of personnel to be in those areas. Fitted EEBD's will remain as per the LSA plan, with additional EEBD's located in areas where increased personnel may be present, and hazards and risks warrant an increased number of devices. This includes confined space entries.

Each cabin on the SeaRose is outfitted with a smoke hood for each bed within that cabin. These smoke hoods are maintained as per preventative maintenance routines. Additional smoke hoods are located throughout the installation as per the LSA plan. Quantities of smoke hoods onboard, as well as distribution will align with scopes of work being executed.

### Evacuation Timing

Based on discussions partially associated with MC-RQF-WR-044 (Revision 2), Transport Canada had previously tasked Cenovus to demonstrate that all personnel can be evacuated from the FPSO within 10 minutes following the abandonment command. In summary:

- It was estimated that either of the aft KISS 1000 lifeboats could be loaded and launched, with personnel originating inside the Temporary Refuge, in under 9 minutes from the abandonment command, including time to put on the immersion suits. (Note: the KISS 800 lifeboat was not installed when the assessment was completed; however, it has a maximum capacity of 56 persons);
- It was estimated that the forward lifeboat could be loaded and launched, with personnel originating inside the Temporary Refuge, in under 11 minutes from the abandonment command, including time to put on the immersion suits, with a lifeboat complement of up to the maximum capacity of 37 persons (however, it was agreed that 10 minutes could have been achieved if the immersion suits were donned as a precautionary action so it was agreed that the 10 minute time could be met);
- It took approximately 3 minutes to simulate the lowering of a liferaft, releasing the hook and recovering it such that the next liferaft could be launched (this demonstrates that 2 liferafts could reasonably be launched from a single liferaft station within 10 minutes of the abandonment command, with personnel on scene and ready for launch, as it was estimated it would take approximately 60 - 90 seconds to load 18 people into a raft, and it was noted that hook recovery after the second liferaft is launched is not a requirement if all other personnel have evacuated by other means); and

**NOTE:** This is based on launching rafts from at least 3 liferafts stations as drills and exercises completed to demonstrate evacuation timing noted ability to launch 2 rafts per station within a 10-minute period (considering the lowering time and the loading time). However, this is also considering that there are no other means of evacuation available which is not practicable considering aft lifeboat and liferaft stations are adjacent to each other and are meant to supplement in the event of evacuation.

- For the purposes of demonstrating that evacuation time criteria are met, it is acceptable to assume that multiple lifeboats and/or liferafts can be launched simultaneously as there are sufficient coxswains on board.

As a result of the above, it can be concluded that 120 POB could be evacuated within 10 minutes based on the agreed criteria. Cenovus will commit to completing an abandonment drill shortly following any increases beyond 90 POB for annual turnaround maintenance periods.

### **CA Engagement**

DNV has been fully engaged in the proposal to periodically increase POB for annual turnaround maintenance and is fully aligned with Cenovus for these annual campaigns.

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## Accommodations

Paragraph 63(2) of the Canada–Newfoundland and Labrador Offshore Area Occupational Health and Safety Regulations states:

- (2) Every employer must, to the extent feasible, assign each person at a workplace under its control their own sleeping quarters with direct access to their own washroom containing a shower.

However, Paragraph 63(3)(a) states

- (3) If compliance with subsection (2) is not feasible, the employer must

- (a) assign no more than two persons to sleep in the same sleeping quarters at the same time, unless a greater number is approved in advance by the Chief Safety Officer on a short-term basis;

The SeaRose FPSO is designed for a normal operating complement of 90 POB considering only 2 people assigned to a room on opposite shifts. However, the rooms on the SeaRose FPSO are outfitted with sleeping quarters for up to 126 POB to accommodate campaign maintenance periods as per this request. Cabins are designed with 1, 2 and 3 person sleeping quarters per cabin. Each sleeping quarters is designed to meet the dimensions and access requirements outlined within the OHS regulations and is assigned its own storage cabinet and reading lamp.

The following summarizes the sleeping quarters on the SeaRose FPSO:

Location	Single Cabins	Double Cabins	Triple Cabins	Available Bed Space
Upper Deck	-	-	4	12
B Deck	-	1	15	47
C Deck	-	3	13	45
D Deck	2	4	4	22
TOTAL				126

During increased POB operations for annual turnaround maintenance, at no time will there be more than 2 persons occupying a room at the same time (i.e. the third person will be on the opposite shift). To further minimize impacts on core crew living arrangement, Cenovus Back-to-Back night and day shifts will be maintained, focusing on selected allotment of rooms and beds for the increased POB associated with the annual turnaround maintenance. The turnaround maintenance crew will be managed to minimize impact on core crew assignments and mitigate against fatigue. However, at times Cenovus may be required to utilize other rooms and beds to best manage crew shifts and scope assignments.

During annual turnaround maintenance periods, additional personnel will be added to the catering staff to offset the additional demands associated with such an increase.

### Basis of Safe Operations:

Cenovus has previously requested Kent prepare an overview of the impact that an increased POB may have on the overall risk profile for the FPSO.

Overall, Kent has stated that annual turnaround maintenance crew would not be at any higher risk than the existing FPSO crew, particularly due to the generally short duration of the annual turnaround maintenance periods and the fact that production operations are shut down and topsides depressurized during the execution of the work. Increasing the POB would not have a detrimental effect on the existing crew. The FPSO's provision of

lifesaving devices / EER equipment is suitably located and sufficient for the increased POB such that there should be no negative impact on the ability to evacuate personnel safely in the event of an emergency.

It can be considered that the risks associated with conducting annual turnaround maintenance periods can be considered to have been reduced to as low as reasonably practicable (ALARP).

### **Specific Commitments Associated with Annual Turnaround Maintenance Periods**

Cenovus is committed to the following:

- The Certifying Authority (CA), Transport Canada, and the C-NLOER to be notified pre and post up-staffing, with any significant changes to the planned proposal communicated to the Regulators and Certifying Authority in a timely manner;
- Compliance with Transport Canada MTRB
- All lifeboat and liferaft equipment to be confirmed in good working order prior to increasing personnel, with no intrusive maintenance activities scheduled on this equipment during the period of proposed personnel increase (any need for emergency maintenance will be discussed with the Regulators and Certifying Authority);
- All production activities will be terminated prior to increasing personnel onboard, with hydrocarbons being reduced to minimal amounts required for safe restart of the installation.
- The topsides process equipment will be shut in, blown down, and depressurized
- The vessels inert gas system to remain operational throughout the turnaround period.
- Hydrocarbons will be stored in dedicated cargo tanks away from intrusive maintenance activities and maintained in an inerted atmosphere throughout. Volumes will vary, and at a minimum be of sufficient volume to allow for flow line recirculation to safely restart production.
- The fire and gas detection and protection systems shall remain operational during the turnaround to the fullest extent practical (where maintenance activities required outages, alternate systems shall be provided; specific scopes of work are being reviewed with the CA);
- All work scopes completed during the period of increased personnel will be managed based on the facility PTW system.
- While POB is increased, the lifesaving equipment and escape route plan will be posted based on 120 POB;
- An emergency abandonment drill will be conducted shortly following up-staffing; and
- Prior to the commencement of production operations, the SeaRose FPSO will down staff personnel to approved normal operational staffing level of 90 POB, or an alternative staffing level as agreed to by the regulator. In any case, the CNLOER will be notified of intended staffing levels prior to start-up.

### **Conclusion:**

Based on the above information, Cenovus Energy is proposing to increase its persons onboard (POB) to a maximum of 120 during annual maintenance turnaround periods. The duration of the annual maintenance turnaround periods and increased personnel onboard will vary annually dependent on scope of work to be executed.

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During normal operations, the maximum POB of 90 will be maintained.

Sincerely

Cenovus Energy

Signed by:

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