



PETROLEUMSTILSYNET

**Seadrill Europe Management AS**

P. O. Box 110

4001 STAVANGER

Vår saksbehandler

**Vivian Sagvaag**

Deres ref.

Vår ref. (bes oppgitt ved svar)

Dato

Ptil 2021/423/IV/VS

05.03.2021

Dear Sirs

### **Orders and decision on a coercive fine**

An acknowledgement of compliance (AoC) was issued to *West Mira* on 30 October 2019. When we issue an AoC, we express confidence that petroleum operations can be conducted by a mobile facility in compliance with the regulations. An AoC decision is based on information provided by the applicant in a dedicated application. This document must cover both technical conditions on the facility and the company's organisation and systems for safety management.

Since the AoC was issued, a number of serious incidents have occurred on the facility, with either serious consequences or a high potential for these. We investigated the incident involving the unintentional disconnection of the lower marine riser package, and this led to an order being issued.

We have also held a number of meetings where we have expressed our concern over observations made in audits and investigations concerning the capacity and competence of your organisation and risk understanding on the facility.

In addition, we have conducted audits and investigations of other facilities operated by you which could have contributed to experience transfer and been relevant for the operation of *West Mira*.

We conducted an audit of electrical installations and technical safety **on West Mira** during week 7 of 2021 in collaboration with the Norwegian Maritime Authority (NMA) and the Directorate for Civil Protection and Emergency Planning (DSB). This exposed new serious nonconformities and also revealed that previously identified nonconformities had not been followed up in accordance with the company's response to us.

We refer to the guidelines for section 25 of the framework regulations on applications for an AoC for certain offshore mobile facilities.

*Further use of an Acknowledgement of Compliance is contingent on maintaining and following up the basis, prerequisites and other conditions given in the acknowledgement*

Based on our observations since the AoC was issued, we are uncertain whether the preconditions for issuing an AoC to *West Mira* are still present.

We also refer to section 25, paragraph 1, second sentence of the activities regulations on use of facilities.

*The use shall at all times be in accordance with the facility's technical condition and the assumptions for use that form the basis for prudent activities.*

The grounds for our assessment are provided below. We refer to our notice of orders and our report sent to you. In accordance with the notice, you are hereby given the following orders.

### **Order 1**

*Pursuant to sections 69 and 10 of the framework regulations on administrative decisions and on prudent activities respectively, Seadrill Europe Management AS (Seadrill) is ordered to do as follows.*

1. *Review safety-critical installations, systems and equipment on West Mira and implement the necessary corrective or compensatory measures to ensure that installations, systems and equipment are capable of performing their required functions so that prudent operation can be maintained on West Mira. See sections 45, 25 and 26 of the activities regulations on maintenance, on use of facilities and on safety systems respectively, and section 22, paragraphs 2 and 3 of the management regulations on handling of nonconformities.*

*A brief description of the process for identifying necessary measures, an overview of measure initiated, and a confirmation with grounds that safe operation is being maintained on West Mira must be submitted to us no later than 12 March 2021.*

2. *Implement the necessary measures by 1 June 2021 so that all nonconformities related to safety-critical installations, systems and equipment on West Mira are corrected. See sections 45, 25 and 26 of the activities regulations on maintenance, on use of facilities and on safety systems respectively, and section 22, paragraph 2 of the management regulations on handling of*

*nonconformities. We must be informed should permanent solutions not be in place by the deadline, and compensatory measures will still be required.*

*A plan for the way part 2 of order 1 will be implemented must be submitted to us by 16 April 2021. We must be notified when the order has been complied with.*

## **Order 2**

*Pursuant to section 69 of the framework regulations on administrative decisions, Seadrill Europe Management AS (Seadrill) is ordered to do as follows.*

- 1. Ensure that all nonconformities from the petroleum regulations which we have identified on your facilities since 1 January 2017 are corrected in line with the company's responses to us. See section 22 of the management regulations on handling of nonconformities. Deadline 1 August 2021.*
- 2. Identify and implement operational or organisational measures which ensure safe operation of all the company's facilities in Norway with an AoC, including ensuring that new faults or deficiencies are continuously identified and corrected. As part of this work, risk understanding and organisational capacity and robustness must be assessed. See section 6 of the management regulations on management of health, safety and the environment. Deadline 1 October 2021.*

*A plan for the way order 2 will be implemented must be submitted to us by 30 April 2021. We must be notified when the order has been complied with.*

## **Decision on a coercive fine**

*We refer to the notice of two orders and the notice of a coercive fine of 1 March 2021.*

*If section 1 of order 1 is not corrected by 12 March 2021, a coercive fine of NOK 50 000 per day will come into effect from 13 March until the order has been implemented. The order to pay a coercive fine is regarded as grounds for enforcement of distraint. See section 7.2 of the Enforcement Act, and payment of the fine can be enforced immediately by the State Agency for the Recovery of Fines, Damages and Costs (SI). The decision on a coercive fine has been taken pursuant to section 10-16, paragraph 1 of the Petroleum Act.*

*Seadrill is requested to provide specific confirmation by e-mail that the decision on a coercive fine has been received.*

## **Justification for our assessment**

## Incidents

A number of incidents have occurred on the facility over the past year. We have assessed five of these as serious and investigated one of them.

- 11 January 2020: lifeboat incident – wave washed a lifeboat overboard
- 14 March 2020: unintentional disconnection of the lower marine riser package (LMRP) – investigated by us
- 23 June 2020: structural damage to the knuckle boom crane for pipe handling
- 15 August 2020: wheel for manual operation of a remotely controlled low torque valve installed in the string dropped into the red zone on the drill floor.
- 23.2.2021: personnel transfer basket trapped in a V door.

## Nonconformities identified by audits and investigations

Examples are provided below of nonconformities in audits and investigations where serious breaches of barriers have been identified.

- Annual NMA inspection January/February 2020. See NMA report KS-0120E list of orders of 3 February 2020 (2020/441).
- Deficient description of and compliance with procedures in connection with planning and execution of an operation. See nonconformity 7.1 in the report of the investigation following the unintentional disconnection of the lower marine riser package (LMRP) on *West Mira* (2020/754).
- Lack of risk understanding and prioritisation of risk reduction solutions. See nonconformity 7.3 in the report of the investigation following the unintentional disconnection of the LMRP on *West Mira* (2020/754).
- Failure to learn from an incident and prevent repetition. See nonconformity 7.4 in the report of the investigation following the unintentional disconnection of the LMRP on *West Mira* (2020/754).
- Uncertainty over the ESD system's functionality and ability to perform its required actions. See NMA report KS-0120B list of orders of 18 February 2021 (2020/2275).
- Failure to deal with the safety function of fire doors. The integrity of a relatively large number of fire doors had weakened as a result of degradation. See NMA report KS-0120B list of orders of 18 February 2021 (2020/2275).
- Inadequate design and handling of an open drain system. See NMA report KS-0120B list of orders of 18 February 2021 (2020/2275).
- Failure to deal with critical conditions on the facility. This concerned both several alarms related to the loss of overpressure or underpressure and to low insulation resistance (earth fault). See NMA report KS-0120B list of orders of 18 February 2021 (2020/2275).
- Inadequate design and handling of lithium ion battery installations. See NMA report KS-0120B list of orders of 18 February 2021.

- Watertight hinged hatches and doors in such a condition that the watertight barrier was non-functional. See NMA report KS-0120B list of orders of 18 February 2021 (2020/2275).
- Several findings reported on watertight sliding doors, which in turn weakened the watertight barrier. See NMA report KS-0120B list of orders of 18 February 2021 (2020/2275).
- Discrepancy between maximum VCG curves entered in the loading computer and associated curves in the stability analysis. See NMA report KS-0120B list of orders of 18 February 2021 (2020/2275).
- See also nonconformities 5.1.2 and 5.1.6 in the list below, relating to previously identified nonconformities which had not been corrected and which also represented serious barrier breaches.

### **Nonconformities not corrected in accordance with the company's response**

We conducted an audit of electrical installations and technical safety during week 7 of 2021 in collaboration with the Norwegian Maritime Authority (NMA) and the Directorate for Civil Protection and Emergency Planning. This exposed new serious nonconformities and also revealed that previously identified nonconformities had not been followed up in accordance with the company's response to us. These included:

- Nonconformity 5.1.2 concerning electrotechnical system analyses from our AoC consideration related to *West Mira* (2019/332). Not all relevant electrotechnical system analyses had been updated, even though changes made to the electric installation affected the analysis. That applied, for instance, to documentation of selective disconnection for all UPS installations, short-circuit analysis of the electrical installations and analysis of harmonic disturbances in the electrical installations. Moreover, analyses which had been updated revealed challenges in the installations which the company had not dealt with. These included a lack of selectivity for protection in the UPS installation and the danger of overloading transformers.
- Nonconformity 5.1.4 on overpressure ventilation and ignition source disconnection from our AoC consideration related to *West Mira* (2019/332). An alarm had not been implemented for loss of overpressure in the shale control operator room in the control system (C&E).
- Nonconformity 5.1.7 on technical conditions concerning technical safety from our AoC consideration related to *West Mira* (2019/332). It could not be documented that the fire pump system had the capacity to meet the estimated simultaneous water requirement for the largest dimensioned fire. See NMA report KS-0120B list of orders of 18 February 2021.
- Nonconformity 5.1.11 on familiarisation and training from our AoC consideration related to *West Mira* (2019/332). It was established that the engine control room operator had not received the necessary equipment training for systems monitored by this position. That related to both the lithium-ion battery system and the fire and gas detection system.

## Meetings

We have held a number of meetings with Seadrill where we have expressed our concern over observations made in audits and investigation, the capacity and competence of Seadrill's organisations, and risk understanding on *West Mira*.

- 13 February 2020: meeting with Seadrill, the county governor's office for Rogaland (FMRO) and the NMA. This was held after the NMA's findings from the annual inspection for 2020. These findings were of such a character that the certificate was no longer valid. We communicated that we see a link between findings related to the annual inspection (NMA) and the failure to follow up the AoC. One item on the agenda was therefore "the company's assessment of the preconditions for the AoC". Questions were also raised at the meeting about the company's capacity and competence (2020/441).
- Seadrill implements a number of measures at company level. These are communicated in meetings on 3 March, 15 April, 23 June and 17 September 2020. Agenda: "How the company ensures prudent operation of its offshore facilities" (2020/441).

An appeal can be made against this decision pursuant to section 28 of the Public Administration Act. The deadline is three weeks from the receipt of this letter. A possible appeal will be heard by the Ministry of Labour and Social Affairs, but must be submitted to us. Further information on the right to lodge an appeal and the procedure for doing so can be obtained from us.

This decision must be made known to elected officers for the workforce, including the safety delegates, pursuant to section 18-6, paragraph 8, of the Working Environment Act.

The decision will be published at [www.psa.no](http://www.psa.no).

Yours faithfully

Irja Viste-Ollestad, by authority  
*Head of supervision*

Vivian Sagvaag  
*Principal engineer*

*This letter has been approved electronically in the PSA and accordingly bears no signatures*

Copies to:

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