

Information to neighbours from Equinor Mongstad

in compliance with the Major Accident Regulations



The purpose of this brochure is to inform people outside the Mongstad process plant regarding substances and situations that could represent a hazard in the event of an undesirable incident. We will explain the plant's emergency response measures, and the precautions that should be taken if an undesirable incident, for example a gas leak or fire, should occur at the plant. In this manner, Equinor wants to contribute to increased knowledge in connection with operation of the plant at Mongstad.

Equinor Mongstad is one of several major enterprises in Norway that handle chemicals and flammable substances, and is therefore subject to the "Regulations relating to measures to prevent and limit the consequences of major accidents in enterprises where hazardous chemicals occur (Major Accident Regulations)". The facility is operated in accordance with this regulation. The Mongstad process plant is covered by this

regulation because flammable substances are handled at the facility.

Based on this regulations a safety report, which deals with the latest changes in the plant, will be prepared for the public. The plant was updated in 2017.

Other regulations that govern the activity as well as audit reports can be obtained upon inquiry to the Petroleum Safety Authority (www.ptil.no)

Activities at Equinor Mongstad

Equinor's activity at Mongstad comprises operation of an oil refinery, a process plant for refining wet gas and condensate to propane, butane and naphtha, a crude oil terminal and a cogeneration plant that is closely integrated with the refinery. Equinor is also co-owner of the CO2 Technology Centre Mongstad (TCM), which is the world's largest facility for testing and development of CO2 capture technologies.

Information about hazardous chemicals at Equinor Mongstad:

-LPG (Liquified Petroleum Gases)

LPG has the hazard category “highly flammable”. LPG is used here as a generic term for propane and butane gases, or mixtures of these gases. Propane and butane occur as gas at normal pressure and temperature. They can, however, be converted to liquid form in connection with compression and/or cooling. LPG is classified as extremely flammable gases. These gases are heavier than air, which means that in the event of a leak, they will spread along the ground, following low points in the terrain. Explosive mixtures can result when the gas is mixed with air. Further mixture with air will result in the gas no longer being ignitable.

- Crude oil, petrol and distillate (kerosene, diesel, gas oil, light fuel oil, heavy fuel oil) are raw materials and finished products at the refinery. Direct contact with these substances is a health hazard. However, the danger of substances spreading outside the refinery area is small, since these products are in liquid form at normal temperatures. Fire/explosion with subsequent formation of smoke and gas is the most significant acute hazard connected with these products. Crude oil and its products also contain benzene and other volatile organic compounds or “VOC”. This is what you can smell when you fuel your vehicle. Equinor Mongstad works actively to limit exposure to benzene and VOC, with measures including VOC recovery plants at our quays – to recover VOC gas in connection with loading and offloading.

- Other chemicals

Gases such as hydrogen sulphide (H₂S), sulphur dioxide (SO₂) and nitrogen (di)oxide (NO_x) are released in extremely low and safe concentrations during normal operations. In the event of a major accident or fire, emission of these gases could be higher and thus represent a health hazard for

personnel inside the fence. These gases are toxic in high concentrations, and in lower concentrations they can irritate the skin and airways. This primarily poses a risk inside the facility. The facility is equipped with measuring instruments that give a warning if the concentration of certain gases becomes too high.

General information about the type of hazard for major accidents and potential impact on people and the environment.

Comprehensive analyses are conducted for the Mongstad process plant on a regular basis to highlight the risk for personnel at the plant, and the surrounding local environment. Equinor is required by law to establish acceptable risk criteria for employees at the plant and neighbours. These criteria have been established in accordance with recognised norms and standards within comparable activity.

Analyses performed by third parties have concluded that the risk for people in the local environment is well within the established criteria and stipulated requirements. The likelihood of a major accident at the Mongstad plant that could affect people outside the plant is extremely low. The risk analyses conclude that third parties, for example neighbours, are not exposed to unacceptable risk pursuant to stipulated norms and assessments. This means that an incident inside the plant will not affect buildings, people or activities outside the company’s area. This assessment has been made following a thorough study and measures. This means that the enterprise does not limit activity or construction outside the company’s area, and also that there will normally be no need to evacuate neighbours in connection with an undesirable incident. However, there could be exceptions – such as a fire causing smoke, and that could necessitate evacuation of certain neighbours.

Continuous work takes place to promote improvement measures within health, environment, safety and preparedness, as well as to limit the consequences if such an incident should occur. The

most serious incidents that can occur in connection with operation of the plant are considered to be:

- **Leakage of oil and gases** that subsequently ignite. Ignition of hydrocarbons under pressure, or gas, could cause significant harm to people, animals and material assets. The probability of such a significant gas leakage is extremely low, and the likelihood of such a gas leak causing consequences outside the fences around the Mongstad plant are even lower.
- **Explosive fire** in tanks or vessels containing hydrocarbons in liquid or gas form can occur after the vessel is exposed to the strain from a fire. In extreme situations, such an incident can arise in a later stage of a fire. The probability that escalation of fires would lead to consequences outside the gates around the Mongstad plant are extremely low, but smoke development can occur. If this happens, follow the instructions in the table on the next page.

The facility is constructed to avoid such situations, and it is equipped with safety functions and alarms. Continuous monitoring of all these functions takes place in the control room.

The Petroleum Safety Authority (PTIL) is the supervisory authority for our facilities, and it verifies that the activity takes place in accordance with rules and regulations. Municipal authorities, the Norwegian Environment Agency and the Norwegian Coastal Administration also take part in this work.

Preparedness and notification

Accidents can occur despite high safety standards. The industrial safety team at Mongstad consists of personnel from our own organisation who have received training in how to handle accident situations. The industrial safety team has the task of implementing measures to reduce the extent of the damage

from a potential undesirable incident. Alarm notification for Equinor Mongstad is the evacuation alarm. The process plant's neighbours may be able to hear this when it is tested at 12:00 hours every Monday.

The alarm is only used as an internal alert in the event of incidents where the objective is to reduce the number of people inside the plant. Neighbours do not need to take any action if they hear this alarm.

The police will be notified if a major accident occurs, or if there is a risk of such an incident. In such case, the Police are responsible, in consultation with Equinor Mongstad and the 110 emergency centre, for assessing the need to alert neighbours and others in the surrounding area, and to potentially initiate evacuation.

Notification will then take place in accordance with the Police notification procedures. Announcements may also be made by radio via NRK Hordaland.

A dedicated emergency response plan has been drawn up for Equinor Mongstad which safeguards both internal circumstances as well as in relation to partners in the event an accident should occur.

What is done at Mongstad in the event of an incident?

Equinor operates and maintains the facilities with a high level of focus on safe operations and accident prevention. The enterprise places great emphasis on the so-called "barrier mind-set". This means that we have a system with several built-in safety barriers and procedures.

This can include:

- Human factors – behaviour and competence
- Technical factors – gas and fire alarms and control systems.
- Organisational factors – control systems and safety delegate system.

If an undesirable incident should occur, emergency response personnel will be mobilised immediately,

and other response staff will be called in to safeguard other important functions. The emergency response organisation conducts regular training exercises on simulated incidents in the facility. A dedicated emergency response plan has been established for the Mongstad facility, which describes various potential hazard situations, how to deal with such situations and notification routines.

The facilities at Equinor Mongstad operate 24/7 and they have a professional response team on-call round the clock.

At all time the personnel at Mongstad includes crew members with special training in handling emergency situations. If the alarm sounds, a dedicated crew will also be on site quickly to staff all important positions. Equinor also cooperates with the local fire service departments. In the event of a major accident, Equinor Mongstad will provide information about the incident as soon as possible.

If additional information is desired beyond what is contained in this document, you can contact Equinor Mongstad via the switchboard at tel. 56344000. The switchboard is operated from Stavanger between 07.00-17.00 on weekdays and during weekends, but during evenings/night-time the call will go to the security guard at Mongstad. Explain the issue and ask to speak with the senior guard or operations manager at Equinor Mongstad

The following actions must be taken if there is a warning of potential significant smoke development:

If you are outdoors:	If you are indoors:
Seek shelter in the nearest house and stay there. Then refer to the items under "If you are indoors"	Shut doors, windows and vents. Shut down ventilation systems with fresh air intake. Listen to the radio, NRK Hordaland. Answer the phone, it could be information from the police.
Pay attention to announcements made by the police, through direct contact or rescue management via the media	
In a hazard situation, the telecommunication network could become overloaded. Therefore, avoid unnecessary use of the telephone network.	
Equinor will publish information on its website: www.equinor.com	

Name and address for the enterprise:

Equinor ASA, Mongstad 56, 5954 Mongstad

Read more about the activities at the facility at:

- www.equinor.com
- www.equinor.com/no/what-we-do/terminals-and-refineries/mongstad.html
- www.facebook.com/EquinorMongstad

