



# To the industrial park's neighbours

Information about safety and emergency preparedness  
at Herøya Industrial Park



# WHAT MIGHT HAPPEN? Information about haz

	AMMONIA	NITROGEN OXIDES (NO <sub>x</sub> )	ETHANE/PROPANE/BUTANE (LIQUID GAS)
<b>Substance properties</b>	Colourless, poisonous gas with an intense, piercing smell that is noticed even at extremely low concentrations.	Reddish brown in colour at high concentrations and has a weak, fairly sweet, nauseating smell.	Liquid gas is colourless and almost odour-free. The gas is heavier than air.
<b>Impact on health and the environment</b>	Attacks the eyes and airways, causes coughing and running eyes.  In high concentrations, ammonia is toxic and hazardous to health if inhaled.  Ammonia is hazardous to the environment.	Extremely toxic when inhaled at high concentrations.	Extremely flammable and may ignite in the event of emissions.  Burn injuries, fire damage to buildings and the environment.
<b>Possible incidents that may result in a major accident</b>	Breaches of tanks or pipes may result in a gas cloud with a hazardous concentration from a distance of several kilometres.	Significant emissions from production or from the storage of nitric acid.  Decomposition reactions in mineral fertiliser.	Stored in containers under pressure, which when directly affected by flames may fail and result in the formation of a fire ball (BLEVE).
<b>Additional information about the substances' properties can be obtained from:</b>	<b>YARA PORSGRUNN</b> Tel.: 09272 e-mail: yara.porsgrunn@yara.com		

## What should you do if the alarm sounds?



### Follow the instructions on the Gas poster. Listen to the radio.

In the event of an ammonia or nitrogen oxide gas leak, this may be noticed due to the following:

- Piercing smell
- Stinging in the eyes and nose
- Coughing

## WARNING SIGNAL

"Important alert – listen to the radio" is the signal from the civil defence's alarm system that is used in the event of danger or a gas leak.



### Important alert – listen to the radio

3 signal series with one minute between the series.  
 Means: Important message, listen to NRK P1 for further information: Listen until the situation is clarified or under control.



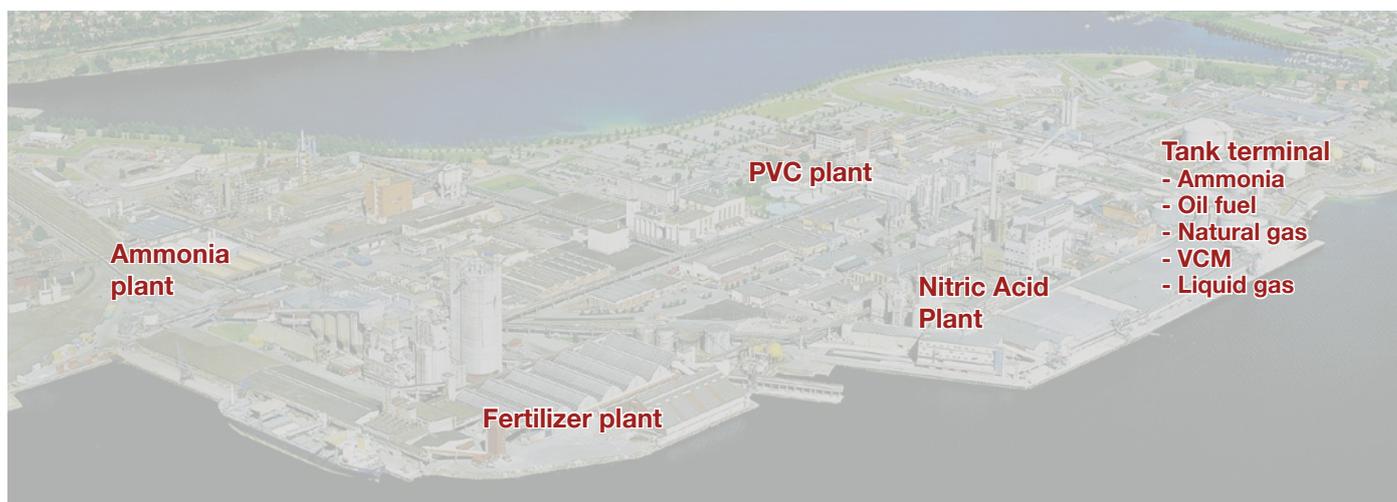
Photo: Tom Riis

# Dangerous substances and the risk of major accidents

VINYL CHLORIDE (VCM)	METHANOL	NATURAL GAS (LNG)	MOTOR FUEL AND OIL FUEL
Colourless gas with a weak, sweet smell. The gas is heavier than air.	Colourless fluid with a mild, characteristic smell.	Colourless gas, stored at extremely cold temperatures.	Fluids with characteristic smell.
Extremely flammable and may ignite in the event of emissions.  Is not acutely toxic, but classified as carcinogenic in the event of long-term exposure.	Extremely flammable.  The vapours may form an explosive mixture with air. Burns with an invisible flame.  Toxic in the event of inhalation, skin contact and swallowing.	Extremely flammable and may ignite in the event of emissions.	Harmful to aquatic organisms and may cause undesirable long-term effects in the aquatic environment.  Is flammable, but not classified as extremely flammable or potentially explosive.
Stored in containers under pressure, which when directly affected by flames may fail and result in the formation of a fire ball, a so-called BLEVE.	Stored in closed containers or tanks.  Fire in tanks or pipes. Cannot cause damage outside the industrial park.	Breach of pipes, where liquid gas may run into the trench surrounding the tanks and ignite. Cannot cause damage outside the industrial park.	Emissions to water during the unloading of vessels.  Significant breach of tanks or pipes.
<b>INOVYN NORGE</b> Tel: 35 00 60 00 e-mail: rafnes@inovyn.com		<b>SKAGERAK NATURGASS</b> Tel.: 35 93 50 00, 24-hour line 815 20 050.	<b>YARA PORSGRUNN</b> Tel.: 09272 e-mail: yara.porsgrunn@yara.com

### In the event of a gas leak:

- Go inside if you are outdoors and close all doors, windows and valves.
- You can create a provisional filter by taking a rough piece of cloth/towel and soaking it through with water. The water absorbs the gas.



## HERØYA INDUSTRIAL PARK

Herøya Industrial Park is an industrial area with 80 organisations with a total of around 2,500 employees, and with a high focus on safety. In order to be a good neighbour that inspires confidence, the organisations at Herøya Industrial Park must show openness in their work with health, safety and the environment.

Some of the organisations have production and storage facilities at which hazardous chemicals are handled in volumes that make the organisations subject to the Major Accident Regulations. The organisations are therefore obligated to coordinate measures and exchange relevant information and necessary documentation in order to prevent and limit the consequences of major accidents. The purpose of this brochure is to give our neighbours information about the substances and situations that may represent a hazard if an unforeseen incident occurs at the industrial park – as well as the park's emergency preparedness measures and instructions for the general population.

The Major Accident Regulations' requirements regarding information for the general public applies to Yara Porsgrunn, INOVYN Norge and Skagerak Naturgass, who have also prepared safety reports that are submitted to the supervisory authorities. Herøya Industripark AS is the landowner at Herøya Industrial Park, and agreements that regulate responsibilities, obligations and rights have been drawn up between the tenants and landowner. Common provisions have been prepared, which apply to all tenants.

For more information about Herøya Industrial Park and the organisations there, see [www.herøya-industripark.no](http://www.herøya-industripark.no).

Information about supervision of operations for Major Accident Regulations can be obtained from the Directorate for Civil Protection and Emergency Planning.

## YARA PORSGRUNN

Yara Porsgrunn produces mineral fertilizer (NPK) and sodium nitrate, as well as a range of other chemical products. The production process includes the production, transport via pipes and storage of gases and chemicals, including ammonia and ethane/propane/butane (liquid gas).

Ammonia is stored in a refrigerated 60,000 m<sup>3</sup> double-walled tank at the Tank Terminal at Herøya Industrial Park, and under pressure in spherical tanks to the south-west of the factory area. At the Tank Terminal, Yara Porsgrunn has permission to store 10,000 m<sup>3</sup> of fuel oil and 2,000 m<sup>3</sup> of ethane/propane/butane. Yara Porsgrunn has approx. 450 employees at the industrial park and is a part of Yara Norge AS.

## YARA NORGE FERTILIZER TERMINAL

Yara Norge Fertilizer Terminal packs and stores fertilizers for the Norwegian markets. The fertilizer is transported mainly via conveyors from Yara Porsgrunn to the terminal, and the packed product is then distributed on the Norwegian market by vehicle or vessel. Operations are notifiable under the Major Accident Regulations.

## INOVYN NORGE

INOVYN Norge produces the plastic PVC (polyvinyl chloride), based on the raw material VCM (vinyl chloride monomer) from Rafnes, where INOVYN Norge AS has a chlorine/VCM factory and administration. In connection with the PVC factory, around 170 m<sup>3</sup> of VCM is stored in three tanks directly outside the factory building. VCM is stored as condensed gas under pressure in two spherical tanks of 3,700 m<sup>3</sup> and 2,500 m<sup>3</sup> respectively at the Tank Terminal at Herøya Industrial Park. The PVC factory also stores 16 m<sup>3</sup> of flammable methanol.

## SKAGERAK NATURGASS

The company receives liquid, cooled natural gas via tanker or vessel, then converts it to gas which is transported via pipe to industrial users at Herøya Industrial Park. Four connected storage tanks totalling 950 m<sup>3</sup> are located at the Tank Terminal at Herøya Industrial Park.

## WHAT MIGHT HAPPEN?

Despite all the safety measures, accidents that affect people in the factories and surrounding areas may occur.

The table on the previous pages provides a brief description of the substances that represent the most significant hazards and that might result in a major accident.

## EMERGENCY PREPAREDNESS AND ACCIDENT ALERTS

Herøya Industrial Park has a coordinated industrial safety team with trained emergency responders who are always on site and ready to manage undesirable incidents and accidents. Herøya Industrial Park's emergency preparedness plans have been prepared with the public emergency preparedness plans (police, municipality, county, etc.) for the management of major undesirable incidents and accidents.

Porsgrunn Fire Service is situated in the industrial park, and will respond to the accident site within just a few minutes.

In the event of accidents that may pose a risk to the population, a warning will be given over the civil defence's siren system with the signal "Important alert – listen to the radio". Further information regarding the situation will be given over the radio on NRK P1.

## THE FACTORY ALARM IS TESTED EVERY MONDAY

The alarm system at the industrial park is tested every Monday at 13.00.

**INFORMATION IN AN ALARM  
SITUATION AT HERØYA  
INDUSTRIAL PARK**

Telephone:  
**+47 35 92 22 18**

## CONTACT INFORMATION FOR THE INDIVIDUAL ORGANISATIONS

### INOVYN Norge AS

Rafnes, 3966 Stathelle  
rafnes@inovyn.com  
Tel: +47 35 00 60 00  
[www.inovyn.no](http://www.inovyn.no)

### Skagerak Naturgass

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firmapost@skageraknaturgass.no  
Tel: +47 35 93 50 00  
[www.skageraknaturgass.no](http://www.skageraknaturgass.no)

### Yara Porsgrunn

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### Yara Norge Fertilizer Terminal

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[www.yara.com](http://www.yara.com)