

# Chemical Working Environment in the Norwegian Oil & Gas Industry - lessons learnt

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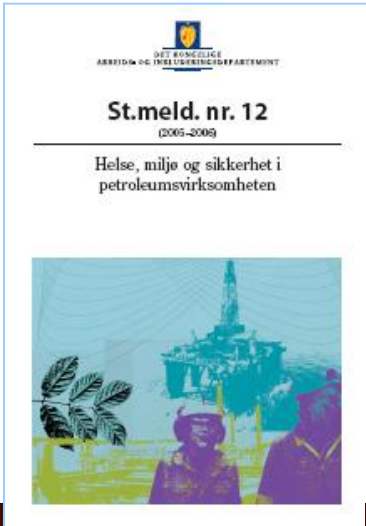
# Newspaper Headlines 2006

"Deaths,  
Cancers and  
Poisonings"



"Why did our  
husbands  
have to  
die ?"





- Lack of exposure data
- Knowledge gaps



PETROLEUMSTILSYNET

# Joining Forces - Tripartite Cooperation

- The Norwegian Confederation of Trade Unions
- Norwegian Union of Energy Workers (SAFE)
- The Norwegian organization of managers and executives



- The Petroleum Safety Authority
- The Norwegian Labour Inspection Authority
- Federation of Norwegian Industries
- Norwegian Shipowners' Association
- The Norwegian Oil Industry Association

# Purpose

The project Chemical Work Environment in the Norwegian petroleum industry shall:

- give an overview of the present and the historic exposure to harmful chemicals,
- describe and close knowledge gaps, and
- enable the petroleum industry to improve on chemical health risk management.

**Collect**

**Create**

**Disseminate**

**KNOWLEDGE**



# R&D - to close the knowledge gap

- Cancer in the offshore cohort (Cancer Register of Norway)
- Lung effects of exposure to oil mist and oil vapour (STAMI)
- Ultrafine / nano particles in welding fumes and biomarkers (STAMI)
- Isocyanatic acid - generation and characterisation (STAMI)
- Toxicological characterisation of crude oil (Statoil)
- Oil mist and oil vapour during drilling operations (Statoil)
- Hot work in habitat - method for chemical exposure assessment (Statoil)
- Hot work and effects of respiratory protection (JIP)
- Emissions from hot work on coated materials (JIP)
- Qualification of respiratory filters (Statoil, Total)





# Compile and disseminate knowledge

- Current chemical exposure in the Norwegian oil & gas industry (STAMI 2008-2012)
- Historical exposure to chemicals (UiB 2009-2010)
- Health effects due to chemical exposure (St.Olavs hospital 2008-2009)
- Biological exposure indicators (IFKAN 2008-2009)
- Oil mist and vapour during drilling operations. Development of modelling tool (UiB 2009-2010)
- Database of scientific literature (STAMI 2008-2012)



# OLF guidance documents

Work in progress

- Exposure assessment and strategies
- Epoxy

Draft versions

- Mercury
- Benzen
- Face fit testing

Final versions

- Health surveillance
- (Exposure monitoring manual)



# Disseminate knowledge

- Seminars
  - Use of chemicals in the Norwegian petroleum industry
  - Biological exposure indicators
  - Hot work and respiratory protection
  - Historical chemical exposure
  - Personal protective equipment
  - REACH
- Training & university courses
  - Advanced training in sampling strategy and use of statistics (NTNU)
  - Advanced training in exposure modelling (NTNU)
  - Introduction to occupational health in the oil&gas industry (namf)
  - Interactive basic training (Industriskolen/Mintra)
  - W501 Measurement of hazardous substances ([www.OHlearning.com](http://www.OHlearning.com))
- Breakfast seminars
  - First Friday of every month
- Web: [www.olf.no/kjemisk](http://www.olf.no/kjemisk) + [www.youtube.com/olfvideo](http://www.youtube.com/olfvideo)
- Reports, publications, guidance documents, films, etc.
- Presentations at conferences, seminars, meetings, etc.

# ...and what's next?

- The challenge
  - Demonstrate control of health risk due to chemical exposure
  - (= no harmful exposure to chemicals)
  - Demonstrate compliance
- The way forward
  - Competence
  - Leadership