



P&A environmental challenges

P&A seminar 17th October 2019

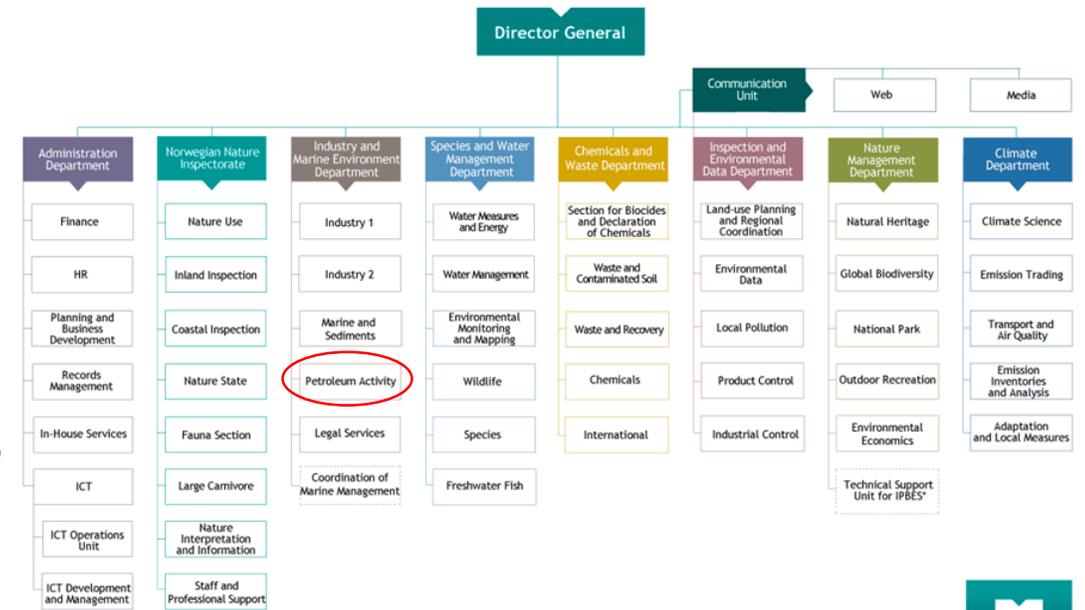
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Norwegian Environment Agency (NEA)

- Report to the Ministry of Climate and Environment
- 700 employees in Trondheim, Oslo including Norwegian Nature Inspection
- Section for Petroleum activity around 18 people, our objectives:
 - manage according to the pollution act,
 - prevent and reduce pollution and emission.



*The Technical Support Unit for the Intergovernmental Platform on Biodiversity and Ecosystem Services is hosted by the Norwegian Environment Agency.

15th August 2017





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P&A - environmental challenges?



P&A an environmental challenge?

We knew that:

- a lot of wells had to be plugged
- a lot of these wells were quite old, containing old drilling fluids
- toxic gases such as H₂S and CO could be a challenge

? Would this lead to discharges of chemicals containing substances with potential harmful properties?

Opp mot 3000 brønner skal plugges. Hevder ingen har oversikt over miljørisiko

Etterlyser risikovurderinger.



<https://www.tu.no/artikler/hevder-ingen-har-oversikt-over-hvor-miljofarlige-oljeborner-pa-sokkelen-er/363853>

PP&A – NEA cooperation with PSA

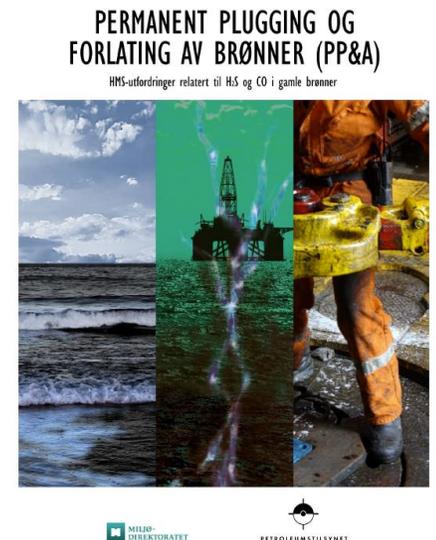


2015 Meetings with the industry to collect information and knowledge on HSE challenges associated with PP&A activities

2017 Established a project team with the mandate to:

- Collect knowledge and experience related to HSE
- Identify challenges
- Assess the need to change regulations
- Recommendations in the future

2018 The report «Permanent plugging og forlating av brønner (PP&A) HMS-utfordringer til H₂S og CO i gamle brønner»





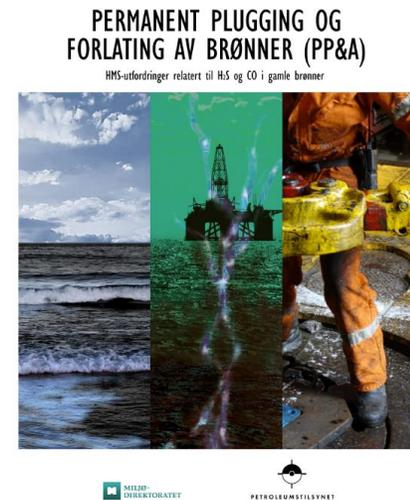
Handling of residual chemicals circulated out of the well

- Treatment on the installations
- Injection
- Bullheading
- Waste disposal onshore at authorized waste facility
- Discharge to sea



Conclusion

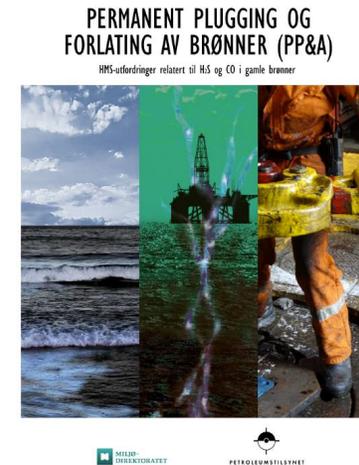
Reduced risk level over the last years, probably due to improved operational routines.





Recommendations

- Ensure uniform regulations
- Consider how use and discharge of chemicals in P&A activities should be reported
- Transfer of experience and knowledge internal in the industry





Our expectations



P&A activities needs a permit

- The activity is limited to the premises in the application
- Use and discharge of chemicals (activities regulations §§ 62-66
 - Normally no discharge of residual chemicals with no documentation of ecotoxicological testing or chemicals with substances in black, red or yellow sub category 3 and 2



Reporting

- All use and discharge of chemicals have to be reported in the annual discharge reports and EEH
- This will be specified in revised guidelines



Environmental monitoring

- No specific regulations on environmental monitoring related to P&A activity
- Generally environmental monitoring states (activities regulations Chapter X)
 - The operator shall monitor the external environment
 - The monitoring shall be adapted to the existing pollution risk
 - The operator shall as soon as possible detect acute pollution



Thank you