



**Ministry of environment and food of Denmark**  
Environmental Protection Agency att. Tor Søltoft  
Tolderundsvej 5  
5000 Odense C  
Denmark

Our reference: 2020-003056  
Your reference: 2020-57263  
02. desember 2020

#### **Regulation no. 1013/2006 on shipments of waste, notification NO 500083**

The Danish EPA has processed the notification NO 500083 Regulation no. 1013/2006 on shipments of waste. According to the Danish legislation, there is a prohibition against shipment of waste to Denmark for disposal, unless certain specific circumstances are present. Denmark has chosen to prohibit shipments of waste when the waste is intended for disposal. However, this does not apply if there are no suitable disposal facilities in the country of dispatch and the waste is produced in such limited amounts that the establishment of new specialized disposal facilities within the country would be uneconomic.

Equinor Mongstad held a valid notification (NO 434773) for shipment of waste to RGS Nordic in Denmark. This permit had a due date on 28<sup>th</sup> of November this year. As there is still need for shipment of waste, Equinor Mongstad sent an application to consent for shipments of waste to the Norwegian Environmental Agency, hereby called NEA, on the 7<sup>th</sup> of October this year. The reason for this application was based on the fact that there are very limited possibilities to treat wastewater in Norway. The refinery receive water together with oil in pipelines going from offshore production to the refinery. The refinery owns and operate a wastewater treatment plant (WWTP), for purification of wastewater produced in the refinery and from water received from offshore oil production. Some of the water from offshore drilling and well operations cannot be purified in the refinery's WWTP. The amount of wastewater that cannot be treated is roughly estimated to be 150 000 tons annually. Equinor has earlier done an investigation on available treatment plants based in given permissions from NEA or the county governor. The conclusion was that there is no facility in Norway to receive and treat this amount of water.

The Danish EPA has received information from NEA on the 6<sup>th</sup> of November, that describes that there are suitable disposal facilities with satisfying treatment capacities for this type of waste in Norway. NEA did their assumption of total national water treatment capacity based on a summation of the permitted volumes for all the major Norwegian treatment plants. This was evaluated up against National annually reported figures of treated oily wastewater.

The Danish EPA believes the opinion of NEA is preliminary and will give Equinor the opportunity to argue the case and to provide any additional information that may exist. Equinor have been asked to respond the latest on Monday the 7th of December.

The 30<sup>th</sup> of September 2019, NO 434773, NEA sent the Danish EPA information about their conclusion that there is very limited capacity in Norway for waste treatment, and they recommended a consent for shipment. The situation from 2019 to 2020 has not changed. Equinor has contacted all relevant facilities to verify the information that is the basis for the Norwegian authorities' assumption, and to evaluate to what degree the current wastewater cleaning capacity might be able to process the waste volumes produced by the Mongstad refinery.

The companies evaluated below are companies that hold permits which in size have realistic (large enough) treatment capacities as well as possess the technological /logistical capacity needed in order to treat/handle the waste in question. Contacted companies are the following:

- **Franzefoss Gjenvinning AS**
- **Wergeland Halsvik Miljøservice**
- **SAR Mongstad**
- **Norsk Spesialolje**
- **Norwegian Technology**

Table 1 Overview of available capacity in Norwegian wastewater treatment plants

Company	Site	Permitted volume m <sup>3</sup> pr.yr.	Treatment capacity m <sup>3</sup> pr.yr.	Spare capacity m <sup>3</sup> pr.yr.
Franzefoss	Eide Sotra	110 000	85 000-40 000	0
Franzefoss	Husøya K.sund	65 000	65 000 – 30 000	0
Wergeland Halsvik	Sløvåg	60 000		0
SAR	Mongstad	240 000	90 000	0
Norsk Spesialolje	Bamble	110 000	35 000	5-7000
Norwegian Technology	Mekjarvik/Kamøy	50 000	10 000	0

Equinor already has frame agreements with three of the companies mentioned above and therefore holds detailed knowledge about their permits as well as their technical capacities. SAR, Wergeland Halsvik and Franzefoss all specializes in offering services to the Norwegian oil industry. These companies have mainly specialized in treating oil contaminated drill cuttings and drilling slop that has been brought to shore for onshore treatment.

The total organic carbon (TOC) in this type of liquid drilling wastewater is high and all facilities thus have a biological treatment processes (activated sludge or biofilm) to reduce TOC content in the effluent before discharge. The extensive offshore drilling activity currently ongoing produces a TOC rich and highly saline slop. These are also the parameters that in most cases set limitations to the treatment capacity for these facilities. High salinity slows down the biological treatment process that is necessary to reduce the TOC level. Some of the companies have indicated the treatment capacity as a range between an upper level (theoretical treatment capacity) and a lower level (real capacity) in which the treatment capacity may vary. Hence for some of the facilities this indicates a potential increase in the total treatment capacity, if the water added is low on salinity and TOC.

The well clean up water that Mongstad could offer for treatment is however both saline and TOC rich in content and our assumption is that on a short-term basis there is not enough spare national treatment capacity to treat the Mongstad volume of 150 000 tons in addition.

**Summary;**

The treatment capacity for the above-mentioned facilities is considerably lower than their permitted volume. Hence the numbers used by the NEA to evaluate spare capacity in the Norwegian wastewater treatment market gives no realistic picture of the situation for available capacity.

For the two remaining companies (Norsk spesialolje and Norwegian Technology) they primarily specialize in production of waste oil. Their wastewater treatment capacity is therefore more limited and focused on removing water from oil and not removing oil from water. Hence, they do not offer a capacity that will be a realistic downstream alternative.

The treatment capacity has over the past years steadily been decreasing as more concentrated and saline slop have been brought to shore. This is deeply worrying and has forced Equinor to export more than 35 000 m<sup>3</sup> of drilling slops this autumn.

If Equinor on short notice is forced to close down the export of wastewater from Mongstad to RGS Nordic Stignæs, this will have dramatic consequences for the business continuity. This is a critical situation for Equinor, and it will affect the business as well as operations, and drilling will be delayed. The refinery has an ongoing activity in modification of the existing wastewater treatment plant, that will enable us to handle all water without shipping some of it abroad. But the new and enlarged plant will not be in full operation for some years. No facility in Norway is willing to expand their disposal facility for this limited period of need, and establishment of new specialized disposal facilities within the country would be uneconomic.

In the application of consent, Equinor has asked for the waste to be disposed not recovered. This was done based on former assessments. RGS Nordic has evaluated the wastewater from Mongstad to be used in recovery, and Equinor has received a statement from RGS, explaining how the wastewater will be used for recovery in the purification process. This is due to the amount of oil in the water, and that both TOC and nitrogen are used in the treatment plant. Equinor was not aware at the time of applying on this huge difference in the notification. The notification should have given the correct picture. We will kindly ask Miljøstyrelsen to consider this information in the evaluation process of this notification. A statement from RGS is attached to this letter.

We hereby kindly ask the Danish EPA to consider this situation and consent to our application for shipment to RGS Nordic in Stignæs.

Yours sincerely,

Anne Kolstad Morken  
Authority contact  
Equinor Mongstad

Copy to:  
The Norwegian Environment Agency