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Kontor/afdeling
Centre for Subsoil Resources
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Summary – Responses – Espoo procedure

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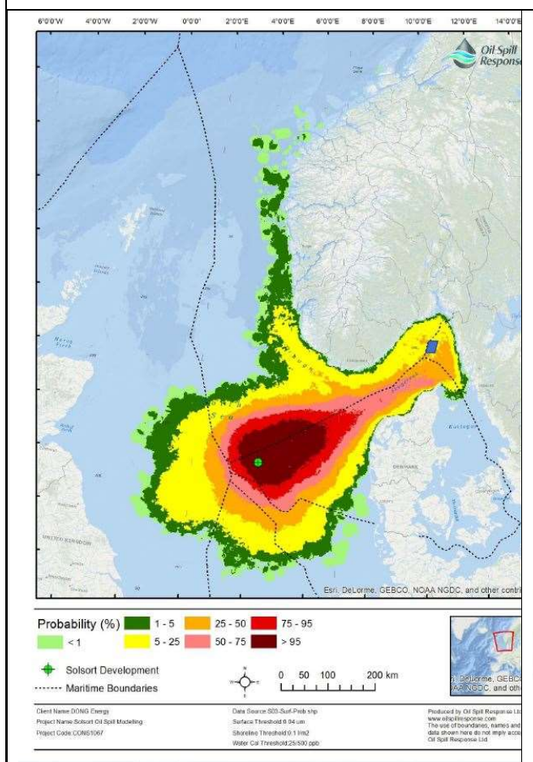
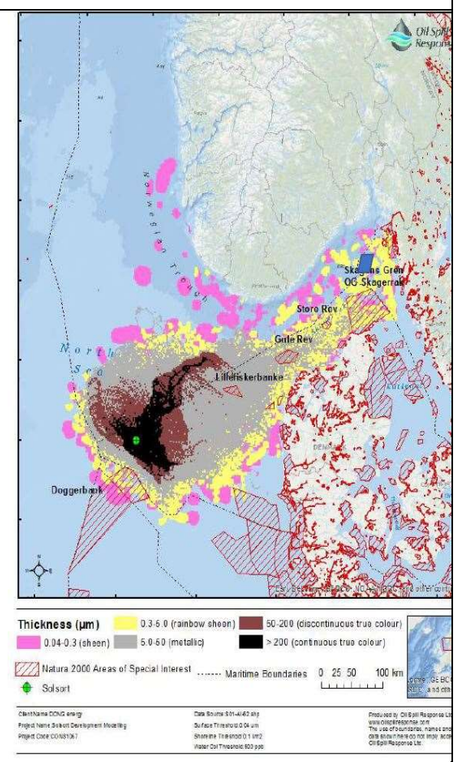
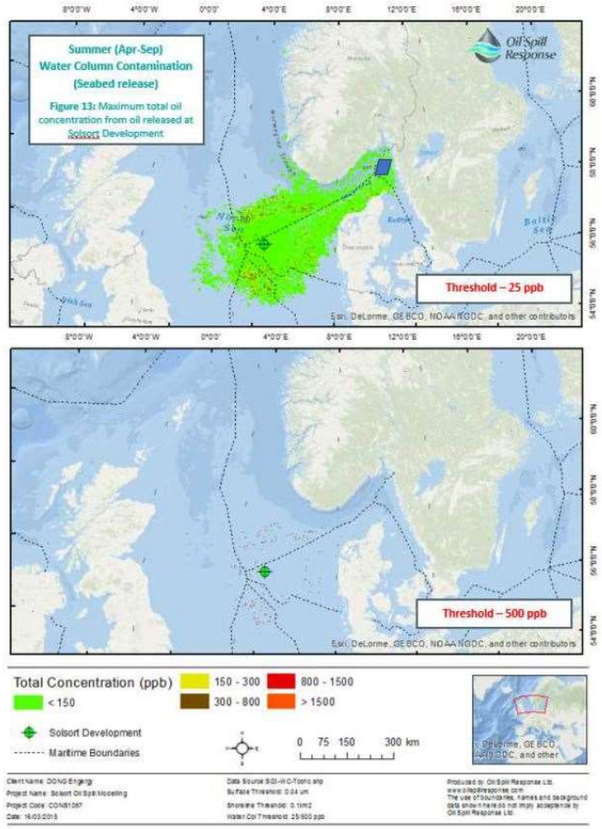
Responses - Sweden

No.	Response/statement	Answer from INEOS Oil & Gas Denmark	Comments from the Danish Energy Agency
County Administrative Board of Västra Götaland			
1	The County Administrative Board of Västra Götaland believes it would be appropriate for the operator's contingency plan to include early and direct communication to responsible authorities in other countries should any oil spill occur of such a magnitude that makes transboundary impact likely.	INEOS notes, that they will make sure that the Swedish Coast Guard is notified should any oil spill occur. The company will agree on a way forward with relevant Danish authorities.	The Danish Energy Agency has noted the comments on this topic and has no further comments.
2	In the event of an oil spill the western coast of Sweden is at risk of becoming extremely adversely affected. We therefore feel the need to show an outline of our protected areas in relation to the model, including the rate of dispersal. Furthermore, the model has been developed for both winter and summer time, but it is unclear whether data based on variations during summer and winter time over several years has been used or whether the model is from a single year only.	The oil spill model is a state-of-the-art 3D-modelling tool. 3 years hydrodynamical data has been used as input in the model to account for different weather situations. Dataset for electricity and wind have a resolution of 1 and 3 hours. A number of different individual spills have been analyzed to create the stochastic results for every scenario. Every spill is set to begin at different start dates to account for different weather conditions. Figure 6-1 (and other figures in the Espoo report) shows the total probabilities of respectively 142 spill-lanes (summer) and 119 spill-lanes (winter). Thus, the simulation does not show the result of a single oil spill, but rather the combined probabilities of a cell in the model being impacted by oil from an oil spill from all combined outcomes from all modelled spills. The outcome of a single spill will thus be significantly smaller. INEOS apologizes that Swedish protected areas are not shown on the oil spill figures. In the case of an oil spill, it is of the highest priority to contain and collect the oil to prevent spreading.	The Danish Energy Agency has noted the comments on this topic.

3	According to the documentation, mainly northern Bohuslän on the western coast of Sweden would be affected by a possible oil spill from the activities. The document contains a description of potential impacts on a range of protected areas at risk, but it does not examine Swedish protected areas in the North Sea.	The environmental impacts of accidental oil and chemical spills are assessed in chapter 13 in the Environmental Impact Assessment report. Figure 1 and 2 below show, that the probability of Swedish protected areas being affected by an oil spill is less than 1 %. The protected area just east of the border between Denmark and Sweden is marked with blue in the following figures to assess the impacts. The probability of this area being affected by an accidental oil spill is between 5-25 %. In the southwestern corner of the area, the probability can however exceed 25 % but stays below 50%. The thickness of the oil film to hit the Swedish maritime area is somewhere between 0,04 - 5,0 µm. Birds are assessed to generally be affected by surface oil when the emulsion thickness exceeds 1 µm, but seals and cetaceans are more tolerant to surface oil. Seals are affected when the emulsion thickness exceeds 10 µm and cetaceans when it exceeds 100 µm (French-McCay 2009*). These species are however not on the basis of designation for the protected area. According to https://skyddadnatur.naturvardsverket.se/ the protected area Bratten (SE0520189) is designated due to the sea bottom in depths of 200-500 meters, where cold seeps and pockmarks with red-listed species exist.  *Figure 1*  *Figure 2*	The Danish Energy Agency has noted the comments on this topic.

		In figure 3 below oil concentrations in the water column is shown. The oil concentrations are assessed to be low relative to the threshold value. The conclusion regarding Swedish marine protected areas is, that drilling of the Solsort West Lobe wells will not impact the conservation status of the areas. This conclusion is based on the following: • *The risk of a blow-out is extremely low since all safety measures and systems are in place on the platform and the rig.* • *The probability of an oil film hitting the area is moderate and the thickness of the film is below 5 μm.* • *The oil concentration in the water column is low.* • *The oil spill contingency plan for the South-Arne operator will be activated, and control of the oil spill will be mobilized to limit the spreading of oil and mitigate the impacts.*  *Figure 3* * French-McCay D. (2009) State-of-the-art and research needs for oil spill impact assessment modeling. Proceedings of the 32nd AMOP Technical Seminar on Environmental Contamination and Response.	

4	As stated in the document, Sweden has a coastline that is more sensitive to oil than the Danish coastline, but the drift time at sea would lead to minor and not so harmful oil blobs. Although this is a better outcome from an environmental point of view, blobs of oil are more difficult to clean up and much more difficult for the Coastguard to clean up at sea before they reach land.	The assessment of INEOS is that the problem concerning the clean-up of oil is only relevant for greater oil spills due to the distance from the platform to the Swedish coast. The oil spill contingency plan describes the possibility of combatting greater spills with dispersants to break down oil blobs.	The Danish Energy Agency has no further comments on this topic
5	According to the scenarios and modelling examined by the operator in the event of an oil spill, Sweden could be affected after a period of some 27 days. This may be considered a long time, but there is a risk of a very large spill remaining uncollected at sea. Cleaning up oil at sea is very weather-dependent and the spread can be rapid. Because of sea currents in Swedish waters, a large oil spill where a complete clean-up at sea has not been successful could mean that residual oil is carried for a long time in the Västerhavet (the sea by Sweden's West Coast).	INEOS' oil spill contingency plan is primarily based on mechanical containment of the spilled oil to prevent the spreading as much as possible and as early as possible. Weather conditions might make such a containment difficult. Thus, the oil spill contingency plan also describes the possibility of combatting greater spills with dispersants to break down the oil faster.	The Danish Energy Agency has no further comments on this topic
	The Swedish Fish Producers' Organization (SFPO)		
6	Those in charge of the planned operation must inform the concerned fishermen's organizations of what will happen and when it will happen. It is also vital that the best environmentally friendly technologies are used throughout and that everything possible is done to minimize the negative impact on fish and fisheries, for instance with regard to the timing of work during the year. The SFPO is of the opinion that the applicant must compensate the affected fishermen in full.	INEOS informs through the common channels (Notices to Mariners and FOGA) and Swedish fishermen have the option to subscribe to these. Fishermen will not have access in a 500 m protection zone around the existing platform from where the two wells are drilled. Further to this, the increased ship traffic related to the drilling operation will not have a negative impact on the fishery. Finally, the area around the South Arne platform in the central North Sea is not an important fishing area. Construction work will only take place within the existing 500 m protection zone around the South Arne platform where fishing is already prohibited and where the fishing intensity in the area is low. The impact on the marine environment from the discharge of chemicals from the drilling operation is limited to 500 m from the platform except during completion (4 hours per well), where the effect is less than 4700 m from the platform. In 2021, The Danish Environmental Protection Agency examined the effects of oil and gas production on marine ecosystems and fish stocks in the Danish North Sea. The report concluded, among other things, that an analysis of possible negative impacts on fish stocks in areas with	According to Sections 77-80 in the Danish Fisheries Act (Act no 261 of 21st March 2019 on fishery and fish farming), affected commercial fishermen are entitled to compensation. The Danish Energy Agency has no further comments on this topic.

		different intensities of discharged produced water showed no negative impacts of oil and gas production on fish stocks. (source: Effects of oil and gas production on marine ecosystems and fish stocks in the Danish North Sea) With all of the above in mind, INEOS does not see that the planned activities should give rise to any compensation.	

Responses – Germany

No.	Response/statement	Answer from INEOS Oil & Gas Denmark	Comments from the Danish Energy Agency
Federal Agency for Nature Conservation			
1	To avoid significant impacts to the Dogger Bank SAC, in particular, further specifications should be made in addition to the measures mentioned in Sections 6.3 and 6.4 of the ESPOO Report. In addition to two immediately deployable barrier systems (oil booms) on site, further technical measures against blowouts (e.g. blowout preventer (BOP)) should be requested (please also see OSPAR Guideline 2010/18).	Prevention of an oil spill at sea has the upmost priority at INEOS. We can confirm that the drilling operation will be conducted in accordance with the best safety practice and will among other things include the use of a BOP. In addition to this, it should be noted that the drilling program, equipment and the drilling activity, including monitoring of environmental and safety related conditions, have to be approved by the Danish Working Environment Authority (DWEA) before commencement of the operation.	The Danish Energy Agency has no further comments on this topic
2	In the event of an accident, the German Central Command for Maritime Emergencies should be notified.	INEOS will make sure, that the German Central Command for Maritime Emergencies will be notified in the event of an accident.	The Danish Energy Agency has noted the comments on this topic.